

# Rancho Cordova Parkway Interchange Project

RANCHO CORDOVA, CALIFORNIA  
DISTRICT 3-SAC-50 (PM 12.5/15.8)  
EA 03-1E2700  
SCH#: 2005092044

## **FinalDraft Environmental Impact Report/ Environmental Assessment with Finding of No Significant Impact**



Prepared by the  
City of Rancho Cordova  
and the  
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by California Department of Transportation under its assumption of responsibility pursuant to 23 USC 327.



October~~April~~ 2014





## **General Information about This Document**

For individuals with sensory disabilities, this EIR/EA is available in Braille and large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to the Department of Transportation, Attn: Georgette Neale, Office of Environmental Management, 2379 Gateway Oaks Drive, Suite 150, Sacramento, CA 95833; (916) 274-0623 Voice, or use the California Relay Service 1 (800) 735-2922 (TTY), 1 (800) 735-2929 (Voice) or 711.

## **~~General Information About This Document~~**

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### **~~What's in this document?~~**

~~The City of Rancho Cordova (City) and the California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), have prepared this Environmental Impact Report/Environmental Assessment (EIR/EA), which examines the potential environmental impacts of alternatives being considered for the proposed project in Rancho Cordova, California. The City is the lead agency under the California Environmental Quality Act (CEQA), and Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Cooperating agencies under NEPA include the U.S. Bureau of Reclamation (USBR), which has jurisdiction of the Folsom South Canal. In addition, Caltrans and Sacramento County, which has jurisdiction for the portion of the project north of U.S. 50, are responsible agencies under CEQA.~~

~~The EIR/EA explains why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.~~

### **~~What should you do?~~**

- ~~• Please read this EIR/EA.~~

~~Additional copies of the EIR/EA, as well as of the technical studies that were used in preparing it, are available for review at the City of Rancho Cordova Public Works Department, 2729 Prospect Park Drive, Rancho Cordova, CA 95670, and the Sacramento Public Library, Rancho Cordova Branch, 9845 Folsom Blvd., Sacramento, CA 95827.~~

~~Please note that all or portions of cultural resources studies will not be publicly available because of concerns regarding resource preservation.~~

- ~~• Attend the public meeting on May 14, 2014.~~

~~Your comments are welcome. If you have any concerns regarding the proposed project, please attend the public meeting and/or send your written comments to Caltrans by the deadline.~~

~~Submit comments via U.S. mail to Caltrans at the following address:~~

- ~~• Georgette Neale, California Department of Transportation, 2379 Gateway Oaks Drive, Suite 150 Sacramento, CA 95833~~
- ~~• Submit e-mail comments to Caltrans at the following e-mail address:~~
- ~~• Georgette Neale, California Department of Transportation,  
[georgette.neale@dot.ca.gov](mailto:georgette.neale@dot.ca.gov)~~
- ~~• Be sure to submit comments by the deadline: June 9, 2014.~~

## **What happens next?**

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

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**[INSERT] California Department of Transportation**  
**Finding of No Significant Impact**

# Summary

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The proposed project is subject to federal, as well as City of Rancho Cordova (City), County of Sacramento, and state environmental review requirements, because the City proposes the use of federal funds from the Federal Highway Administration (FHWA) and/or the project requires a FHWA approval action. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The City is the project proponent and the lead agency under CEQA. [Caltrans is the lead agency under NEPA.](#)

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a revised and permanent Surface Transportation Project Delivery Program. As a result, the California Department of Transportation (Caltrans) entered into a memorandum of understanding (MOU) pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and terminates 18 months from the effective date of FHWA regulations developed to clarify amendments to 23 USC 327 or on January 1, 2017. The NEPA Assignment MOU incorporates by reference the terms and conditions of the Pilot Program MOU. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an environmental impact statement (EIS), or some lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an

EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the lead agency to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, it is quite often the case that a “lower-level” document is prepared for NEPA. One of the most commonly seen joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA).

~~Following receipt of comments from the public and reviewing agencies, a final environmental document will be prepared. The City and Caltrans may undertake additional environmental and/or engineering studies to address comments. This~~ final environmental document ~~will~~ includes responses to comments received on the Draft EIR/EA and ~~will~~ identify the preferred alternative. If the decision is made to approve the project, the City will publish a Notice of Determination for compliance with CEQA, and Caltrans ~~will decide whether to~~ will issue a Finding of No Significant Impact (FONSI) ~~or require an Environmental Impact Statement (EIS)~~ for compliance with NEPA. A Notice of Availability of the FONSI will be sent to the affected units of federal, state, and local government and to the State Clearinghouse in compliance with Executive Order 12372.

## Overview of Project Area

The proposed project is located partially within the city and partially in unincorporated Sacramento County. The project ~~site area~~ includes U.S. Highway 50 (U.S. 50) between postmiles 12.5 and 15.8 (near Hazel Avenue and Sunrise Avenue, respectively,) which is a federal highway under the jurisdiction of Caltrans, as well as an area extending south from the proposed interchange south to White Rock Road. Currently, no interchange or intersection structure exists at this location. Within the project limits, U.S. 50 is a seven-

to eight-lane freeway, including high-occupancy vehicle (HOV) lanes that begin (eastbound) near the Watt Avenue interchange and end (westbound) near the Sunrise Boulevard interchange. An auxiliary lane is provided between the Folsom Boulevard and Hazel Avenue interchanges in the westbound direction, and between the Hazel Avenue and Sunrise Boulevard interchanges (a span of approximately 3 miles) another auxiliary lane is added and dropped. Another westbound mixed-flow lane is added at the Sunrise Boulevard westbound on-ramp. The surrounding area is urban.

## **Project Background**

Plans for the Rancho Cordova Parkway Interchange at U.S. 50 have been included in long-range planning efforts in Rancho Cordova since the 1980s, many years prior to Rancho Cordova's incorporation in 2003. The initial 1988 Gold River General Development Plan granted the County an offer of dedication of right-of-way, designated as an "interchange study area." Then, as a condition of approval of the Gold River Unit 17 subdivision in 1992, the Natomas Land Company dedicated "Freeway Interchange Lot (Lot C)" to the County, to provide an additional access point to U.S. 50 from the south; this improvement then was incorporated into the County's General Plan, adopted in 1993.

Prior to the incorporation of Rancho Cordova, a lengthy planning process was undertaken and documented in the Cordova Community Plan, prepared by the County and adopted by the Board of Supervisors on May 21, 2003. Specifically, the plan called for new roadway connections to enhance regional circulation and provide additional linkages. The Cordova Community Plan also identified a new interchange on U.S. 50 in the location of the proposed project.

The planning and environmental documents for the Sunrise-Douglas Community Plan and Sunridge Specific Plan anticipated this roadway as a key corridor for access between new developments in the area with U.S. 50. The interchange and the parkway are key elements of the City's overall transportation network and circulation element as set forth in the City's General Plan.

In 2007, the City of Rancho Cordova Public Works Department initiated community meetings to update concerned citizens on progress of the project and provide a forum for citizens to voice their concerns and receive answers from City staff. Between October 2007 and August 2008, the City of Rancho Cordova Public Works Department held six meetings of the Rancho Cordova Parkway Community Advisory Committee. These

meetings were attended by City staff, consultants, property owners or their representatives, community organizations, and community members. During these meetings, City staff and consultants presented project details and answered questions. Specific topics discussed included the design plans, lighting and landscape plans, and bike paths.

The Rancho Cordova Parkway Community Advisory Committee meetings provided citizens a forum for providing input into the design and features of the interchange. Commercial property owners voiced concerns regarding the visibility of commercial structures following construction of the interchange. Local residents voiced concerns about car headlights on the interchange that could illuminate nearby homes. Local residents also voiced concerns regarding the safety of children playing near the interchange.

The design and features of the interchange and parkway have been modified iteratively to address public concerns.

## **Purpose and Need**

The proposed project is intended to address the existing operational deficiencies of U.S. 50 and adjacent arterial roadways as well as the anticipated future growth in the project [vicinity area](#). The proposed project, along with the planned improvements proposed under the 50 Corridor Mobility Partnership,<sup>1</sup> will relieve existing traffic congestion on U.S. 50 and local facilities. The project would help to achieve the following objectives:

- Relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue south of U.S. 50.
- Improve traffic operations at the U.S. 50/Sunrise Boulevard and U.S. 50/Hazel Avenue interchanges.
- Maintain acceptable levels of service on U.S. 50 and at existing access points to U.S. 50 under existing and future conditions.
- Provide additional access to and from U.S. 50 and planned developments.
- Improve emergency access within the City of Rancho Cordova.

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<sup>1</sup>The 50 Corridor Mobility Partnership is a public/private partnership of public jurisdictions and private landowners, formed to address the transportation planning and funding issues that are unique to the U.S. 50 corridor through eastern Sacramento County.

- Provide access to regional transit facilities and park-and-ride lots, where feasible.

Because of existing and planned growth within the city and the surrounding communities, the need has arisen to provide additional access to U.S. 50 from the south, where limited points of access are currently provided.

Currently, traffic through and around the project area operates at unacceptable levels of service in several areas, including the eastbound freeway mainline during the PM peak traffic hour, key freeway ramp junctions, and key roadway intersections.

The City's General Plan anticipates the addition of 53,480 new housing units and 55,199 new jobs within the current city limits by 2030. Much of this growth is anticipated to occur east of Sunrise Boulevard and south of U.S. 50, near the project area. The existing street network in the project vicinity and south of U.S. 50 consists of two-lane arterial roadways, used primarily by commuters traveling between Elk Grove and the U.S. 50 corridor. Currently, Sunrise Boulevard is the only route that provides direct access to U.S. 50 from this area.

The new developments in the project [vicinity area](#) that are anticipated in the City's General Plan could be constructed without construction of the interchange; however, resulting increases in traffic would likely have a negative impact on traffic operations and safety on existing local roadways. Improvements would be needed to accommodate traffic demands resulting from these developments, which are necessary to provide adequate housing for existing and planned job center uses in and adjacent to the city.

This project is part of the 50 Corridor Mobility Partnership's list of near-term priority projects. This partnership is a public/private effort to provide a unified solution for transportation improvements in an area that is already congested and/or will experience more traffic congestion in future years.

In addition to near-term priority projects, the City will commit to opening the interchange project after or concurrent with the opening of the following roadway projects. These projects are located partially or entirely outside the City's jurisdiction. Therefore, the City will also commit to working with outside jurisdictions to ensure that these projects are completed in a timely manner.

- An “at-grade” extension of Hazel Avenue (Nimbus Road) south from Folsom Boulevard to Easton Valley Parkway—The City anticipates that this project would be constructed as a condition of approval for the Glenborough at Easton project. Glenborough is conditioned to extend Hazel Avenue from its current terminus at Folsom Boulevard, southward to proposed Easton Valley Parkway. Glenborough condition of approval number 97 describes this initial improvement as an “at-grade” connection.
- Extension of Easton Valley Parkway from Rancho Cordova Parkway to Hazel Avenue (Nimbus Road).
- U.S. 50 eastbound transition auxiliary lane from Hazel Avenue through the Folsom Boulevard overcrossing.

To achieve and maintain acceptable operations along U.S. 50 and on Hazel Avenue, several transportation improvement projects have been constructed, including the extension of HOV lanes from the project area to Watt Avenue in Sacramento, the widening of Hazel Avenue north of U.S. 50, and improvements to the Hazel Avenue interchange. Planned projects include the Sacramento Area Council of Government’s (SACOG) “Regional Connector” connecting Elk Grove to El Dorado County to the south of the project site. In addition, Caltrans’ Corridor System Management Plan has listed the U.S. 50 auxiliary lane projects to construct eastbound and westbound auxiliary lanes on U.S. 50 from Sunrise Boulevard to Scott Road. These auxiliary lane projects are subject to availability of local funding and can be considered long-term projects. Other long-term projects include the extension of Hazel Avenue south to White Rock Road.

## **Proposed Action**

The proposed project intends to construct a new interchange over U.S. 50 between Sunrise Boulevard and Hazel Avenue in the City of Rancho Cordova, Sacramento County, California. The interchange would be a “south-only” connection and would also include construction of a new four-lane arterial street, called Rancho Cordova Parkway. Rancho Cordova Parkway would extend from the new interchange south to a new signalized intersection with White Rock Road. The overcrossing structure would span U.S. 50, Folsom Boulevard, the Sacramento Regional Transit (Sac RT) light rail and Union Pacific Railroad (UPRR) tracks (Railroad Corridor), Folsom South Canal, and Buffalo Creek.

The proposed project is located partially within the city and partially in unincorporated Sacramento County. The project would construct auxiliary lanes along U.S. 50 in the area between Sunrise Boulevard and Hazel Avenue. The project [site area](#) north of U.S. 50 is within Sacramento County. The Folsom South Canal is under the jurisdiction of the U.S. Bureau of Reclamation. The remainder of the project [site area](#) is within the Rancho Cordova city limits.

The project will provide bicycle and pedestrian connections along Rancho Cordova Parkway between White Rock Road and Easton Valley Parkway ultimately connecting to the bicycle lane and bicycle trail system in the future Westborough development. When combined with the Westborough system, the project bicycle facilities will allow access to residential and commercial properties making several connections to the City's main trail system and the Folsom South Canal trail. Additional connections across the Folsom South Canal will provide bicycle and pedestrian access to Regional Transit's Sunrise light rail station and to the future Mine Shaft light rail station. The proposed project would include bicycle/pedestrian facilities (Class II bike lanes and sidewalks). The bridge facility will have an open shoulder, but will not be striped for bicycle lanes.

Two alternatives (Alternative 3 and the No Build alternative) are considered in detail in this EIR/EA and are summarized next.

### **Alternative 3 (Proposed Project)**

Alternative 3 is a tight diamond (L-1) interchange, and the eastbound ramps would be placed in a diamond (L-1) configuration paralleling U.S. 50 and creating a four-way intersection at the overcrossing. Alternative 3 would include:

- An overcrossing structure perpendicular to U.S. 50, with the eastbound and westbound ramps parallel to U.S. 50, terminating at a 'T' intersection with the westbound ramps.
- Eastbound ramps, connecting to the overcrossing with a four-way intersection.
- Ramp intersections 295 feet apart, operating as a single intersection.
- A 14-foot median within the overcrossing structure.
- Continuous auxiliary lanes in both directions on U.S. 50 from Sunrise Boulevard to Rancho Cordova Parkway and from Rancho Cordova Parkway to Hazel Avenue.

- Sound walls and retaining walls, constructed at various locations along U.S. 50 mainline, ramps, and intersections.
- An interchange design would include provisions to accommodate bicyclists and pedestrians along the interchange and roadway extension to White Rock Road (an on-street Class II bike lane on the overpass would provide access between the new interchange at U.S. 50 and the new residential and commercial developments planned south of the Folsom South Canal).
- An interchange structure spanning Folsom Boulevard, the RT/UPRR rail lines, Folsom South Canal, and Buffalo Creek.
- The new Rancho Cordova Parkway, a four-lane roadway with a center median terminating at a new signalized intersection with White Rock Road.
- An integrated highway and bridge drainage system and roadway drainage systems constructed within the project limits to accommodate and treat collected stormwater.

See **Table S-2** for a summary of potential impacts of the proposed project.

### **No Build Alternative (2037 Conditions without the Project)**

Under the No Build alternative, no construction of the proposed interchange or roadway connection -would occur. Vehicles accessing U.S. 50 and surrounding development would continue to use the U.S. 50/Sunrise Boulevard interchange and U.S. 50/Hazel Avenue interchange, and access to areas south of the Folsom Boulevard would be limited to Sunrise Boulevard. The analysis of this alternative considers the environmental effects of not approving the proposed project. Not approving the proposed project would have several negative effects within the City, including increased traffic congestion and a decrease in the quality of life of residents and workers. See **Table S-2** for a summary of potential impacts of the No Build alternative.

### **Areas of Potential Controversy**

CEQA Guidelines (Section 15123) and NEPA Regulations (40 Code of Federal Regulations 1502.12) require the summary to identify areas of controversy known to the lead agency, including issues raised by other agencies and the public. These issues are summarized as follows:

**Table S-1  
Summary of Potential Controversies and Actions to Address**

Issue	Actions to Address
<p>Aesthetic impacts associated with the height and location of the interchange structure as well as lighting impacts</p>	<p>Interchange Structure: Incorporation of design features to soften the visual appearance of the structure including landscaping and other aesthetic treatments.</p> <p>Lighting: Photometric study will be conducted and lighting types and shading methods shall be incorporated to reduce lighting impacts, including hooded lighting.</p> <p>See Sections 2.1.9 and 3.2.5 for additional details.</p>
<p>Construction and operational air quality impacts</p>	<p>No federal air quality standards will be exceeded by the project and the result of the interagency consultation on particulate matter was that the project is not a project of air quality concern. However, the City has conducted analyses above and beyond those required and has included a list of measures to further reduce construction and operational emissions, including fuel and equipment restrictions during construction.</p> <p>See Sections 2.2.5 and 3.2.11 for additional details.</p>
<p>Bicycle and pedestrian access and associated effects to the Gold River Community associated with the optional bicycle/pedestrian path connection</p>	<p>The bicycle and pedestrian access to the Gold River Community was considered as a design option. After working with all interested parties, the City decided to take the bicycle/pedestrian path out of the project.</p>
<p>Biological resource impacts from project construction</p>	<p>Three endangered species have the potential to be impacted by the project—vernal pool fairy shrimp (<i>Branchinecta lynchi</i>), vernal pool tadpole shrimp (<i>Lepidurus packardii</i>), and valley elderberry longhorn beetle (VELB, <i>Desmocerus californicus dimorphus</i>). Section 7 consultation for the Westborough Development, which encompasses the proposed project, has resulted in a finding of not likely to adversely affect for the vernal pool fairy shrimp and vernal pool tadpole shrimp and likely to adversely affect for VELB. During the development of alignments for Rancho Cordova Parkway, avoidance of these species and their habitats were taken into consideration. However, the distribution of these biological resources across the project study area made it impossible to completely avoid impacting vernal pools and VELB.</p> <p>Numerous measures have been included to offset impacts to endangered and other sensitive biological resources, including but not limited to construction work windows, replantings, and the purchase of mitigation banking credits.</p> <p>See Sections 2.3 and 3.2.13 to 3.2.17 for additional information.</p>

Summary

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Issue	Actions to Address
Geologic and soil stability of the project site associated with historic gold dredging activities	<p>During studies for the proposed project, no impacts to geologic and soil stability as a result of historic gold-dredging activities were identified. There is some potential for encountering expansive soils that may affect the stability of the project site, but measures including soil mixing and replacement would address any potential concerns.</p> <p>See Sections 2.2.3 and 3.2.9 for additional information.</p>
Hazardous materials associated with the truck transportation of hazardous materials using the interchange as well as potential soil contamination	<p>The transportation of hazardous materials is subject to strict regulation at the federal, state, and local levels. Hazardous material hauling and emergency spill response is carefully handled within Caltrans facilities in accordance with the <i>Caltrans Maintenance Manual</i> Chapter 5. In addition to its regular maintenance crews, Caltrans maintains on-call contracts with pre-qualified clean-up contractors so that any spills on Caltrans facilities can be responded to as soon as possible. The City also has established policies and procedures in place for hazardous materials; these are set forth in Section 4.4 of the City's General Plan EIR. Both the City and Caltrans also participate in the Standardized Emergency Management System.</p> <p>There is some potential for soils adjacent to U.S. 50 to be contaminated with aerially deposited lead (ADL). During final design of the project, additional testing will be conducted to determine whether the concentrations warrant remediation. If remediation is needed, construction shall not commence until the site has been remediated and cleared for construction.</p> <p>See Sections 2.2.4 and 3.2.10 for additional information.</p>
Hydrology and water quality impacts from construction and operation, including groundwater impacts and existing groundwater contamination issues	TBD based on further discussions with Aerojet.
Land use associated with compatibility with adjacent land uses and adopted land use plans and policies	<p>The proposed project is consistent with City's General Plan and the Sacramento Area Council of Government's (SACOG) MTP.</p> <p>See Sections 2.1.1 and 3.2.1 for additional information.</p>
Construction and operational noise impacts	<p>Construction Noise: Locate equipment and staging areas as far from residences as possible. Limit unnecessary idling of equipment. Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted within 100 feet of residences, i.e., the westbound on- and off-ramps (north side of U.S. 50), or during any pile-driving activities.</p>

*Summary*

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<b>Issue</b>	<b>Actions to Address</b>
	<p>Operational Noise: While there are receptors for which the future predicted noise levels require the consideration of noise abatement, the absolute increase in future predicted noise levels is 1-2 decibels; this change is imperceptible for most humans. The City is, however, proposing to build an 8-foot-high sound wall along the outside edge of shoulder of the westbound auxiliary lane, including the proposed ramps; this sound wall would be built with nonfederal (local) funds.</p> <p>See Sections 2.2.6 and 3.2.12 for additional information.</p>
Population growth inducement effects of the proposed project	<p>The proposed project would not result in a change in the location, rate, type, or amount of growth planned for under regional and local plans. The location and rate of future growth would continue to be controlled by the City's General Plan and land use planning agencies as guided by local land use plans. Growth approved and planned for the area is, in part, facilitated by the proposed project.</p> <p>See Section 2.1.3 for additional information.</p>
Construction and operational traffic impacts and related safety issues	<p>Construction: Substantial traffic delays are not anticipated during construction of this project due to the amount of work that would occur outside of the travel corridor. According to the recommendations in the Transportation Management Plan Data Sheet (April 2010) lane closures on U.S. 50 would be prohibited during peak and daytime hours and on holidays.</p> <p>Operational: Level of service (LOS) at the Rancho Cordova Parkway/eastbound U.S. 50 on-ramp would be unacceptable (LOS F) in the future year 2037 scenario. Changing the rate of the ramp metering is one option for reducing the queuing and congestion at this location. In general, average freeway speeds remain approximately the same or increase slightly with the project in future year scenarios.</p> <p>See Sections 2.1.8 and 3.2.4 for additional information.</p>
Consideration of additional alternatives, including alternatives associated with project configuration/design alternatives and transit alternatives	<p>During the development of the proposed project, numerous roadway, interchange, and transit alternatives were studied. In response to comments on the Notice of Preparation, a light rail-only alternative was examined but determined not to meet the purpose and need for the project; Rancho Cordova Parkway has been identified as a potential future corridor for bus rapid transit and/or light rail along Rancho Cordova Parkway.</p> <p>See Section 1.2.5.4 for additional information.</p>

During the scoping phase of the EIR and at public outreach and community advisory meetings, residents of the Eureka Village community and the larger Gold River Community expressed opposition to construction of the proposed bicycle/pedestrian connection to the Eureka Village neighborhood, primarily because the connection may introduce substantial numbers of additional bicyclists wishing to access the American River Parkway Trail into the local trails throughout Eureka Village and the Gold River Community that are not designed for heavy bicycle use (Eureka Village is shown on **Figure 2.1.1-1**). Residents in opposition expressed concern that these additional bicyclists and pedestrians would present an increased risk to neighborhood security, would result in insurance and legal liability to the Gold River Community Association, and would result in uses of local walking paths that are inconsistent with their designs. Furthermore, residents in opposition to the connection identified the potential for the public to use the Eureka Village streets for parking, if a light rail station is constructed in the future near the south side of the proposed interchange. They expressed concerns that commuters wishing to use the light rail station would park in Eureka Village and walk or bike across the Rancho Cordova Parkway Interchange bridge to the light rail station, as an alternative to crossing U.S. 50 on Sunrise Boulevard or Hazel Avenue and then driving on Folsom Boulevard to park at the light rail station.

Conversely, in individual communications to City staff, other residents of the Gold River Community and members of the Sacramento Area Bicycle Advocates expressed strong support for the bicycle/pedestrian connection, primarily because opportunities for bicycle and pedestrian connectivity would be increased throughout the area, and in particular across U.S. 50, where opportunities for bicycle and pedestrian crossings are limited. Local business owners also advocated for the bicycle/pedestrian connection because it would provide convenient, nonvehicular access for Eureka Village and Gold River Community residents to existing and planned retail centers and dining/entertainment venues south of U.S. 50.

After carefully and fully considering the comments and concerns of the Gold River residents as well as the Sacramento Area Bicycle advocates, the City has decided to drop the bicycle/pedestrian connection to the Eureka Village from the proposed project. The proposed project still includes bicycle lanes on the parkway with connections to the future trails within the Westborough Development and with Easton Valley Parkway.

## **Project Impacts**

**Table S-2** summarizes the results of the environmental studies, displaying the potential impacts for each alternative. Avoidance, minimization, and/or mitigation measures are

listed in **Appendix G**. CEQA-only impact determinations are provided in Chapter 3, “California Environmental Quality Act Evaluation.”

**Table S-2  
Summary of Potential Impacts from Alternatives<sup>1</sup>**

	<b>EIR/EA Section</b>	<b>Alternative 3 (Proposed Project) Potential Impacts</b>	<b>No Build Alternative Potential Impacts</b>
Land Use	2.1.1	Consistent with City’s General Plan and the Sacramento Area Council of Government’s (SACOG) MTP.	Regional development and growth assumptions would not be consistent with those in the City’s General Plan or the SACOG MTP.
Parks and Recreational Facilities	2.1.2	Construction: The project would temporarily affect access to two bicycle trails during construction. Long-Term: The project would not “use” recreational facilities during operation of the project.	No potential impacts.
Growth	2.1.3	Would accommodate the planned rate of growth in the area. The proposed project would not result in a change in the location, rate, type, or amount of growth planned under regional and local plans.	Inadequate levels of service (LOS) and severe traffic congestion that could constrain and/or displace growth.
Community Impacts	2.1.4	Would improve community connectivity and mobility through the area. Would not divide an established community.	May result in decrease in quality of life because of increased traffic congestion.
Relocations	2.1.5	Potential business relocation.	No potential impacts
Environmental Justice	2.1.6	No disproportionate impacts to minority or low-income populations.	No potential impacts.
Utilities/Emergency Services	2.1.7	Construction: Temporary delays to emergency vehicles along existing roadways. Long-term: Beneficial effects to traffic circulation over the No Build alternative.	Potential to obstruct or delay emergency vehicles due to worsening LOS and severe traffic congestion.
Traffic and Transportation/ Pedestrian and Bicycle Facilities	2.1.8	Construction: Temporary increases in traffic congestion during construction. Long-Term: Improvement over future No Build alternative in freeway operations and intersections, with the exception of unacceptable operation of Rancho Cordova Parkway/U.S. Highway 50 eastbound ramp intersection under 2037 conditions.	Inadequate LOS and severe traffic congestion.
Visual/Aesthetics	2.1.9	Construction: Temporary visual impacts associated with on-site storage of construction materials and debris, removal of vegetation, and other construction activities; nighttime “spillover” lighting and glare from construction and operation; removal of trees and other mature vegetation. Long-term: Visual impacts resulting from the interchange structure profile.	No potential impacts.

Summary

	<b>EIR/EA Section</b>	<b>Alternative 3 (Proposed Project) Potential Impacts</b>	<b>No Build Alternative Potential Impacts</b>
Cultural Resources	2.1.10	Potential for harm to undiscovered cultural resources.	No potential impacts.
Hydrology and Floodplain	2.2.1	May encounter groundwater during pile installation activities, and dewatering may be required during construction; however, this would not be expected to substantially impact groundwater supplies or groundwater recharge. Would result in minor changes in the hydrology of the immediate project area; no increase in flooding risk is anticipated. Would result in increase in impervious surface that is not anticipated to be of concern for groundwater recharge.	No potential effects.
Water Quality and Stormwater Runoff	2.2.2	Construction: Increased sedimentation and erosion from construction activities; disruption of groundwater monitoring activities on Aerojet property; contaminated groundwater and monitoring wells.	No potential impacts.
Geology/Soils/ Seismic/ Topography	2.2.3	Expansive soils would cause settlement.	No potential impacts.
Hazardous Waste/Materials	2.2.4	Construction: Exposure and disposal of PCBs; handling of hazardous materials during construction; potential to disturb previously unidentified contaminated soils during project construction.	No potential impacts.
Air Quality	2.2.5	Construction-related air pollutant emissions and air toxics.	No potential construction impacts; worsening traffic LOS would contribute to worsening air quality in and around the project area.
Noise	2.2.6	Construction-related and operational traffic noise.	No potential impacts.
Biological Environment	2.3	Indirect effects to natural communities within the project area; impacts to aquatic resources; indirect damage to trees identified for preservation during construction; impacts to native trees; degradation of habitat for midvalley fairy shrimp and other aquatic invertebrates; direct and indirect impacts to vernal pool and seasonal wetland habitat that supports special-status invertebrate species; construction effects to western spadefoot toad; construction effects to the northwestern pond turtle; western burrowing owls may be affected; during project construction, impacts to other raptor species; loss of active raptor nests impacts to nesting birds; indirect effects to vernal pool fairy shrimp and vernal pool tadpole shrimp habitat; effects to valley elderberry longhorn beetle (VELB); direct loss of a VELB through habitat (elderberry shrub) removal; disturbance of active Swainson's hawk nests; construction effects to Swainson's hawk nests; loss of Swainson's hawk foraging habitat.	No potential impacts.

Notes: 1. See Chapter 3 for CEQA significance determinations.

## Coordination with Other Agencies

**Table S-3** notes the permits, reviews, and approvals from other agencies that may be required for project construction:

**Table S-3  
Required Permits, Reviews, and Approvals**

Agency	Permit/Approval
U.S. Army Corps of Engineers	404 Permit
U.S. Fish and Wildlife Service	Section 7 Consultation; Biological Opinion
U.S. Bureau of Reclamation	Encroachment Permit
Federal Highway Administration	Project-level Conformity Determination for Federal Air Quality Standards
State Water Resources Control Board and Regional Water Quality Control Board, Central Valley Region	Notice of Intent for coverage under the National Pollutant Discharge Elimination System permit and Stormwater Pollution Prevention Plan
California Department of Fish and Wildlife	Potential streambed alteration agreements and 2081 Take Permit for Threatened and Endangered Species
State Historic Preservation Office	Section 106 Coordination
California Department of Transportation (Caltrans)	Encroachment permit(s) required for work within Caltrans' right-of-way
County of Sacramento (County)	Approval of site development permits/plans in the project area within the County
	County right-of-way and property acquisition
City of Rancho Cordova (City)	City right-of-way and property acquisition
	Approval of site development permits/plans in the project area within the City



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## List of Abbreviated Terms

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
ACM	asbestos-containing materials
ADA	Americans with Disabilities Act
ADI	Area of Direct Impact
ADL	aerially deposited lead
APE	Area of Potential Effects
BA	Biological Assessment
Blueprint	Preferred Blueprint Scenario
BMP	best management practice
BSA	biological study area
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQ	Council for Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation Liability Information System
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CIDH	cast-in-drilled-hole
CIP	Capital Improvement Plan
City	City of Rancho Cordova
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO Protocol	Transportation Project-Level Carbon Monoxide Protocol
County	Sacramento County

CRHR	California Register of Historical Resources
CSMP	Corridor System Management Plan
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
dbh	diameter at breast height
DIB	Design Information Bulletin
DOF	California Department of Finance
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EA	Environmental Assessment
EB	eastbound
EIR	Environmental Impact Report
EIR/EA	Environmental Impact Report/Environmental Assessment
EIS	Environmental Impact Statement
EJ	environmental justice
EO	Executive Order
ESA	Environmentally Sensitive Area
ESL	Environmental Study Limits
FCAA	Federal Clean Air Act
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GGG	giant garter snake
GHG	greenhouse gas
HHS	U.S. Department of Health and Human Services
HOV	high-occupancy vehicle
HPSR	Historic Property Survey Report
HSA	Hydrologic Sub-Area
IC	interchange
ISA	Initial Site Assessment

L <sub>eq</sub>	energy-equivalent noise level
L <sub>eq</sub> (h)	The noisiest hour expressed as the energy-average of the A-weighted noise level occurring during a 1-hour period
L <sub>dn</sub>	day-night average noise level
LOS	level of service
MBTA	Migratory Bird Treaty Act
mph	miles per hour
MS4	Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MSAT	mobile source air toxic
MTIP	Metropolitan Transportation Improvement Plan
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NB	northbound
NDMA	nitrosodimethylamine
NEPA	National Environmental Policy Act
NES	Natural Environmental Study for the Rancho Cordova Parkway Interchange
NFRAP	No Further Remedial Action Planned
NOAA	National Oceanic and Atmospheric Administration
NOA	naturally occurring asbestos
Noise Protocol	Caltrans Traffic Noise Analysis Protocol (August 2006)
NOP	Notice of Preparation
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OC	overcrossing
O <sub>3</sub>	ozone
PA	Programmatic Agreement
Pb	lead
PCB	polychlorinated biphenyl

*List of Abbreviated Terms*

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Planning Area	Rancho Cordova General Plan Planning Area
PM	postmile
PM <sub>10</sub>	particulate matter 10 micrometers in diameter or smaller
PM <sub>2.5</sub>	particulate matter 2.5 micrometers in diameter or smaller
POC	pedestrian overcrossing
ppm	parts per million
PRC	California Public Resources Code
Railroad Corridor	Sacramento Regional Transit District Light Rail and Union Pacific Railroad tracks
RAP	Relocation Assistance Program
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
RSA	Resource Study Area
RT	Regional Transit
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
Sac RT	Sacramento Regional Transit
SB	southbound
SDCP	Sunrise-Douglas Community Plan
SHPO	State Historic Preservation Officer
SHS	State Highway System
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO <sub>2</sub>	sulfur dioxide
SPA	Special Planning Area
SR	State Route
SRSP	Sunridge Specific Plan
SSHCP	South Sacramento Habitat Conservation Plan
STIP	State Transportation Improvement Program
SWDR	Storm Water Data Report

SWMP	Storm Water Management Plan
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCE	trichloroethylene
TCZ	temporary construction zone
TDM	Transportation demand management
TMDL	Total Maximum Daily Load
TOS	Traffic Operations Systems
TSM	transportation system management
UPRR	Union Pacific Railroad
U.S. 50	U.S. Highway 50
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VELB	valley elderberry longhorn beetle
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
VOC	volatile organic compound
vph	vehicles per hour
WB	westbound
WEAP	Worker Environmental Awareness Program



# Chapter 1. Proposed Project

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## 1.1. Introduction

The City of Rancho Cordova (City), in cooperation with the California Department of Transportation (Caltrans) as assigned by the Federal Highway Administration (FHWA), the U.S. Bureau of Reclamation (USBR), and the County of Sacramento (County), is proposing to construct a new interchange over U.S. Highway 50 (U.S. 50) between Sunrise Boulevard and Hazel Avenue in Rancho Cordova, California, as well as a new four-lane arterial extending south from the new interchange to White Rock Road. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). The City is the lead agency under the California Environmental Quality Act (CEQA).

**Figure 1.1-1**, Project Vicinity Map, shows the project and surrounding areas and streets. The interchange would be a “south-only” connection and would also include construction of a new arterial street, called Rancho Cordova Parkway. Rancho Cordova Parkway would extend from the new interchange south to White Rock Road.

The proposed project is located partially within the city and partially in unincorporated Sacramento County as illustrated in **Figure 1.1-2**. The project would construct auxiliary lanes along U.S. 50 (between postmiles 12.5 and 15.8), which is a federal highway under the jurisdiction of Caltrans. The project ~~site area~~ north of U.S. 50 is within Sacramento County. The Folsom South Canal is under the jurisdiction of the USBR. The City will be managing the construction contract for this project.

Funding for the proposed project has been identified from local developer funds; however, the City also is pursuing federal funds for construction of the project. Federal funding is expected to be secured by summer 2015. The cost of project development and construction is estimated to be \$100 million in 2010 dollars.

The proposed project is identified in the 2035 Metropolitan Transportation Plan (MTP), which was approved on March 20, 2008. The MTP is the long-range transportation plan for the Sacramento region. The proposed project also is included in the ~~2011–~~ 2014/2013/16 Metropolitan Transportation Improvement Plan (MTIP), which was approved on ~~December 14, 2010~~ August 16, 2012. The MTIP contains the short-term listing of surface transportation projects that receive federal funds, are subject to a federally required action, or are regionally significant. The proposed project name in the ~~2011/2014~~ 2013/16 MTIP is the “U.S. 50/Rancho Cordova Pkwy. Interchange” and the project number is SAC24220.

The City’s 2009–2014 Capital Improvement Plan (CIP) represents a five-year transportation capital improvement plan for Rancho Cordova. The CIP identifies 42 projects within the city limits that would provide various improvements during the plan period. The improvements include but are not limited to street extensions, traffic signals, bikeway improvements, a pilot shuttle project, landscape improvements, and bridge replacements. The estimated cost for all recommended improvements in the five-year plan period is approximately \$208.7 million, with costs ranging from \$40,000 (for a traffic calming project) to \$119,401,000 (for the proposed Rancho Cordova Parkway Interchange).

## **1.2. Purpose and Need**

### **1.2.1. Background and History**

The County’s General Plan has long envisioned the project area and the surrounding area as an important residential, recreational, and commercial center. Prior to the development in the late 1980s of the Gold River Community, located north of U.S. 50, traffic congestion along Sunrise Boulevard was identified as an issue requiring resolution. As a result, the initial 1988 Gold River General Development Plan granted the County an offer of dedication of right-of-way, designated as an “interchange study area.” Then, as a condition of approval of the Gold River Unit 17 subdivision in 1992, the Natomas Land Company dedicated “Freeway Interchange Lot (Lot C)” to the County, to provide an additional access point to U.S. 50 from the south; this improvement then was incorporated into the County’s General Plan, adopted in 1993.

Prior to the incorporation of Rancho Cordova, a lengthy planning process was undertaken and documented in the Cordova Community Plan, prepared by the County and adopted by the Board of Supervisors on May 21, 2003. That plan recognized that the character of the project area has been changing; important job centers have formed around U.S. 50, and, because of this, an imbalance between jobs and housing has occurred in this portion of the county. This imbalance has led to the need for enhanced mobility for automobiles, transit, bicycles, and pedestrians. Specifically, the plan called for new roadway connections to enhance regional circulation and provide additional linkages (e.g., pedestrian structures) across U.S. 50. The Cordova Community Plan also identified a new interchange on U.S. 50 in the location of the proposed project.

The Sunrise-Douglas Community Plan/Sunridge Specific Plan Final Environmental Impact Report, prepared by Sacramento County in November 2001, assessed the impacts of the urbanization of 6,042 acres within the plan area. To mitigate for the increased traffic that would result from the development of the plan area, mitigation TC-28 in the

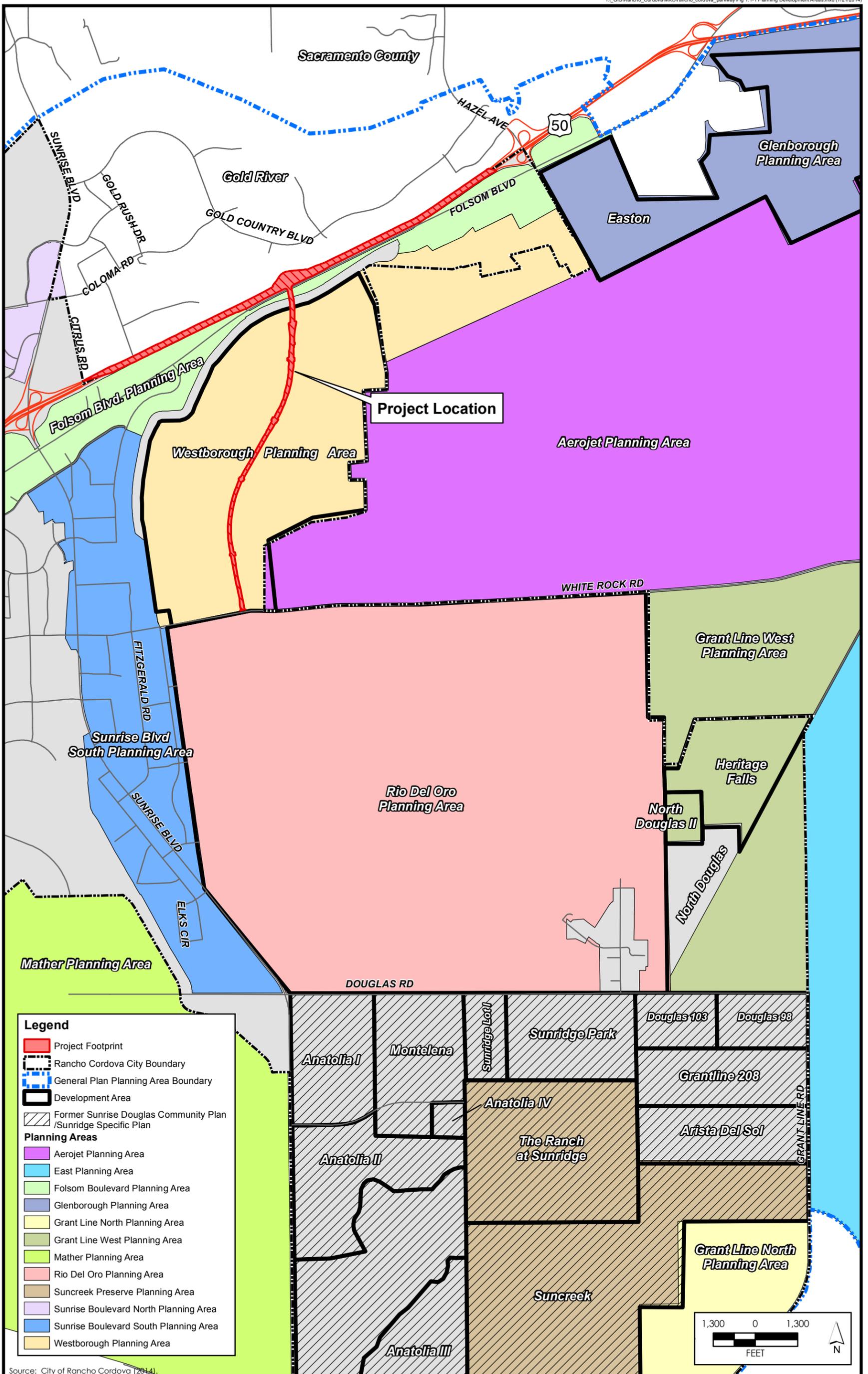
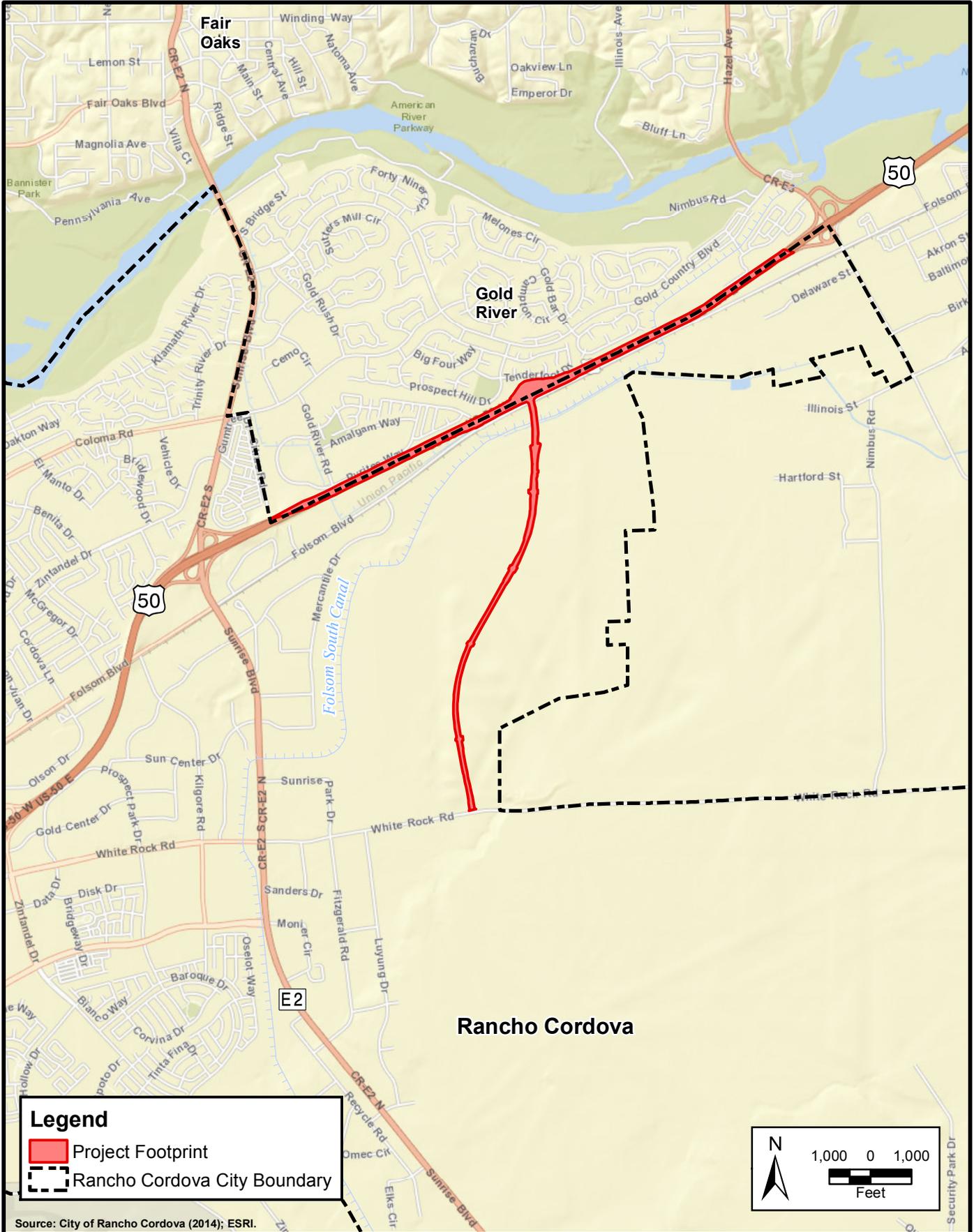


Figure 1.1-1  
Project Vicinity





T:\GIS\Projects\Projects\cordova\_parkway\Project Location.mxd (7/21/2014)



**Legend**

- Project Footprint
- Rancho Cordova City Boundary

N

1,000 0 1,000

Feet

Source: City of Rancho Cordova (2014); ESRI.



City of Rancho Cordova  
Planning Department

**Figure 1.1-2**  
Project Location



Final EIR required developers within the plan area to contribute funding for the construction of a new, ultimate six-lane, south-only roadway to connect Douglas Road to U.S. 50 at the location of the proposed Rancho Cordova Parkway Interchange.<sup>2</sup>

The proposed interchange is the first major roadway infrastructure project initiated by the City. The City, in partnership with the County, began work on the design of the proposed project in September 2004.

### 1.2.2. Purpose

The proposed project is intended to address the existing operational deficiencies of U.S. 50 and adjacent arterial roadways as well as the anticipated future growth in the project area. The project would help to achieve the following objectives:

- Relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue south of U.S. 50.
- Improve traffic operations at the U.S. 50/Sunrise Boulevard and U.S. 50/Hazel Avenue interchanges.
- Maintain acceptable levels of service (LOS) on U.S. 50 and at existing access points to U.S. 50 under existing and future conditions.
- Provide additional access to and from U.S. 50 and planned developments.
- Improve emergency access within the City of Rancho Cordova.
- Provide access to regional transit facilities and park-and-ride lots, where feasible.

### 1.2.3. Need

Because of existing and planned growth within the city and the surrounding communities, the need has arisen to provide additional access to U.S. 50 from the south, where limited points of access are currently provided.

Currently, traffic through and around the project area operates at unacceptable levels of service in several areas, including the eastbound freeway mainline during the PM peak traffic hour, key freeway ramp junctions, and key roadway intersections.

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<sup>2</sup> The Sunrise-Douglas Community Plan/Sunridge Specific Plan Final EIR identified this future roadway as “Jaeger Road.” The name of this proposed roadway has since been changed to “Rancho Cordova Parkway.” This Plan is no longer in effect and has been superceded by the City’s adoption of its General Plan and development-specific approvals. Sunridge Specific Plan Zoning Condition 48 associated with the timing of the proposed project has been applied to development projects.

The City’s General Plan anticipates the addition of 53,480 new housing units and 55,199 new jobs within the current city limits by 2030. Much of this growth is anticipated to occur east of Sunrise Boulevard and south of U.S. 50, near the project [sitearea](#). The existing street network in the project vicinity and south of U.S. 50 consists of two-lane arterial roadways, used primarily by commuters traveling between Elk Grove and the U.S. 50 corridor. Currently, Sunrise Boulevard is the only route that provides direct access to U.S. 50 from this area.

The new developments in the project area that are proposed or approved in the City’s General Plan could be constructed without construction of the interchange [and roadway connection](#); however, resulting increases in traffic would likely have a negative impact on traffic operations and safety on existing local roadways. The proposed [projectinterchange](#) would help to accommodate traffic needs resulting from these developments, which are necessary to provide adequate housing for existing and planned job center uses in and adjacent to the city.

The proposed project is part of the 50 Corridor Mobility Partnership’s list of near-term priority projects. To achieve and maintain acceptable operations along U.S. 50 and on Hazel Avenue, several improvement projects are planned, including constructing auxiliary lanes on U.S. 50 between Sunrise Boulevard and Scott Road in the eastbound and westbound directions, the extension of high-occupancy vehicle (HOV) lanes from the project [sitearea](#) to Watt Avenue in Sacramento, and the widening of Hazel Avenue north of U.S. 50 (currently under construction). Additionally, the extension of Hazel Avenue south to White Rock Road<sup>3</sup> and the “short-term mobility project” to extend the U.S. 50 eastbound auxiliary lane between Hazel Avenue and Folsom Boulevard are anticipated by 2023. The Sacramento Area Council of Governments (SACOG) is planning new projects that would connect Elk Grove to El Dorado County to the south of the project site. However, none of these improvements are anticipated to reduce congestion on Sunrise Boulevard and address the traffic demands projected for the planned growth in Rancho Cordova.

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<sup>3</sup> Note: In SACOG’s Draft Final 2035 Metropolitan Transportation Plan/Sustainable Communities Strategy List of Projects (updated February 2012) the extension to Easton Valley Parkway is the only portion that is fully funded. The extension through Aerojet’s property has been deemed infeasible in the 2035 time frame.

### 1.2.3.1. Social Demands/Economic Development/Legislation

U.S. 50 is a major regional highway, connecting Sacramento and the Central Valley with Lake Tahoe and the Sierra Nevada. In the Sacramento metropolitan area, U.S. 50 serves as an important commuter route between downtown Sacramento and the northeast suburban communities of Carmichael, Fair Oaks, Folsom, Orangevale, Rancho Cordova, and western El Dorado County.

Rancho Cordova is centrally located in the Sacramento region and has a substantial job base and an older housing stock that cannot house the city's entire workforce. By 2025, Rancho Cordova is anticipated to grow from a 2010 population of approximately 62,000<sup>4</sup> to an approximate population of 169,100,<sup>5</sup> which is an increase of more than 207 percent. Much of this growth will occur in developments located in the southern and eastern portions of the city, for which Sunrise Boulevard currently serves as the major connection to U.S. 50.

Within and surrounding the project area, land uses include single-family residential, commercial, and vacant industrial/warehouse. Current vacant industrial/warehouse land use areas are in transition to single-family residential.

Although the City's General Plan includes actions to attract a full-service hospital to Rancho Cordova, there are currently no full-service hospitals within the city limits. The nearest full-service hospitals are located in Carmichael (Mercy San Juan), Sacramento (UC Davis, Kaiser, Shriner's, Sutter General, and Mercy General), and Folsom (Mercy Hospital of Folsom). The ability to quickly reach U.S. 50 to travel to these hospitals is critical to emergency patient transport and care.

The proposed project falls within the jurisdiction of several agencies, including the City, County, USBR, Caltrans, and FHWA. Caltrans, in its Highway 50 Corridor System Management Plan (Caltrans District 3, 2009), has identified LOS F as the 20-year concept LOS for the segment of U.S. 50 within the project [sitearea](#). The County's General Plan establishes LOS E as the LOS standard for areas within the Urban Services Boundary, which includes the project [sitearea](#). For the purposes of this Environmental Impact Report/Environmental Assessment (EIR/EA), LOS E is used as the analysis evaluation criteria for freeway mainline, weaving sections, ramp junctions, and ramp metering operations. The City has identified LOS D as the minimum LOS for roadways and intersections within the city limits (although roadway facilities can operate below

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<sup>4</sup> State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change, January 1, 2009 and 2010. Sacramento, California, May 2010.

<sup>5</sup> City of Rancho Cordova General Plan Draft Environmental Impact Report, Section 4.3 Population and Housing, March 2006.

LOS D under certain circumstances identified in the City’s General Plan Circulation Element). **Table 1.2.3-1** shows each jurisdiction, study facility, and associated LOS threshold.

**Table 1.2.3-1  
Concept LOS for Study Facilities**

Study Facility	Jurisdiction	LOS Threshold
<b>Freeway Facilities</b>		
U.S. 50 mainline between Zinfandel Drive and Folsom Boulevard interchanges	Caltrans	LOS F
<b>Ramp Junctions</b>		
U.S. 50/Hazel Avenue eastbound off-ramp U.S. 50/Hazel Avenue eastbound loop on-ramp U.S. 50/Hazel Avenue eastbound slip on-ramp U.S. 50/Hazel Avenue westbound off-ramp U.S. 50/Hazel Avenue westbound loop on-ramp U.S. 50/Hazel Avenue westbound slip on-ramp U.S. 50/Sunrise Boulevard eastbound off-ramp U.S. 50/Sunrise Boulevard eastbound loop on-ramp U.S. 50/Sunrise Boulevard eastbound slip on-ramp U.S. 50/Sunrise Boulevard westbound off-ramp U.S. 50/Sunrise Boulevard westbound loop on-ramp U.S. 50/Sunrise Boulevard westbound slip on-ramp U.S. 50/Rancho Cordova Parkway eastbound on-ramp (proposed) U.S. 50/Rancho Cordova Parkway westbound on-ramp (proposed) U.S. 50/Rancho Cordova Parkway eastbound off-ramp (proposed) U.S. 50/Rancho Cordova Parkway westbound off-ramp (proposed)	Caltrans	LOS E
<b>Intersections</b>		
Sunrise Boulevard eastbound U.S. 50 off-ramp terminal intersection Sunrise Boulevard westbound U.S. 50 off-ramp terminal intersection Hazel Avenue eastbound U.S. 50 off-ramp terminal intersection Hazel Avenue westbound U.S. 50 off-ramp terminal intersection Rancho Cordova Parkway/westbound U.S. 50 ramps intersection (proposed) Rancho Cordova Parkway/eastbound U.S. 50 ramps intersection (proposed) Hazel Avenue/Folsom Boulevard Grant Line Road/White Rock Road	Sacramento County	LOS E
Sunrise Boulevard/Folsom Boulevard Rancho Cordova Parkway/White Rock Road	City of Rancho Cordova	LOS D <sup>1</sup>

<sup>1</sup> City of Rancho Cordova General Plan policies C.1.2 and C.1.3 allow for reduced LOS conditions when such operations would be infeasible and/or conflict with the achievement of other goals.

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010 and March 2011 and April 2011 technical memorandums

### 1.2.3.2. Capacity and Level of Service

Fehr & Peers prepared a traffic analysis for the proposed project (August 2010) with updated analysis of baseline (2005) conditions and the evaluation of additional intersections in March and April 2011. The results of the traffic model indicate the need for a new interchange that will accommodate current and future traffic volumes at an acceptable LOS.

#### **Freeway Mainline Level of Service**

**Table 1.2.3-2** summarizes the existing AM and PM peak hour LOS on U.S. 50 between Sunrise Boulevard and Hazel Avenue. Currently, the freeway mainline segments studied operate acceptably at LOS E or better during both AM and PM peak hours, except for eastbound U.S. 50 between Sunrise Boulevard and Hazel Avenue, which operates unacceptably at LOS F during the PM peak hour.

**Table 1.2.3-2  
Freeway Mainline LOS—Existing Conditions**

Freeway Mainline	AM Peak Hour		PM Peak Hour	
	LOS <sup>1</sup>	Density <sup>2</sup>	LOS	Density
Eastbound—Sunrise Boulevard to Hazel Avenue	D	32	<b><u>F</u></b>	<b><u>64</u></b>
Westbound—Hazel Avenue to Sunrise Boulevard	E	38	C	23

Note: Bold font with underscore indicates unacceptable operations.

<sup>1</sup> LOS = level of service

<sup>2</sup> Density is measured in vehicles per mile per lane.

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

Under future conditions, freeway mainline operations would deteriorate. **Table 1.2.3-3** summarizes projected 2037 AM and PM peak hour LOS on the U.S. 50 mainline between Sunrise Boulevard and Hazel Avenue, as they would be with and without the proposed interchange construction.

**Table 1.2.3-3  
2037 Freeway Mainline Operations**

Freeway Mainline	No Build		Alternative 3	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Eastbound—Sunrise Boulevard to Hazel Avenue	E/39	E/39	N/A <sup>1</sup>	
Westbound—Hazel Avenue to Sunrise Boulevard	D/29	D/32		
Eastbound—Sunrise Boulevard to Rancho Cordova Parkway	N/A <sup>2</sup>		D/35	E/35
Eastbound—Rancho Cordova Parkway to Hazel Avenue			<b>F/46</b>	<b>F/53</b>
Westbound—Hazel Avenue to Rancho Cordova Parkway			C/25	D/30
Westbound—Rancho Cordova Parkway to Sunrise Boulevard			D/26	D/30
Eastbound—Zinfandel Drive to Sunrise Boulevard	<b>F/103</b>	<b>F/102</b>	<b>F/92</b>	<b>F/89</b>
Westbound—Zinfandel Drive to Sunrise Boulevard	E/36	E/37	D/32	D/33

Notes:

Bold font indicates unacceptable level of service (LOS) F conditions. LOS and density (in vehicles per lane per mile) are reported.

<sup>1</sup> N/A = not applicable

This study location does not exist under the alternative indicated. This segment of Sunrise Boulevard to Hazel Avenue would be bisected by the construction of the proposed project, and would become Sunrise Boulevard to Rancho Cordova Parkway and Rancho Cordova Parkway to Hazel Avenue under Alternative 3.

<sup>2</sup> N/A = not applicable

This study location does not exist under the alternative indicated. Under the No Build alternative, the proposed project would not be built, and this segment would remain as Sunrise Boulevard to Hazel Avenue.

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

Without the proposed project, freeway mainline LOS for the segment of U.S. 50 between Zinfandel Drive and Sunrise Boulevard would operate unacceptably, at LOS F in the eastbound during both AM and PM peak hours. With implementation of the project, freeway mainline operations would be improved.

**Freeway Corridor System Performance**

**Table 1.2.3-4** summarizes the current AM and PM peak hour freeway speeds for vehicles traveling on the U.S. 50 mainline between Zinfandel Drive and Folsom Boulevard (approximately 7 miles).

**Table 1.2.3-4  
Freeway Corridor Average Peak Hour Speed under Existing Conditions**

Route	Eastbound		Westbound	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Zinfandel Drive to Folsom Boulevard	67	50	53	63

Note:

The freeway speeds cited in this table are calculated based on a compilation of speeds for all vehicles using the 7-mile segment of U.S. 50 between the Zinfandel Drive interchange and the Folsom Boulevard interchange.

Source: Fehr & Peers, August 2010

**Table 1.2.3-5** shows the predicted 2037 average freeway speeds on the U.S. 50 freeway mainline from Zinfandel Drive to Folsom Boulevard. The speeds shown are an average of all vehicles, including those entering and exiting the corridor, between Zinfandel Drive and Folsom Boulevard.

**Table 1.2.3-5  
Freeway Corridor Average Peak Hour Speed  
in Design Year (2037) Conditions**

Route	Eastbound		Westbound	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
No Project	48	48	60	60
Alternative 3 (proposed project)	54	53	59	59
Alternative 3 (proposed project) plus Operational Improvements	52	55	60	59

Note:

The freeway speeds cited in this table are calculated based on a compilation of speeds for all vehicles using the 7-mile segment of U.S. 50 between the Zinfandel Drive interchange and the Folsom Boulevard interchange.

Source: Fehr & Peers, August 2010

As shown in **Table 1.2.3-5**, the average freeway speeds improve or remain virtually unchanged between the 2037 No Project and 2037 With Project conditions in the westbound direction; in the eastbound direction, the With Project conditions would result in a slightly better performance of the freeway mainline. Further improvements would result under 2037 With Project and Operational Improvements scenario.

**Freeway Ramp Junctions Level of Service**

**Table 1.2.3-6** summarizes the AM and PM peak hour LOS at ramp junctions within the project area.

**Table 1.2.3-6  
Existing Freeway Ramp Junctions Levels of Service**

Freeway Ramp Junction	AM Peak Hour		PM Peak Hour	
	LOS <sup>1</sup>	Density <sup>2</sup>	LOS <sup>1</sup>	Density <sup>2</sup>
Eastbound Sunrise Boulevard on-ramp	D	34	<b><u>F</u></b>	<b><u>68</u></b>
Westbound Sunrise Boulevard on-ramp	E	37	C	25
Eastbound Sunrise Boulevard off-ramp	D	35	<b><u>F</u></b>	<b><u>92</u></b>
Westbound Sunrise Boulevard off-ramp	E	35	C	27
Eastbound Hazel Avenue to Aerojet Road weave section	E	39	<b><u>F</u></b>	<b><u>44</u></b>
Westbound Hazel Avenue loop on-ramp	E	39	D	30
Westbound Hazel Avenue slip on-ramp	<b><u>F</u></b>	<b><u>44</u></b>	C	25
Eastbound Hazel Avenue off-ramp	D	29	<b><u>F</u></b>	<b><u>61</u></b>
Westbound Hazel Avenue off-ramp	E	39	<b><u>F</u></b>	<b><u>53</u></b>

Notes:

Bold font with underscore indicates unacceptable operations.

<sup>1</sup> LOS = level of service

<sup>2</sup> Density is measured in vehicles per mile per lane.

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

As shown in **Table 1.2.3-6**, although three of the studied freeway ramp junctions in the project area operate acceptably during both AM and PM peak hours, most operate at unacceptable levels during either the AM or PM peak hours.

**Table 1.2.3-7** summarizes projected 2037 LOS for freeway ramp junctions within the project area, as they would be with and without the proposed interchange construction. Under the 2037 scenario, the westbound Hazel Avenue slip on-ramp would no longer exist as it does under existing conditions. This would be because of the merging of the westbound Hazel Avenue loop on-ramp and slip on-ramp, to create only one merge point with U.S. 50, which is planned for completion by 2016. With the addition of cumulative traffic volumes generated by regional development, all Sunrise Boulevard freeway ramp junctions, except for the westbound Sunrise Boulevard off-ramp, would operate at LOS F during the AM and PM peak hours under 2037 conditions without the proposed interchange construction. All of the Hazel Avenue ramps would operate at acceptable LOS conditions under 2037 conditions without the proposed interchange construction. Under 2037 conditions with the proposed project, ramp operations at the

eastbound off-ramp and westbound off-ramp to the U.S. 50/Hazel Avenue interchange are expected to worsen. This would occur because the added capacity provided by the project would alleviate an existing bottleneck on eastbound U.S. 50, allowing a higher percentage of the peak hour demand to be served and arrive at the Hazel Avenue interchange. It is anticipated that the planned improvements to the U.S. 50/Hazel Avenue interchange will provide sufficient capacity to meet these future demands at acceptable operating conditions. Improvements to the Hazel Avenue interchange that would alleviate this condition are analyzed as part of a Project Study Report for the Hazel Avenue Interchange (see Section 2.1.8, “Traffic and Transportation/Pedestrian and Bicycle Facilities” for additional details). The proposed project is expected to improve operations from LOS F to acceptable LOS D conditions during PM peak hour conditions at the eastbound and westbound Sunrise Boulevard on-ramps.

**Table 1.2.3-7  
2037 Freeway Ramp Junctions Levels of Service  
With and Without Project**

Freeway Ramp Junction	No Build		Alternative 3 (Proposed Project)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Eastbound Sunrise Boulevard on-ramp	<b><u>F/92</u></b>	<b><u>F/88</u></b>	D/29	D/30
Westbound Sunrise Boulevard on-ramp	<b><u>F/50</u></b>	<b><u>F/50</u></b>	D/33	D/34
Eastbound Sunrise Boulevard off-ramp	<b><u>F/88</u></b>	<b><u>F/87</u></b>	<b><u>F/51</u></b>	<b><u>F/47</u></b>
Westbound Sunrise Boulevard off-ramp	D/30	D/33	D/31	E/38
Eastbound Hazel Avenue to Aerojet Road weave section	E/36	D/29	E/35	D/31
Westbound Hazel Avenue loop on-ramp	D/29	D/31	C/24	C/25
Eastbound Hazel Avenue off-ramp	E/38	E/40	<b><u>F/50</u></b>	<b><u>F/64</u></b>
Westbound Hazel Avenue off-ramp	C/24	D/30	C/27	<b><u>F/46</u></b>
Eastbound Rancho Cordova Parkway on-ramp	N/A <sup>1</sup>		D/34	E/42
Westbound Rancho Cordova Parkway on-ramp			C/24	C/27
Eastbound Rancho Cordova Parkway off-ramp			E/41	E/40
Westbound Rancho Cordova Parkway off-ramp			D/29	D/32

Note:  
 Bold font with underscore indicates unacceptable LOS F conditions. LOS and density (in vehicles per lane per mile) are reported.  
 Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

**Intersection Level of Service**

**Table 1.2.3-8** summarizes the existing conditions analysis resulting from key intersections within the project area. As shown below, all of the study intersections currently operate at acceptable levels during the AM peak hour, and all study intersections (except Sunrise Boulevard/White Rock Road) currently operate at unacceptable levels during the PM peak hour.

**Table 1.2.3-8  
Key Intersections Existing Level of Service and Delay**

Intersection	AM Peak Hour		PM Peak Hour	
	LOS <sup>1</sup>	Delay <sup>2</sup>	LOS	Delay
Sunrise Boulevard/Folsom Boulevard	D	37	<u>F</u>	<u>120</u>
Sunrise Boulevard/U.S. 50 EB Ramps	C	31	<u>F</u>	<u>149</u>
Sunrise Boulevard/U.S. 50 WB Ramps	D	46	<u>F</u>	<u>92</u>
Sunrise Boulevard/White Rock Road	D	41	D	47
Hazel Avenue/Folsom Boulevard	D	48	<u>F</u>	<u>127</u>
Hazel Avenue/U.S. 50 EB Ramps	B	14	<u>F</u>	<u>109</u>
Hazel Avenue/Tributary Point Drive/U.S. 50 WB Ramps	D	53	<u>F</u>	<u>129</u>
Grant Line Road/White Rock Road	C	20	<u>F</u>	<u>119</u>

Note:

Bold with underscore indicates unacceptable operations.

<sup>1</sup> LOS = level of service

<sup>2</sup> Delay is measured in seconds per vehicle.

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010, and April 2011 Technical Memorandum

As shown in **Table 1.2.3-9**, many of the project area intersections are projected to operate unacceptably at LOS F under the 2037 scenario; however, the proposed project and planned roadway improvements along the U.S. 50 corridor (e.g., Hazel Avenue interchange improvement project) are expected to improve overall operations in and around the project area (see Section 2.1.8, “Traffic and Transportation/Pedestrian and Bicycle Facilities” for further discussion).

**Table 1.2.3-9  
2037 Intersection Levels of Service With and Without Project**

Intersection	No Project		Alternative 3 (Proposed Project)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Sunrise Boulevard/Westbound U.S. 50 ramps	D(45)	<b>F(101)</b>	D(37)	D(44)
Sunrise Boulevard/Eastbound U.S. 50 ramps	D(43)	E(58)	C(24)	D(43)
Sunrise Boulevard/Folsom Boulevard	<b>F(104)</b>	<b>F(175)</b>	<b>F(82)</b>	<b>F(178)</b>
Hazel Avenue/Westbound U.S. 50 ramps	E(71)	E(69)	E(78)	<b>F(102)</b>
Hazel Avenue/Eastbound U.S. 50 ramps	D(49)	D(52)	E(59)	E(57)
Hazel Avenue/Folsom Boulevard	<b>F(94)</b>	<b>F(234)</b>	<b>F(186)</b>	<b>F(254)</b>
Rancho Cordova Parkway/Westbound U.S. 50 ramps	N/A <sup>1</sup>		C(24)	C(25)
Rancho Cordova Parkway/Eastbound U.S. 50 ramps			<b>F(265)</b>	<b>F(99)</b>
Sunrise Boulevard/White Rock Road	<b>F(85)</b>	E(75)	E(76)	E(68)
Rancho Cordova Parkway/White Rock Road	E(59)	E(62)	E(59)	E(66)
Grant Line Road/White Rock Road	E(61)	<b>F(86)</b>	E(56)	<b>F(84)</b>

Notes:

Bold font with underscore indicates unacceptable level of service (LOS) F conditions.

LOS and delay (in seconds per vehicle) are reported.

<sup>1</sup> N/A = not applicable.

This study intersection does not exist under the scenarios indicated.

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

**1.2.3.3. System Safety Needs**

The accident history was reviewed using data from Caltrans’ Traffic Accident Surveillance and Analysis System for a three-year period, from January 2006 to December 2008. This data is summarized in **Table 1.2.3-10**. Within the project area, 186 accidents occurred with no fatalities on the U.S. 50 mainline. The accident rate on eastbound and westbound U.S. 50 between Sunrise Boulevard and Hazel Avenue was lower than the average accident rate for similar freeway facilities.

All on- and off-ramps in the project area, except for the eastbound U.S. 50 off-ramp to Hazel Avenue, had higher accident rates than the average accident rate for similar facilities. The accident rates on both the westbound Sunrise Boulevard off-ramp and eastbound on-ramp from southbound Sunrise Boulevard were more than double the statewide average. For the eastbound on-ramp from northbound Sunrise Boulevard, the accident rate was nearly 25 percent higher than the statewide average. At the Hazel Avenue interchange, the accident rate for the northbound and southbound to westbound on-ramps were approximately 48 and 9 percent higher than the statewide average, respectively.

**Table 1.2.3-10  
Freeway Mainline and Ramp Accident History  
January 2006 to December 2008**

Location	Total Accidents	Total Fatalities	Actual Accident Rate <sup>1</sup>	Statewide Average Accident Rate
<b>Mainline</b>				
Eastbound U.S. 50—Sunrise Boulevard to Hazel Avenue	92	0	0.42	0.73
Westbound U.S. 50—Hazel Avenue to Sunrise Boulevard	94	0	0.42	0.73
<b>Ramps</b>				
Eastbound U.S. 50 on-ramp from southbound Sunrise Boulevard	15	0	<b><u>2.47</u></b>	0.70
Eastbound U.S. 50 on-ramp from northbound Sunrise Boulevard	5	0	<b><u>0.81</u></b>	0.65
Eastbound U.S. 50 off-ramp to Hazel Avenue	11	0	0.80	1.20
Westbound U.S. 50 on-ramp from northbound Hazel Avenue	2	0	<b><u>1.04</u></b>	0.70
Westbound U.S. 50 on-ramp from southbound Hazel Avenue	10	0	<b><u>0.71</u></b>	0.65
Westbound U.S. 50 off-ramp to Sunrise Boulevard	43	0	<b><u>3.20</u></b>	1.20

## Notes:

Bold font with underscore indicates that the actual accident rate on this segment is greater than the statewide average accident rate for similar facilities.

<sup>1</sup> For mainline sections, the rate is accidents per million vehicle-miles. For the ramps, the rate is accidents per million vehicles.

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

The majority of mainline accidents were rear-end (46 percent) and hit-object (26 percent) collisions. Rear-end collisions on the mainline likely are caused by traffic congestion near the on- and off-ramps. Similarly, the majority of ramp accidents also were rear-end collisions (49 percent). The high percentage of rear-end accidents on the off-ramps likely are caused by queuing downstream from Sunrise Boulevard and Hazel Avenue. For the eastbound on-ramp at the Sunrise Boulevard interchange, excessive speed was cited as a contributing factor, and approximately 60 percent of the accidents on this ramp were rear-end collisions.

#### **1.2.3.4. Roadway Deficiencies**

Traffic congestion in the project area occurs at various locations during both AM and PM peak hours. Some notable congested locations on U.S. 50 include:

- Westbound U.S. 50 mainline at the U.S. 50/Folsom Boulevard interchange (upstream of the project area) as traffic merges in from the westbound on-ramp during the AM peak hour.
- The slip on-ramp from Sunrise Boulevard to westbound U.S. 50 during the AM peak hour.
- The eastbound U.S. 50 off-ramps at both Hazel Avenue and Sunrise Boulevard during the PM peak hour.

During peak hours, heavy congestion also occurs on Hazel Avenue, particularly in the southbound direction during the AM and northbound direction during the PM to/from U.S. 50. Northbound and southbound traffic on Sunrise Boulevard also experiences heavy congestion, particularly during the PM peak hour.

Existing north–south local travel in the project area that is associated with current land use patterns and limited American River crossings contribute to overall congestion on the U.S. 50 mainline between Sunrise Boulevard and Hazel Avenue. For example, to reach employment centers in Rancho Cordova south of U.S. 50, a considerable percentage of motorists travel from southbound Hazel Avenue to westbound U.S. 50 to southbound Sunrise Boulevard during the AM peak hour. The reverse movement during the PM peak hour also adds to freeway congestion.

#### **1.2.3.5. Modal Interrelationships and System Linkages**

##### ***Transit Linkages***

The Sacramento Regional Transit (Sac RT) light rail line runs parallel to Folsom Boulevard through the project area. The nearest transit system linkage to the project area would be the Sac RT light rail stations at Sunrise Boulevard and Hazel Avenue. Access to light rail is not currently planned at the proposed Rancho Cordova Parkway Interchange because the portion of the project that intersects with the Sac RT light rail line would be a bridge structure, which is necessary to allow clearance of the new connection from U.S. 50 over Folsom Boulevard, the Union Pacific Rail Road (UPRR) tracks, the Sac RT light rail tracks, and the Folsom South Canal. (Construction of an at-grade crossing over these features is infeasible, because of their proximity to U.S. 50 and the height requirements necessary for the interchange structure over the highway.) Because the crossing of the

proposed interchange and roadway connection would be approximately 23.5 feet above the grade of the RT tracks, a vehicular connection to the light rail station below the bridge structure would not be possible. A pedestrian ramp that complies with the Americans with Disabilities Act (ADA) requirements could be constructed in the future to provide pedestrian and bicycle access to the light rail station.

### ***Regional Transportation System Linkages***

The proposed Rancho Cordova Parkway Interchange and roadway extension would be a critical link in the city's transportation system and in the transportation system along the U.S. 50 corridor. The Rancho Cordova Parkway Interchange and roadway extension is identified in the City's General Plan Circulation Element as an ultimate six-lane expressway and also identified in the City's CIP as a "critical portion of the City's transportation backbone" that is needed to serve development east of Sunrise Boulevard. It is also included in SACOG's 2035 MTP.

The proposed project would provide additional connectivity to the south of U.S. 50 between Sunrise Boulevard and Hazel Avenue, which would help reduce existing and anticipated congestion on Sunrise Boulevard and would serve development planned for areas east of Sunrise Boulevard.

### ***Bicycle and Pedestrian Access Improvements***

The project will provide bicycle and pedestrian connections along Rancho Cordova Parkway between White Rock Road and Easton Valley Parkway, ultimately connecting to the bicycle lane and bicycle trail system in the future Westborough development. When combined with the Westborough system, the project bicycle facilities will allow access to residential and commercial properties, making several connections to the City's main trail system and the Folsom South Canal trail. Additional connections across the Folsom South Canal will provide bicycle and pedestrian access to RT's Regional Transit's Sunrise light rail station and to the future Mine Shaft light rail station.

~~Currently, pedestrian and bicycle access across U.S. 50 within the project area is provided at the Citrus Road undercrossing (1.5 miles west of the proposed interchange), a pedestrian/bicycle overcrossing immediately east of Hazel Avenue, and along the Folsom South Canal (0.75 miles east of the proposed interchange). By incorporating bicycle lanes and sidewalks adjacent to the roadway along the length of the project area, an additional north-south access between White Rock Road and Gold Country Boulevard would be created and north-south mobility for bicyclists and pedestrians would be improved.~~

#### 1.2.4. Project Description

This section describes the proposed action and the design alternatives that were developed to meet the identified need through accomplishing the defined purpose, while avoiding or minimizing environmental impacts. The alternatives are Alternative 3 (proposed project) and the No Build (2037 Conditions without the Project) alternative.

As previously stated, because of existing and planned growth within the city and the surrounding communities, the need has arisen to provide additional access to U.S. 50 from the south, where limited points of access currently are provided. The proposed project is intended to address the existing operational deficiencies of U.S. 50 and adjacent arterial roadways as well as anticipated future growth in the project area.

This project is part of the 50 Corridor Mobility Partnership’s list of near-term priority projects. This partnership is a public/private effort to provide a unified solution for transportation improvements in an area that is already congested and/or will experience more traffic congestion in future years.

In addition to near-term priority projects, the City will commit to opening the interchange project after or concurrently with the opening of following roadway projects. These projects are located partially or entirely outside the City’s jurisdiction. Therefore, the City will also commit to working with outside jurisdictions to ensure that these projects are completed in a timely manner.

- An “at-grade” extension of Hazel Avenue (Nimbus Road) south from Folsom Boulevard to Easton Valley Parkway—The City anticipates that this project would be constructed as a condition of approval for the Glenborough at Easton project. Glenborough is conditioned to extend Hazel Avenue from its current terminus at Folsom Boulevard, southward to proposed Easton Valley Parkway. Glenborough condition of approval number 97 describes this initial improvement as an “at-grade” connection.
- Extension of Easton Valley Parkway from Rancho Cordova Parkway to Hazel Avenue (Nimbus Road).
- U.S. 50 eastbound transition auxiliary lane from Hazel Avenue through the Folsom Boulevard overcrossing.

To achieve and maintain acceptable operations along U.S. 50 and on Hazel Avenue, several transportation improvement projects have been constructed, including the extension of HOV lanes from the project [sitearea](#) to Watt Avenue in Sacramento, the

widening of Hazel Avenue north of U.S. 50, and improvements to the Hazel Avenue interchange. Planned projects include SACOG’s “Regional Connector” connecting Elk Grove to El Dorado County to the south of the project site. In addition, Caltrans’ Corridor System Management Plan has listed the U.S. 50 auxiliary lane projects to construct eastbound and westbound auxiliary lanes on U.S. 50 from Sunrise Boulevard to Scott Road. These auxiliary lane projects are subject to availability of local funding and can be considered long-term projects. Other long-term projects include the extension of Hazel Avenue south to White Rock Road.

### 1.2.5. Alternatives

The criteria established by the Project Development Team for evaluating a project alternative includes whether the alternative:

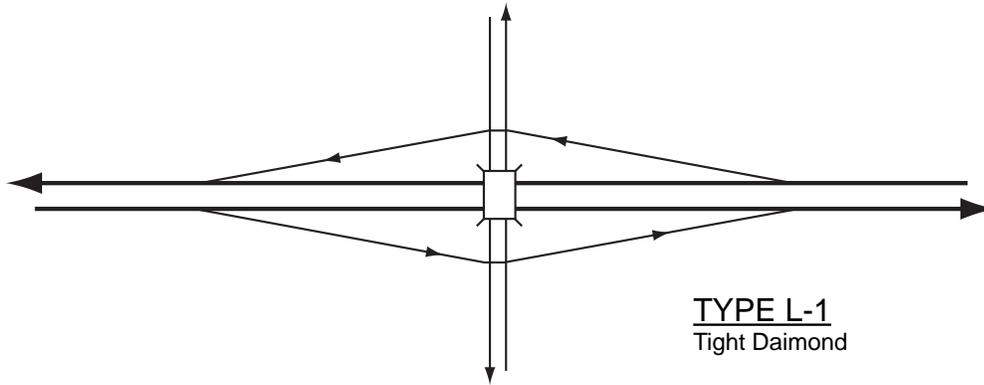
- Meets the project purpose and need.
- Provides current and future improved traffic operations.
- Requires acquisition of the least amount of right-of-way necessary.
- Avoids substantial environmental effects.
- Would be prohibitively expensive.

As part of the Notice of Preparation (NOP) scoping process and public outreach, several alternatives have been suggested for the project. The following discussion provides an analysis of alternatives that were considered.

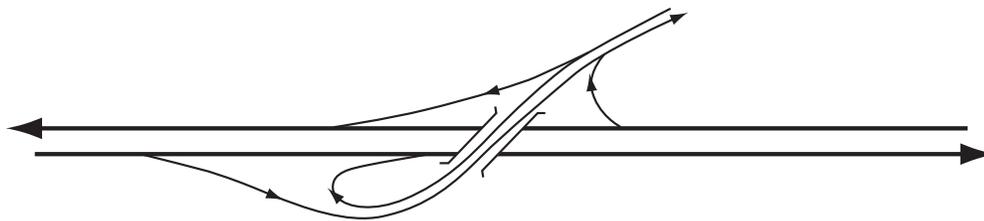
#### 1.2.5.1. Alternative 3 (Proposed Project)

Alternative 3 (proposed project) is a tight diamond (L-1) interchange (see **Figure 1.2.5-1**, Typical Interchange Configuration), and the eastbound ramps would create a four-way intersection at the overcrossing (see **Figure 1.2.5-2**, Alternative 3 (Proposed Project)). The overcrossing structure would be perpendicular to U.S. 50, and the eastbound and westbound ramps would parallel U.S. 50. The overcrossing would terminate at a ‘T’ intersection with the westbound ramps. The overcrossing structure would include four through lanes, one left-turn pocket, and shoulders, ~~and a shared pedestrian/bicycle lane on one side of the interchange structure.~~ Ramp metering will be provided at eastbound and westbound ramps.

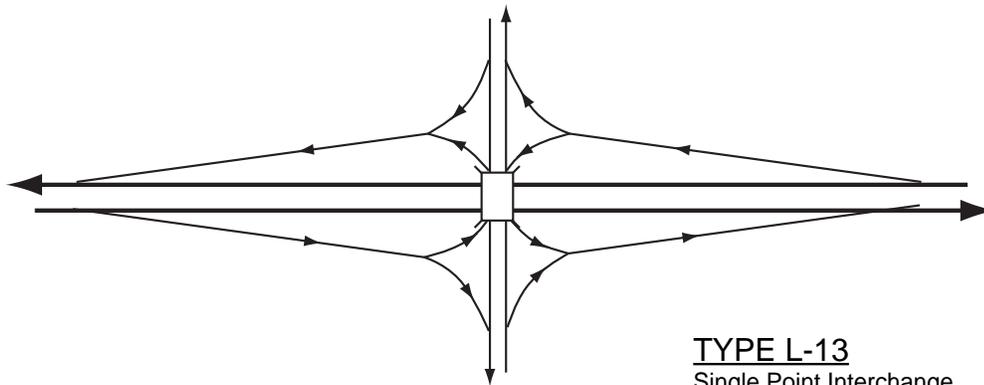
The proposed project would include continuous auxiliary lanes in both directions on U.S. 50 from Sunrise Boulevard to Rancho Cordova Parkway and from Rancho Cordova Parkway to Hazel Avenue. Because the area north of U.S. 50 is predominantly



**TYPE L-1**  
Tight Daimond



**TYPE L-11**  
Standard Trumpet



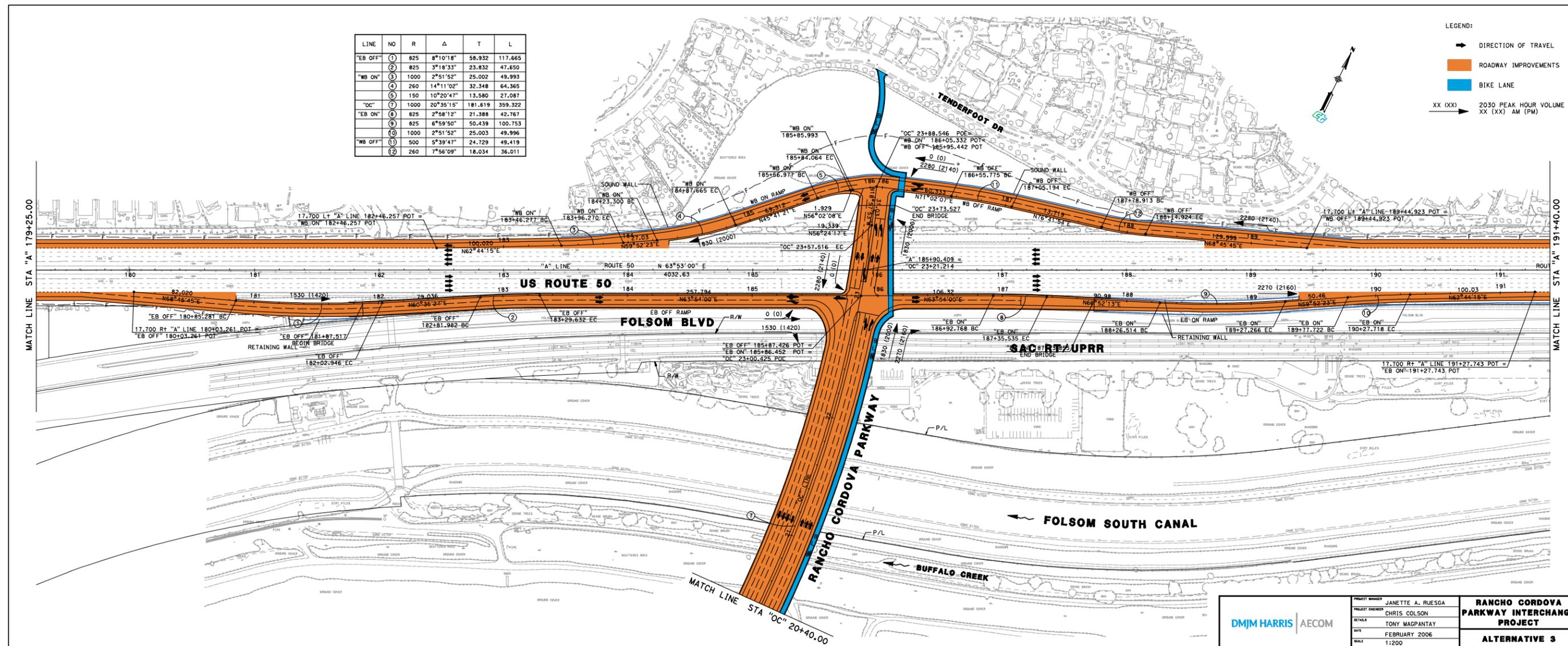
**TYPE L-13**  
Single Point Interchange

Source: PMC 2011





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FIGURE 1.2.5-2  
ALTERNATIVE 3 (PROPOSED PROJECT)



residential, an 8-foot-high sound wall is proposed along the outside edge of the shoulder of the westbound auxiliary lane, including the proposed ramps.

Retaining walls also would be provided along the westbound auxiliary lane, where the ramp is higher than the adjacent properties. The auxiliary lane would terminate at the Sunrise Boulevard westbound off-ramp.

The Fair Oaks Branch overhead structure<sup>6</sup> would require a sliver widening, and a portion of the existing sound wall on the Sunrise Boulevard westbound off-ramp would be reconstructed to accommodate the westbound auxiliary lane between the proposed interchange and Sunrise Boulevard interchange. The Buffalo Creek culvert under U.S. 50 would be widened by up to 10 feet on the north side, to accommodate the widening of U.S. 50 westbound auxiliary lanes. At the Folsom South Canal crossing, the existing culvert would be long enough to accommodate the auxiliary lanes.

At the Hazel Avenue westbound on-ramp, the HOV bypass lane and mixed flow lanes would be striped to merge into a single continuous auxiliary lane that will extend to Rancho Cordova Parkway.

In the eastbound direction, the existing auxiliary lane that begins at the terminus of the Sunrise Boulevard eastbound on-ramp to U.S. 50 would be extended to the eastbound off-ramp at the proposed interchange. The auxiliary lane that would begin at the terminus of the Rancho Cordova Parkway eastbound on-ramp to U.S. 50 would be extended to join the existing auxiliary lane serving the Hazel Avenue eastbound off-ramp from U.S. 50.

The interchange structure would touch down south of the Folsom South Canal. The new roadway would extend south to White Rock Road, where it would terminate at a new signalized intersection. Under the proposed project, the new Rancho Cordova Parkway roadway would be constructed as a four-lane roadway with paved shoulders for bicycle and pedestrian access. The ultimate planned configuration of the Rancho Cordova Parkway roadway, as identified in the City's General Plan Circulation Element, calls for a six-lane roadway with a center median, bicycle lanes, and curbs, gutters, and sidewalks; however, the construction of the final two traffic lanes, final bicycle lanes, and final curbs, gutters, and sidewalks would be provided by the developers of the future Westborough development, which the Rancho Cordova Parkway roadway would bisect.

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<sup>6</sup> The Fair Oaks Branch overhead bridge structure carries U.S. 50 traffic over the Citrus Road undercrossing bicycle path, located just east of the start of the westbound U.S. 50 off-ramp at Sunrise Boulevard.

### **Utilities**

The proposed project would require minor amounts of electricity and water to power streetlights and provide landscaping irrigation. Utilities exist in and near the project area, primarily in and near the Folsom Boulevard roadway corridor, where the proposed project could obtain its supply of power and irrigation water. No improvements to utility lines outside of the project area would be necessary to provide services to the project. New utility infrastructure would be constructed within the project footprint to support operation of the project, including electrical lines to power streetlights and traffic signals, water lines to provide landscape irrigation, and stormwater drainage facilities.

### **Stormwater Drainage**

To provide stormwater drainage for the interchange area of the proposed project, an integrated highway and bridge drainage system would be constructed within the project limits to convey all collected stormwater runoff. Drainage facilities consisting of curbs, gutters, inlets, drainage pipes, and outfalls would be designed to collect runoff and direct it to the acceptable best management practices (BMP) facilities and existing facilities that would allow for infiltration of runoff. The proposed drainage system would collect concentrated flows from the elevated structure through surface drains located throughout the alignment.

To provide stormwater drainage for the extension to the White Rock Road area of the proposed project, a roadside drainage system would be constructed within the project limits to convey all collected stormwater runoff. In an effort to maintain historical east–west drainage patterns through the roadway, the project would construct several small culverts under the roadway that would allow sheet flow stormwater originating from the east to be conveyed under the roadway and then continue to sheet flow to the west. Runoff from the roadway would be collected from the pavement surface into small roadside ditches and/or basins, where it would receive water quality treatment through bioswales or other appropriate operational BMPs, before being released on the west side of the roadway to join sheet flows that move through the area.

### **Right-of-Way Requirements**

The proposed project would require acquisition of rights-of-way from several parcels, including permanent right-of-way acquisition of portions of two privately owned commercial parcels, and temporary right-of-way acquisition of a portion of one privately owned parcel. Permanent aerial easements would be granted to Caltrans by the City, the UPRR, Sac RT, and the USBR for the portions of the proposed overcrossing structure that would be elevated above Folsom Boulevard, the UPRR and Sac RT tracks, and the Folsom South Canal.

### **Construction Staging and Site Access**

Although project construction staging areas have not been identified, the majority of construction-related activities would likely occur within the project area adjacent to existing and proposed roadways. A 20-foot corridor along the length of the project roadways is anticipated to contain all construction activity and staging areas for the project, although adjacent areas such as vacant parking lots or fields also may be used by the contractor.

Access to the project site during construction would come from various points. North of the Folsom South Canal, project access would be from U.S. 50, Folsom Boulevard, or the maintenance road along the north side of the Folsom South Canal.<sup>7</sup> South of Folsom South Canal, project [sitearea](#) access would be from White Rock Road or the maintenance road on the south side of the Folsom South Canal.

#### **1.2.5.2. Transportation System Management and Transportation Demand Management Alternatives**

Transportation system management (TSM) strategies consist of actions that increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes.

The TSM alternative alone would not meet the purpose and need for the proposed project because it would not provide sufficient additional access between U.S. 50 and planned developments. The travel demand from planned developments south of U.S. 50 could not be adequately served by increases in efficiency to existing facilities that would be provided through strategies such as auxiliary lanes and improved transit, pedestrian, and bicycle facilities. Although TSM measures alone would not satisfy the project purpose

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<sup>7</sup> The maintenance road along the Folsom South Canal that is used for recreational cycling generally would remain open and available to pedestrians and bicyclists during project construction, although occasional detours or closures may be required for public safety during certain construction activities.

and need, the following TSM measures have been incorporated into Alternative 3: ramp metering, auxiliary lanes, and bicycle/pedestrian lanes.

Transportation demand management (TDM) focuses on regional strategies for reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation choice in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. A typical activity within this component is providing contract funds to regional agencies that actively promote ridesharing, maintain rideshare databases, and provide limited rideshare services to employers and individuals. TDM strategies are not proposed as part of this project at this time.

### **1.2.5.3. No Build Alternative (2037 Conditions without the Project)**

The purpose of describing and analyzing a No Build alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The No Build alternative is discussed throughout this EIR/EA for each subject area. For the No Build alternative analysis, no construction of the new interchange or roadway connection would occur. Vehicles accessing U.S. 50 and surrounding development would continue to use the U.S. 50/Sunrise Boulevard interchange and U.S. 50/Hazel Avenue interchange, and access to areas south of Folsom Boulevard would be limited to Sunrise Boulevard and Hazel Avenue. The analysis of this alternative considers the environmental effects of not approving the proposed interchange project.

The No Build alternative assumes the following roadway improvements within the project area:

- The proposed Rancho Cordova Parkway Interchange, including the Rancho Cordova Parkway connection to U.S. 50, would not be constructed.
- Tier 1 roadway improvements (i.e., those improvements that have reasonably expected revenues) contained in the SACOG 2035 MTP are assumed to be in place depending on their completion dates. Notable roadway improvements from the MTP include:
  - Widening of Hazel Avenue from four to six lanes between Madison Avenue and U.S. 50 in phases. Phase 1 was completed in 2011 and included improvements from U.S. 50 to Curragh Downs Drive. Phase 2 includes improvements from Curragh Drive to Sunset Avenue (by 2015/16) and Phase

- 3 includes improvements from Sunset Avenue to Madison Avenue (by 2016/17).
- Extension of HOV lanes on U.S. 50 in each direction from Sunrise Boulevard to downtown Sacramento (by 2037).
  - Ramp metering of all eastbound and westbound on-ramps at the U.S. 50 interchanges of Zinfandel Drive, Sunrise Boulevard, Hazel Avenue, and Folsom Boulevard interchanges during both AM and PM peak hours (i.e., ramp metering during both peak hours in both directions by 2037).
  - Sac RT light rail service, with 30-minute service intervals (assumed under 2016 conditions) and 15-minute service intervals (assumed under 2037 conditions).
  - The existing Aerojet Road off-ramp (just east of the Hazel Avenue interchange) was assumed to continue to be in operation under 2016 and 2037 conditions (both without and with the proposed project).
- Other future roadway improvements planned as part of the City’s General Plan (which includes roadway facilities within the City’s “Planning Area” outside city limits) include:
    - The White Rock Road six-lane expressway from Sunrise Boulevard to Prairie City Road (by 2030).
    - Construction of Easton Valley Parkway—a four- to six-lane arterial roadway from Rancho Cordova Parkway to Prairie City Road (by 2030).
    - Extension of Hazel Avenue from Folsom Boulevard to Easton Valley Parkway (by 2015).
    - Extension of International Drive (four-lane roadway) from Sunrise Boulevard to Grant Line Road and beyond (by 2030).
    - Grade separation of the future Easton Valley Parkway/Rancho Cordova Parkway intersection (by 2030; see further discussion below).
    - Grade separation of the light rail tracks and Hazel Avenue.

#### **1.2.5.4. Identification of a Preferred Alternative**

After the public circulation period, all comments were considered and the City of Rancho Cordova, in coordination with Caltrans, selected the Build Alternative as the Preferred Alternative. The Build Alternative was the only proposed alternative that met the purpose and need for the project.

#### **1.2.5.4. 1.2.5.5. Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Impact Report/Environmental Assessment (EIR/EA)**

An environmental document must identify any alternatives that were considered by the lead agency but which were eliminated as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. The purpose of the discussion of alternatives shall focus on alternatives to the project or its location that would meet the purpose and need and feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the severe environmental effects of the project.

Factors that may be used to eliminate alternatives from detailed consideration are (1) failure to meet purpose and need and most of the basic project objectives, (2) infeasibility, or (3) inability to avoid severe environmental impacts. Three main factors to consider when assessing the feasibility of an alternative include feasibility of the alternative (including but not limited to site suitability, availability of infrastructure, general plan consistency, jurisdictional boundaries, and ability to acquire, control, or otherwise have access to a site); alternative locations, with consideration of whether the alternative location would avoid or substantially lessen severe effects of the project; and if the effect of an alternative can be reasonably ascertained and whose implementation is not remote or speculative. If an alternative under consideration cannot meet one or more of these criteria, it may be eliminated from further consideration in the project development process. Presented below is a discussion of the alternatives considered but ultimately identified as either (1) failing to meet purpose and need and most of the basic project objectives, (2) infeasible, or (3) unable to avoid severe environmental impacts and, as such, eliminated from further discussion.

#### ***Alternative 1***

Alternative 1 includes construction of a standard trumpet (L-11) interchange (see **Figure 1.2.5-1**, Typical Interchange Configuration). Alternative 1 is shown in **Figure 1.2.5-3**. The overcrossing structure would span U.S. 50, Folsom Boulevard, the Sac RT light rail and UPRR tracks (Railroad Corridor), Folsom South Canal, and Buffalo Creek. The

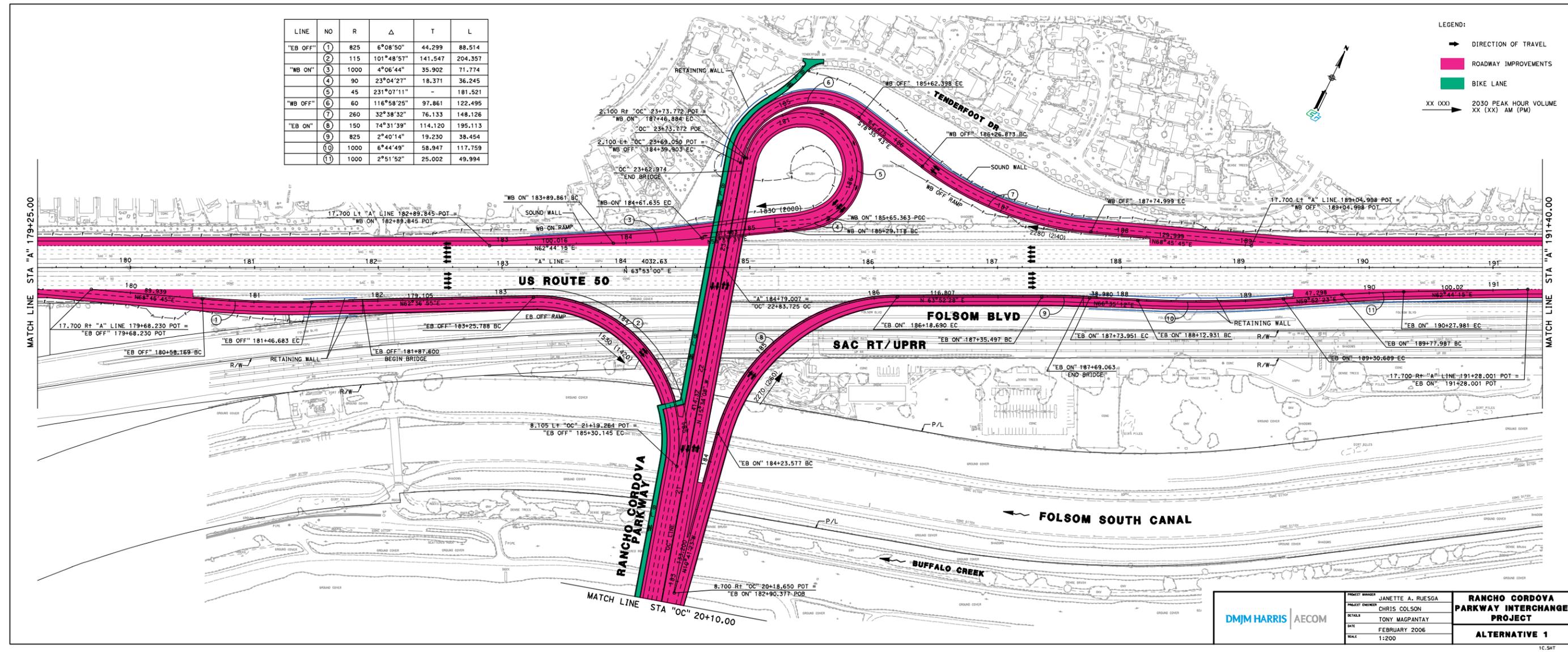
structure would terminate approximately 328.2 feet south of the Folsom South Canal and become Rancho Cordova Parkway. Rancho Cordova Parkway then would extend south to a new signalized intersection at White Rock Road.

The overcrossing structure would include four through lanes and two outside standard-width shoulders. The structure would widen at the termini of the eastbound ramps, adding four through lanes for a total of eight through lanes.

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<b>DMJM HARRIS</b>   <b>AECOM</b>	PROJECT MANAGER JANETTE A. RUESGA	<b>RANCHO CORDOVA          PARKWAY INTERCHANGE          PROJECT</b>  <b>ALTERNATIVE 1</b>
	PROJECT ENGINEER CHRIS COLSON	
DETAILS TONY MAGPANTAY		
DATE FEBRUARY 2006 SCALE 1:200		



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FIGURE 1.2.5-3  
ALTERNATIVE 1



Four of the through lanes would terminate at the future proposed Easton Parkway/Rancho Cordova Parkway intersection. Rancho Cordova Parkway would continue to White Rock Road with a median, four through lanes, and two standard-width shoulders.

The westbound off-ramp would allow two lanes to exit the mainline. The ramp would have standard-width left and right shoulders. The ramp would be adjacent to residential properties, requiring installation of a sound wall. Along the right shoulder, the sound wall may be placed on top of a retaining wall in areas where right-of-way is limited.

The westbound loop on-ramp would take two through lanes from the overcrossing and then widen to three lanes, including a HOV bypass lane. The three lanes then would merge into a single lane and be directed into an auxiliary lane. The ramp would have standard-width left and right shoulders. The ramp would be adjacent to residential properties, requiring installation of a sound wall.

The eastbound on-ramp would have two lanes upstream of the ramp metering location, which then would taper to a single lane that would enter an auxiliary lane. The ramp would have standard-width left and right shoulders.

The eastbound off-ramp would allow two lanes to exit the mainline. The ramp would have standard-width left and right shoulders.

This alternative would result in similar environmental effects as Alternative 3 (proposed project).

This alternative has been removed from further consideration because of concerns regarding its ability to meet driver expectations. Drivers traveling northbound on Rancho Cordova Parkway at a moderate rate of speed would not expect to enter a low-speed loop on-ramp. A secondary concern would be the need for this alternative to place permanent bridge columns within the Folsom Boulevard shoulder/bike lane. Folsom Boulevard in this area is an element of Sacramento County's bikeway master plan.

## **Alternative 2**

Alternative 2 would have the same westbound trumpet loop on-ramp configuration as Alternative 1. Alternative 2 is shown in **Figure 1.2.5-4**. The overcrossing structure would be in the same location as that in Alternative 1, but the structure would be wider between the ramp intersections, to accommodate a 13.8-foot median. The overcrossing structure would include four through lanes and standard shoulder widths. The eastbound ramps would be placed in a diamond (L-1) configuration, paralleling U.S. 50 and creating a four-way intersection at the overcrossing. At the intersection, the eastbound off-ramp

would provide two free-right turn lanes and a single left turn or through lane. The eastbound ramps would rise quickly, achieving sufficient vertical clearance to allow aerial encroachment over the shoulders of U.S. 50 and Folsom Boulevard.

This alternative would result in similar environmental effects as Alternative 3 (proposed project).

This alternative has been removed from further consideration based on concerns regarding its ability to meet driver expectations, as described above for Alternative 1.

#### **Alternative 4**

Alternative 4 is identical to Alternative 2 with the exception that the westbound off-ramp would terminate at the overcrossing with a ‘T’ intersection. This intersection would either be signalized or stop sign-controlled, to indicate the terminus of the off-ramp and slow traffic before it reached the overcrossing.

This alternative would result in similar environmental effects as Alternative 3 (proposed project).

This alternative was removed from further consideration, based on the criteria similar to Alternative 1 as well as the potential for the westbound off-ramp traffic to reach excessive speeds in advance of the stop sign, fail to react to the traffic control, and be unable to negotiate the left turn onto Rancho Cordova Parkway.

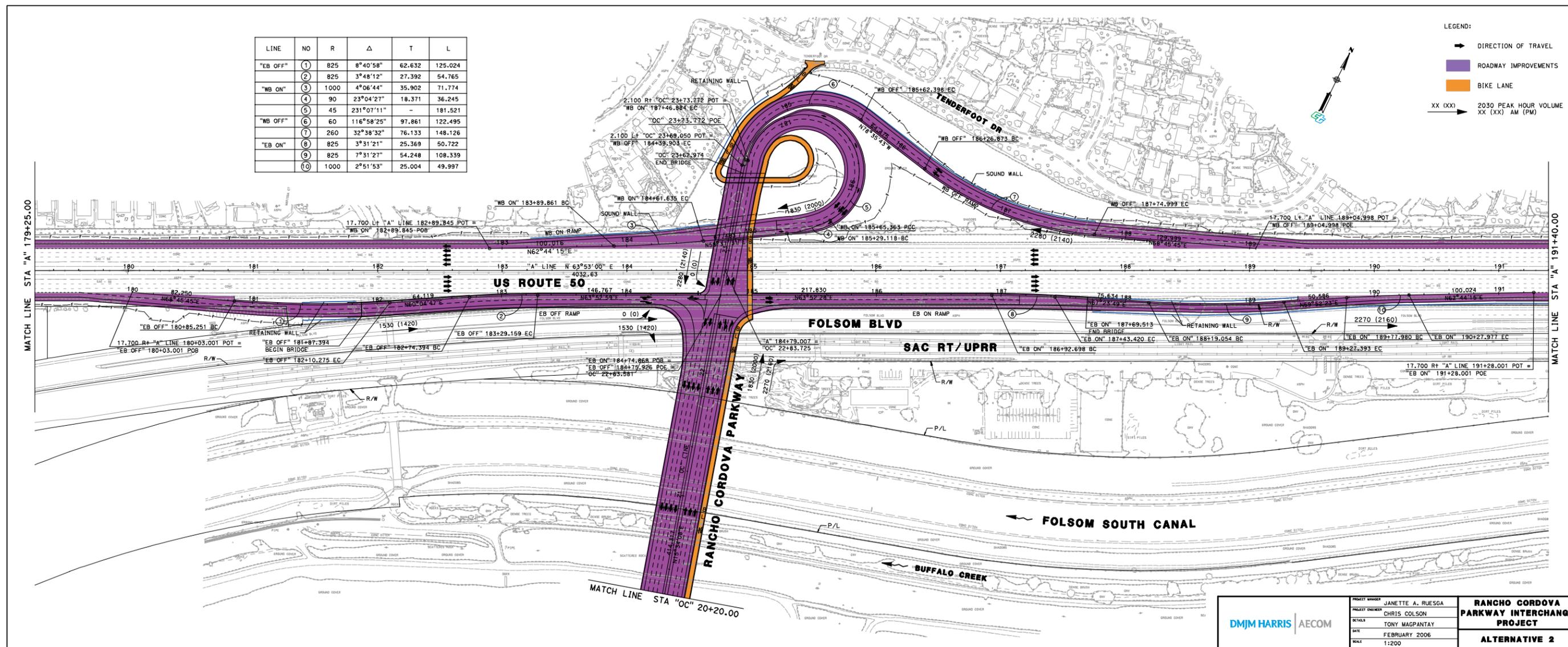
#### **Alternative 5**

Alternative 5 is a modified single point interchange (L-13). The westbound ramps would span U.S. 50, crossing at a signalized intersection above the U.S. 50 eastbound through lanes, and would connect with Rancho Cordova Parkway to the south. The eastbound ramps would run parallel to U.S. 50 before curving to the south and connecting with Rancho Cordova Parkway.

This alternative would result in similar environmental effects as Alternative 3 (proposed project).

This alternative was removed from further consideration, based on the criteria that it is not feasible because of potential safety concerns associated with the potential for the westbound on-ramp traffic to back up into the intersection and the potential for the westbound off-ramp traffic to reach excessive speeds in advance of the intersection, reducing reaction time to the intersection signals. Cost issues with the structure also were identified.

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FIGURE 1.2.5-4  
ALTERNATIVE 2



## **Alternative 6**

Alternative 6 consists of tunneling under U.S. 50, Folsom Boulevard, the Railroad Corridor, the Folsom South Canal, and Buffalo Creek, and providing a below-grade interchange design. The westbound and eastbound ramps would be configured as a trumpet interchange (L-11). The westbound ramps would diverge from U.S. 50 and descend to the level of the tunnel entrance. The eastbound ramps would be elevated and cross Folsom Boulevard, the Railroad Corridor, the Folsom South Canal, and Buffalo Creek, before joining Rancho Cordova Parkway south of the tunnel.

This alternative would result in similar environmental effects as Alternative 3 (proposed project).

This alternative was identified as infeasible and was removed from further consideration for three reasons:

1. Rejection of the alternative by the USBR, disallowing a tunnel to be constructed beneath the Folsom South Canal, which the USBR identified as having the potential to compromise the integrity and safety of the canal.
2. Available right-of-way north of U.S. 50 would be insufficient to allow the ramp profiles to achieve the required vertical clearance below U.S. 50.
3. The infeasibility of the City to be able to meet the long-term need for treating contaminated groundwater that would filter into the tunnel.

## **Alternative 7**

Alternative 7 would provide access to U.S. 50 for HOV only. The overcrossing structure would be similar to Alternative 1 and Alternative 2 because it would span Buffalo Creek, the Folsom South Canal, the Railroad Corridor, and Folsom Boulevard. However, the structure would terminate in the median of U.S. 50, spanning only the eastbound lanes. All of the on- and off-ramps would allow access exclusively to and from the existing HOV lanes on U.S. 50.

This alternative would result in similar environmental effects as Alternative 3 (proposed project).

This alternative was removed from further consideration as an infeasible alternative because the ramps would require additional lanes and median width on U.S. 50. Because of limited right-of-way north of U.S. 50, the widening would require realignment of Folsom Boulevard and the Railroad Corridor tracks, as well as encroachment into many

commercial properties beyond what would be required for Alternative 3 (proposed project), resulting in greater relocation impacts. This alternative also would not meet the purpose and need of relieving existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue (south of U.S. 50) because it would be limited to HOV use.

### **Alternative 8**

This alternative would provide continuous eastbound and westbound auxiliary lanes along U.S. 50 between the Sunrise Boulevard interchange and Hazel Avenue interchange. No new connection to U.S. 50 would be provided. This alternative would avoid environmental impacts associated with visual and lighting and operational impacts to the Rancho Cordova Parkway/U.S. 50 eastbound ramp. It also would be likely to reduce traffic noise impacts and construction air quality and air toxics as compared to Alternative 3 (proposed project).

This alternative was removed from further consideration because it did not satisfy the purpose and need to provide additional access to U.S. 50, improve traffic operations on Sunrise Boulevard, and relieve existing traffic congestion on Sunrise Boulevard.

### **Capital Southeast Connector Alternative**

This alternative, which was suggested during the NOP comment period, would not construct the proposed ~~interchange~~ project and instead would rely on the Capital Southeast Connector Project. A detailed description of this project is available at <http://connectorjpa.net/about/>. This proposed project would construct a 35-mile-long, four- to six-lane roadway/expressway facility from the Interstate 5/Hood Franklin Road interchange in Sacramento County to the U.S. 50/Silva Valley Parkway interchange in El Dorado County and is included in the SACOG 2035 MTP. The Capital Southeast Connector Project is intended to link employment centers and residential areas in this corridor and contribute to the remedy for current and future deficiencies in transportation capacity, safety, and land use compatibility. The Draft Program EIR for the Capital Southeast Connector Project traffic analysis assumes the existence of the Rancho Cordova Parkway Interchange for 2035 conditions and identifies that the Capital Southeast Connector would reduce traffic average daily volumes on Rancho Cordova Parkway (U.S. 50 to White Rock Road) by 2,300 to 3,700 trips and on U.S. 50 by 4,000 to 7,000 trips (Zinfandel Drive to Hazel Avenue) (see Chapter 16 of the Draft Program EIR for the Capital Southeast Connector Project).

Although the Capital Southeast Connector Project would provide reduced traffic volumes in the project area of the U.S. 50 corridor, it alone would not provide sufficient capacity to adequately address existing and future congestion issues associated with U.S. 50 and the operation of interchanges at Sunrise Boulevard and Hazel Avenue. The Capital Southeast Connector Project would alleviate some of the traffic congestion associated with U.S. 50 and the Sunrise Boulevard and Hazel Avenue interchanges, but would not be capable of reducing enough congestion in these areas to allow them to operate sufficiently. It also would not address the more localized need for improving congestion on Sunrise Boulevard, White Rock Road, and Hazel Avenue south of U.S. 50. The proposed project and the Capital Southeast Connector Project (as well as other projects in the SACOG 2035 MTP) are intended to work in combination to provide improved transportation conditions in the region. In addition, the Capital Southeast Connector Project would result in similar impacts as the proposed project, as well as additional severe and unavoidable impacts to biological resources, cultural resources, and loss of prime farmland that would be avoided under the proposed project.

### ***Expansion of Existing Arterials Alternative***

This alternative was suggested during the NOP comment period and would expand major arterials between U.S. 50 and Jackson Highway (State Route 16) in substitution of a new interchange.<sup>8</sup> Existing and proposed major arterials within and surrounding the project area, such as Sunrise Boulevard, Rancho Cordova Parkway, Americanos Boulevard, Kiefer Boulevard, Douglas Road, White Rock Road, Jackson Highway, and Grant Line Road, already are planned to be constructed and/or expanded under the City's General Plan Circulation Element (see Figure C-1 of the Circulation Element on the City's website, at <http://www.cityofranhocordova.org/Index.aspx?page=104#a2>) to four- to six-lane roadway facilities and still would not be sufficient to provide adequate replacement roadway capacity for traffic utilizing U.S. 50. As such, this alternative would not meet the project purpose and need to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue (south of U.S. 50), because it would not provide the capacity necessary to accommodate future traffic volumes and alleviate congestion through these areas.

This alternative would avoid some site-specific impacts associated with Alternative 3 (proposed project) by not constructing a new interchange on U.S. 50, which would avoid localized effects to visual resources, localized air quality, and noise, but likely would

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<sup>8</sup> The following arterials were specifically identified during the NOP period: Jackson Highway (State Route 16), Douglas Road, Grant Line Road, and White Rock Road.

result in new and/or different environmental effects elsewhere, associated with visual resources, cultural resources, biological resources, air quality, and noise.

### ***Rancho Cordova Parkway “T” Intersection with Folsom Boulevard Alternative***

This alternative, suggested during the NOP comment period, would extend Rancho Cordova Parkway to Folsom Boulevard only, rather than construct a new interchange. This alternative would avoid site-specific impacts associated with Alternative 3 (proposed project). However, this alternative would increase traffic volumes on Folsom Boulevard and would still result in traffic utilizing the existing interchanges at Sunrise Boulevard and Hazel Avenue. This alternative would not meet the purpose and need to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, and Hazel Avenue (south of U.S. 50). In addition, an at-grade T-intersection between Rancho Cordova Parkway and Folsom Boulevard is not feasible due to the proximity of the Folsom South Canal and the RT Folsom Light Rail line. In order to provide the required vertical clearances over the canal and light rail, a connection to Folsom Boulevard is not practical.

### ***Light Rail Extension Alternative***

This alternative was suggested during the NOP comment period. It would eliminate the proposed ~~interchange~~ project and instead would provide a light rail line along Rancho Cordova Parkway. As identified in the August 2006 City of Rancho Cordova Transit Master Plan, Rancho Cordova Parkway is already designated as a potential future corridor for transit as well as bus rapid transit. Although these facilities would assist in reducing traffic operation impacts to the U.S. 50 corridor, they would not provide adequate ridership to meet the project purpose and need to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue (south of U.S. 50).

### ***Alternative Site Analysis***

Alternative site evaluations are most relevant for public and other projects where a considerable choice in location exists. A power plant or roadway alignment, for example, may be located in different areas or located on public land and achieve the same objectives.

Because one of the primary purposes of the proposed project is to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue south of U.S. 50, the proposed new interchange must be located in the general vicinity of these

roadways. Additionally, because a new interchange was envisioned by the County in the 1980s and land was set aside from the Gold River Community development at that time to accommodate a future interchange, the proposed location is one of the few areas along U.S. 50 between Sunrise Boulevard and Hazel Avenue where undeveloped space is available and no existing residences or commercial buildings are located. Because a substantial number of residences and/or commercial buildings would need to be relocated to accommodate an alternative site for a new interchange, other site alternatives are not considered to be practical or feasible.

Also, Caltrans' design guidelines call for new interchanges to meet minimum spacing between interchanges. The Caltrans Design Information Bulletin 77 (DIB 77) (Caltrans 1995) requirements establish a minimum distance of 0.93 miles between interchanges in urban areas. No locations within the U.S. 50 ~~project area~~ corridor within the project vicinity, other than the proposed interchange location, would meet both the Caltrans DIB 77 spacing requirements and avoid or substantially lessen severe effects of the project. An example of an alternative considered but eliminated from further consideration based on interchange spacing requirements is the Citrus Road undercrossing area, which is an existing bicycle-only undercrossing under U.S. 50, located approximately 2,000 feet east of the Sunrise Boulevard interchange. Because this location is so close to the existing Sunrise Boulevard interchange, construction of a new interchange at this location not only would fail to meet Caltrans DIB 77 spacing requirements, but the proximity of these two interchanges to each other would result in unacceptable traffic operations at both interchange locations and along this segment of U.S. 50.

### ***Alternative Rancho Cordova Parkway Roadway Alignment Analysis***

In addition to analyzing alternative locations for placement of the interchange structure, alternative alignments of the Rancho Cordova Parkway roadway between the interchange structure just south of the Folsom South Canal and White Rock Road also were examined, to identify whether an alternative alignment could substantially lessen severe environmental effects.

The area between the Folsom South Canal and White Rock Road is largely undeveloped open space with nonnative grassland. Most of the area historically has been dredged for gold, leaving an irregular surface of dredge tailing piles of cobbles and rock. Scattered throughout the area are isolated seasonal wetlands and vernal pools that may provide suitable habitat for protected aquatic invertebrate species, and elderberry bushes that provide habitat for the federally protected valley elderberry longhorn beetle (VELB). Several native and nonnative trees also are scattered throughout the area. Because this area largely is undeveloped open space with wetland, elderberry, and tree habitats

scattered throughout, the primary effects of constructing a road through it would be to biological resources.

Because biological resources are abundant and scattered throughout this area, with no areas or corridors that contain substantially fewer biological resources than others, alternative alignments of Rancho Cordova Parkway that would substantially lessen impacts of the project were not identified. An assessment was conducted to identify whether adjusting the alignment of the Rancho Cordova Parkway roadway alignment to the east or west of the currently proposed alignment would serve to reduce effects to isolated seasonal wetlands and elderberry shrubs. The ability to modify the proposed alignment would be constrained in the north by the location where the overpass from U.S. 50 over the Folsom South Canal would touch down to ground level and be constrained in the south by the location of the future Rancho Cordova Parkway/White Rock Road intersection, as identified in the City's General Plan and the Rio del Oro Specific Plan. Additionally, the ability to modify the roadway alignment to avoid resources also would be limited by the confines of safe and allowable curve radii (i.e., it is not feasible to design an alignment that would avoid resources but would result in dangerous curves in the roadway alignment). As such, alternative roadway alignment opportunities would be limited to the areas between these two points.

Elderberry shrubs are scattered throughout the project area. As such, alternative alignments of the Rancho Cordova Parkway roadway would result in effects to similar numbers of the shrubs as would be affected by the proposed project. No locations exist in the project area where substantially fewer numbers of elderberry shrubs occur, such that the proposed project could substantially reduce effects to this resource.

Realigning the roadway to the east or west of the proposed alignment could result in slightly fewer effects to isolated seasonal wetland habitat in the project area, although no alternative would fully avoid either direct or indirect effects. All potential alignments would result in some amount of both direct and indirect effects to isolated seasonal wetland habitat. As such, no alternative was identified that would avoid or substantially reduce effects to isolated seasonal wetland habitat.

All isolated seasonal wetland habitat in the project area is marginal habitat, as described in Section 2.3, "Biological Environment." As such, this habitat represents low-value habitat for both endangered and common species that use wetland habitat. Replacement mitigation that would be required to compensate for the loss of isolated seasonal wetland habitat as a result of the proposed project would be high-quality, high-value habitat,

which, cumulatively, would result in improvement of wetland habitat available as compared to preservation of the marginal wetland habitat on-site.

Regardless of the proposed alignment of the Rancho Cordova Parkway roadway, areas surrounding the project area are proposed for full development as part of the proposed Westborough development. As such, under a cumulative condition, most elderberry and all isolated seasonal wetland habitat in the project area would be eliminated, regardless of preservation efforts made for the proposed Rancho Cordova Parkway roadway alignment.

In addition, the corridor alignment for Rancho Cordova Parkway has been set through the City's General Plan Circulation Element (see Figure C-1 of the Circulation Element), the approved Rio del Oro Specific Plan south of White Rock Road, and approved and developed conditions in the Sunridge Specific Plan south of the Rio del Oro Specific Plan.

#### 1.2.6. Permits and Approvals Needed

After the public circulation period, all comments ~~will be~~ were considered, and the City and Caltrans ~~will~~ selected the Build Alternative as the a-preferred alternative. The City and Caltrans will ~~and~~ make the final determination of the proposed project's effect on the environment. In accordance with CEQA, the City will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. The City then will file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. Similarly, if Caltrans, as assigned by FHWA, determines the NEPA action does not significantly impact the environment, Caltrans will issue a Finding of No Significant Impact (FONSI) in accordance with NEPA.

**Table 1.2.6-1** lists other permits, reviews, and approvals that would be required for project construction.

**Table 1.2.6-1  
Required Permits, Reviews, and Approvals**

Agency	Permit/Approval
U.S. Army Corps of Engineers	404 Permit
U.S. Fish and Wildlife Service	Section 7 Consultation; Biological Opinion
U.S. Bureau of Reclamation	Encroachment Permit
Federal Highway Administration	Project-level Conformity Determination for Federal Air Quality Standards
State Water Resources Control Board and Regional Water Quality Control Board, Central Valley Region	Notice of Intent for coverage under National Pollutant Discharge Elimination System permit and Stormwater Pollution Prevention Plan
California Department of Fish and Wildlife	Potential streambed alteration agreements and 2081 Take Permit for Threatened and Endangered Species
State Historic Preservation Office	Section 106 Coordination
California Department of Transportation (Caltrans)	Encroachment permit(s) required for work within Caltrans' right-of-way
County of Sacramento	Approval of site development permits/plans in the project area within the county
	County right-of-way and property acquisition
City of Rancho Cordova	City right-of-way and property acquisition
	Approval of site development permits/plans in the project area within the City



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

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As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this Environmental Impact Report/Environmental Assessment (EIR/EA).

- **Scenic Vista**—It was determined in the Initial Study that the project would not have a substantial adverse effect on a scenic vista.
- **Scenic Highway**—The portion of U.S. Highway 50 (U.S. 50) within the project area is not designated or eligible for California’s Scenic Highway Program.
- **Agricultural Resources**—No farmlands were identified within the proposed project area in the Initial Study; therefore, there would be no impact to lands contracted under the Williamson Act and no conversion of farmland to nonagricultural land.
- **Wastewater and Drinking Water Systems**—The proposed project would not include features that would require the use of a septic system or other wastewater system; thus there is no discussion regarding the demand or expansion of these facilities, or the soil’s capability of supporting septic system structures.
- **Airports**—The proposed project is not located within an airport planning area or within 2 miles of a public or private use airport; therefore, the project would not result in any airport-related impacts such as changing air traffic patterns, safety risks, or airport noise.
- **Flooding and Natural Disasters**—The project area is not within a 100-year floodplain zone. Thus, the project would not place housing within a 100-year floodplain nor would it place any structures within a 100-year floodplain that would impede or redirect flood flows. The project area is not located in an area that would be affected by a seiche, tsunami, or mudflow.
- **Mineral Resources**—There are no mineral resource recovery sites within the project area delineated on any local general plan, specific plans, or land use plan.

- **Housing**—Construction of the proposed project would not require the destruction of any existing housing or require the displacement of any persons that would necessitate the construction of replacement housing elsewhere.
- **Schools and Parks**—The proposed project would not include residential or commercial components which would result in a demand for schools, parks, or other public facilities.
- **Paleontology**—The proposed project would be predominantly located in very highly disturbed soils—the majority of the soils in the project area comprise mine dredge tailings—and have no potential to contain paleontological resources. Further, as noted in the Environmental Impact Report (EIR) prepared for the City of Rancho Cordova General Plan, a search of the University of California Museum of Paleontology collections database conducted for the General Plan EIR did not identify any evidence of significant paleontological resources in the Rancho Cordova Planning Area. The area does not appear sensitive for the presence of paleontological resources.
- **Parking Demand**—The proposed project would not include land uses that would generate a demand for parking; therefore, no impact is anticipated.
- **Wild and Scenic Rivers**—No rivers subject to the National Wild and Scenic Rivers Act (16 U.S. Code [USC] 1271) and the California Wild and Scenic Rivers Act (California Public Resources Code [PRC] Section 5093.50 et seq.) were identified within the ~~proposed~~ project ~~area or~~ vicinity.
- **Energy**—This project does not qualify as a “major” project for energy analysis under the screening process set forth in California Department of Transportation (Caltrans) Standard Environmental Reference, Volume 1, Chapter 13; this is not a large-scale Environmental Impact Statement (EIS) project that would have obvious and substantial differences in energy consumption among the build alternatives (such as different transit modes versus different highway modes). When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have substantial energy impacts. Refer to Section 3.3, “Climate Change under the California Environmental Quality Act,” for a more detailed analysis of energy consumption.

## 2.1. Human Environment

### 2.1.1. Land Use

#### 2.1.1.1. Existing and Future Land Use

##### *Affected Environment*

##### *Regional Setting*

The proposed project [site area](#) is located entirely within Sacramento County, California. Sacramento County is bounded by Placer and Sutter counties to the north, San Joaquin County to the south, Yolo and Solano counties to the west, and El Dorado and Amador counties to the east. Sacramento County covers approximately 1,015 square miles of land, the majority of which consists of flat grassland and oak woodlands with foothill areas to the west and east of the county line. The land uses in the surrounding counties vary from flat agricultural lands and floodplains in Yolo, Solano, and San Joaquin counties to foothill areas in Amador County and mountainous terrain in Placer and El Dorado counties.

##### *Local Setting*

The proposed project [site area](#) is located within the Rancho Cordova General Plan Planning Area (Planning Area). The Planning Area is located approximately 9 miles east of downtown Sacramento in eastern Sacramento County. The Planning Area covers approximately 58,190 acres, with the current Rancho Cordova city limits encompassing about 20,000 acres, or about 35 percent of the area. The Planning Area is generally bordered by the American River on the north, Prairie City Road and the boundary of the 100-year floodplain for the Cosumnes River on the east, Jackson Highway (State Route [SR] 16) on the south, and Watt Avenue and the City of Sacramento on the west. The most southern portion of the Planning Area (i.e., south of SR 16) is characterized with rural residential, agricultural operations, and industrial land uses. The rest of the Planning Area is generally bounded by residential, commercial, and industrial uses and undeveloped agricultural land. **Figure 2.1.1-1** shows the existing and future land uses in and around the project area.

The City of Rancho Cordova contains a wide range of existing land uses, including approximately 2,600 acres of residential developments, 454 acres of commercial/retail uses, 972 acres of office uses, and approximately 835 acres of industrial uses within the city limits. In addition, there are approximately 12,888 acres of agricultural (vacant) uses and over 296 acres of public/private recreation and natural preserve uses. Institutional

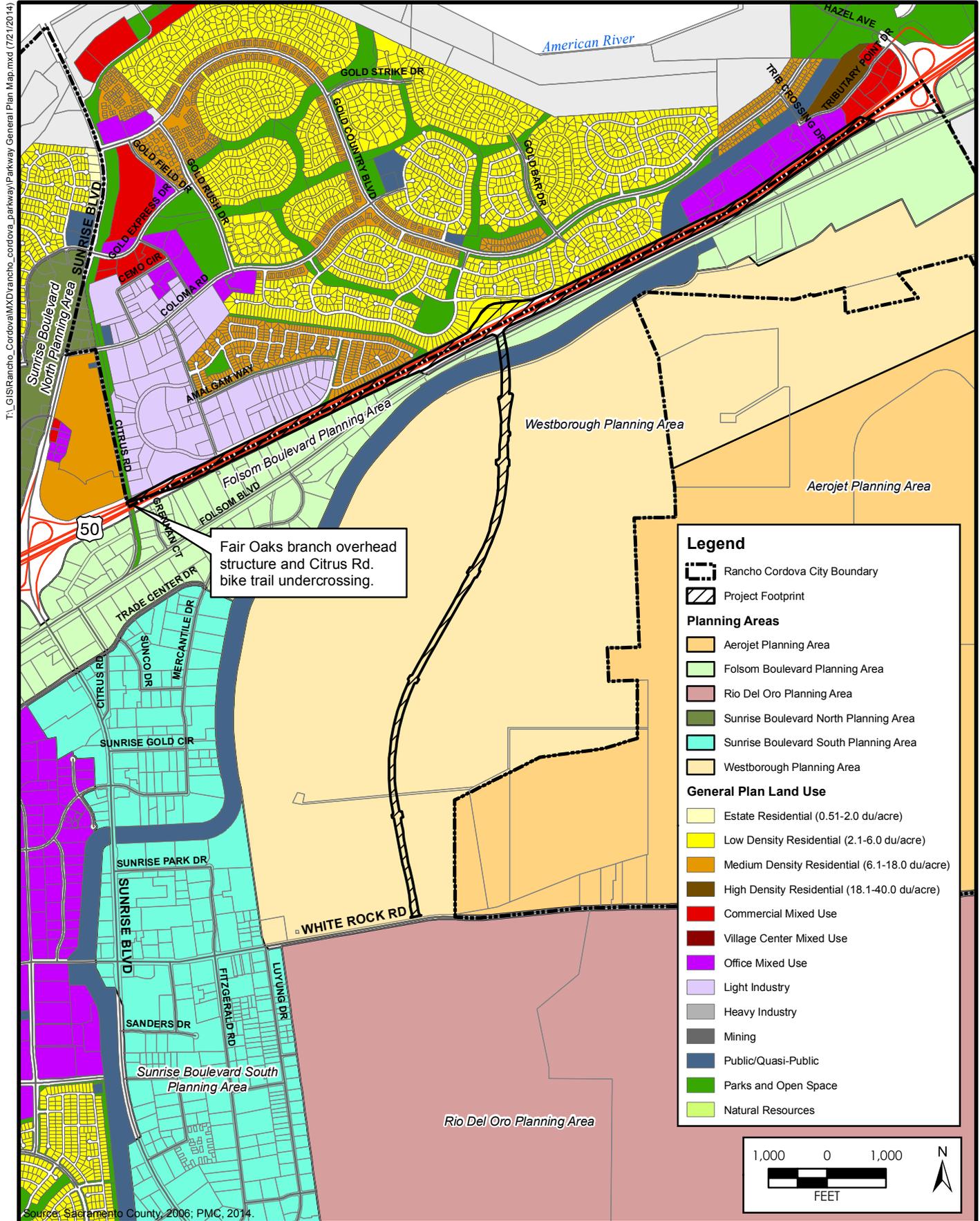
uses such as schools, churches, and other public entities also serve as major land uses (refer to **Table 2.1.1-1** below).

**Table 2.1.1-1  
City of Rancho Cordova General Plan Land Uses**

Land Use	Land Use Description	Acres	Percentage of Total
GA	General Agriculture	0	0.0%
RA	Rural Agriculture	0	0.0%
P/QP	Public/Quasi Public	1,138	5.7%
P/OS	Parks and Open Space	2,392	12.0%
NR	Natural Resources	1,864	9.3%
RR	Rural Residential	0	0.0%
ER	Estate Residential	34	0.2%
LDR	Low Density Residential	6,752	33.7%
MDR	Medium Density Residential	3,423	17.1%
HDR	High Density Residential	450	2.2%
RMU	Residential Mixed-Use	62	0.3%
CMU	Commercial Mixed-Use	439	2.2%
OMU	Office Mixed-Use	1,788	8.9%
VC	Village Center	222	1.1%
LTC	Local Town Center	68	0.3%
RTC	Regional Town Center	112	0.6%
LTOD	Local Transit-Oriented Development	77	0.4%
RTOD	Regional Transit-Oriented Development	0	0.0%
LI	Light Industrial	961	4.8%
HI	Heavy Industrial	224	1.1%
SM	Surface Mining	0	0.0%
<b>Total</b>		<b>20,006</b>	<b>100.0%</b>

Source: City of Rancho Cordova General Plan Land Use Element Table LU-2, July 2006

The Planning Area is characterized by a wide range of existing land uses, including residential developments, commercial/retail/office uses, industrial uses, institutional uses (e.g., churches, schools), Mather Airport operations, natural features, open space, parks, and vacant land. The majority of the commercial, office, and retail uses are located along the Sunrise Boulevard and Folsom Boulevard corridors. Industrial, manufacturing, and



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Source: Sacramento County, 2006; PMC, 2014.



City of Rancho Cordova  
Planning Department

**Figure 2.1.1-1**  
Existing and Future Land Uses  
in the Project Vicinity



distribution facilities are located throughout the Planning Area, primarily along Sunrise Boulevard, Jackson Highway, Bradshaw Road, and Folsom Boulevard. The majority of manufacturing and distribution outlets are located along Folsom Boulevard, Bradshaw Road, and Sunrise Boulevard. The **GenCorp/Aerojet testing and manufacturing facility** operations are located south of U.S. 50 and east of Sunrise Boulevard. Teichert and Granite have active mining operations north of Jackson Highway between Bradshaw Road and Excelsior Road in the Mather Planning Area. Teichert also has operations south of U.S. 50 along Grant Line Road. The Sacramento County (County) Branch Center Complex, which contains many Sacramento County departments and agencies, is located near the intersection of Bradshaw Road and Kiefer Boulevard. Mather Airport is a former air force base that has been converted to civilian use. The Sacramento County Airport System now operates the airport.

Located within the Planning Area are various creeks, tributaries, drainage basins, and surface waterways including the American River, Buffalo Creek, and the Folsom South Canal. The American River makes up the Planning Area's northern boundary. The American River Parkway is an open space greenbelt adjacent to the American River that provides flood protection and recreational opportunities and extends approximately 29 miles from the Folsom Dam to the American River's confluence with the Sacramento River near Discovery Park. The floodplain of the Cosumnes River makes up the Planning Area's southeastern boundary.

Buffalo Creek runs through the Westborough Planning Area in an east-west direction and flows north across the Folsom South Canal in an overchute, through the Gold River Community, and then drains into the American River. Buffalo Creek was modified historically to accommodate storm events on the Aerojet property within the Westborough Planning Area. The Folsom South Canal is owned and maintained by the U.S. Bureau of Reclamation (USBR). The Folsom South Canal was originally designed to convey industrial, municipal, and irrigation water from Lake Natoma to San Joaquin Valley counties and customers in the East Bay; however, the original plan for the canal was never completed. The portion of the Folsom South Canal that has been completed starts at the Nimbus Dam and extends southward for approximately 27 miles past the community of Wilton.

Annual grassland is the prevalent vegetation type throughout the undeveloped (vacant) portion of the Planning Area and comprises approximately 12,888 acres. The majority of the vacant land is located in the southeastern portion of the Planning Area (i.e., the Rio del Oro Planning Area and the Sunrise-Douglas Community Plan area) and the area east

of Hazel Avenue and south of U.S. 50 (i.e., Glenborough and Westborough Planning Areas).

### *Project Area*

The proposed project site is located partially in the northern limits of the City of Rancho Cordova, and the remainder of the site is located in unincorporated Sacramento County.

**Figure 1.1-1** in Chapter 1, “Proposed Project,” shows the [project site and surrounding project area](#). It is directly south of the Gold River Community, which lies in unincorporated Sacramento County. The proposed interchange is located on U.S. 50 (postmile 12.5/15.8) along a 3.2-mile segment between Sunrise Boulevard and Hazel Avenue. The proposed Rancho Cordova Parkway Interchange would be located approximately 1.6 miles east of the Sunrise Boulevard interchange and 1.6 miles west of the Hazel Avenue interchange. **Figure 2.1.1-2** shows existing and future planned land uses in the project vicinity.

The portion of the project along the north side of U.S. 50 is outside of the city limits, but within unincorporated Sacramento County and the Rancho Cordova Planning Area. The portion of the project south of U.S. 50 is within the Rancho Cordova city limits.

### *U.S. 50*

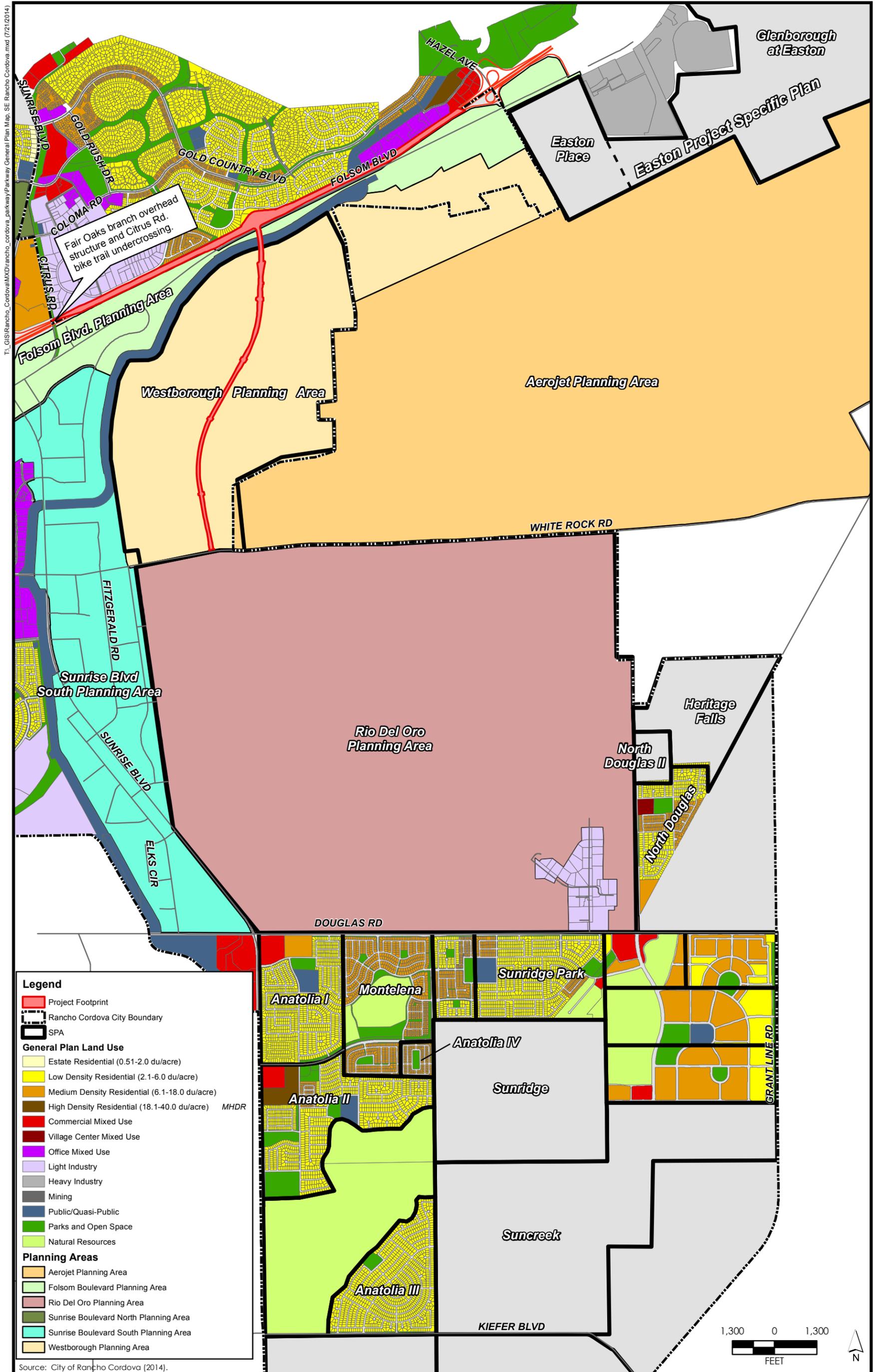
U.S. 50 is an eight-lane limited-access freeway running in an east–west direction in the project area. The facility contains six general purpose travel lanes and two high-occupancy vehicle (HOV) lanes along the median of the roadway. The average median width is 22 feet, including shoulders and traffic barrier.

In 2002, Caltrans completed work on the Highway 50 HOV Lane and Sunrise Interchange Project. The purpose of the project was to improve existing operations on the U.S. 50 mainline, reduce queuing on the ramps, enhance safety, and provide additional incentives for ridesharing.

### ***Surrounding Land Uses***

Existing land uses on the north and south sides of U.S. 50 consist of a mixture of single-family residential, commercial, and vacant industrial/warehouse. **Figure 2.1.1-2** shows the designated land uses in and around the project area.

The land uses south of U.S. 50 are predominantly industrial, both intensive and extensive uses, with some hazardous waste designations in the vicinity of Aerojet. North of the freeway to the American River, land use is mainly low-density residential with some urban transit-oriented residential use and, to a lesser extent, industrial uses.



**Figure 2.1-1-2**  
Existing and Future Land Uses  
in the Project Vicinity - Southeast Rancho Cordova



### *North of U.S. 50*

The northern portion of the proposed project ~~area-site~~ is located outside of the Rancho Cordova city limits, but within the Rancho Cordova Planning Area in unincorporated Sacramento County. Areas surrounding the northern portion of the project site These areas are designated as Low Density Residential, Urban Transit-Oriented, Commercial & Offices, and Intensive Industrial by the Sacramento County General Plan Land Use Diagram and as Residential, Industrial/Office Park, and Heavy Industrial by the County of Sacramento Zoning Code. Immediately north of the proposed overpass is a small area of fallow and undeveloped land set aside by the County for the footprint of the proposed interchange as a condition of approval for the Gold River Community. A concentration of residential dwellings is located further north in the Gold River Community.

### *Gold River Community*

The Gold River Community is a master-planned residential community located in unincorporated Sacramento County directly north of the proposed interchange. It is bordered by U.S. 50 to the south, the American River to the north, Hazel Avenue to the east, and Sunrise Boulevard to the west. The community comprises 25 single-family home villages, each named for famous gold mining patriarchs and places. The community spans approximately 950 acres with nearly 3,000 homes ranging in size from 1,500 square feet to 5,000 square feet. The Gold River Community had a total population of 7,994 residents according to 2010 U.S. Census data. Approximately 60 parcels within Gold River abut the northern perimeter of the U.S. 50 right-of-way. Gold River is located within the boundaries of the Cordova Community Plan and is included within the November 2011 Sacramento County General Plan. Each of the villages is governed by its own homeowners association, which is responsible for front yard landscaping (front home maintenance is included in some villages) and enforcement of Conditions, Covenants, and Restrictions.

Based upon the Land Use Diagram contained in the November 2011 Sacramento County General Plan, the land use designation for Gold River Community is Low Density Residential, which allows for densities between one and 12 dwelling units per acre. The frontage along the American River is designated as Recreation and a Protected Resource Conservation Area. Much of the Gold River Community's residential areas are zoned as a Special Planning Area (SPA). The site was formerly utilized for gold dredging operations from the middle 1800s through the 1950s. In the late 1970s, the Natomas Real Estate Company began to develop the site into a residential community.

### *South of U.S. 50*

The Rancho Cordova General Plan designates existing and future land uses south of U.S. 50 as Commercial and Medium Density Residential. Historically, the area south of U.S. 50 in the vicinity of the project site was utilized for gold mining and dredging operations, as evidenced by the presence of mine tailings.

Folsom Boulevard lies directly south of U.S. 50 and runs from downtown Sacramento to the City of Folsom. The portion of Folsom Boulevard within the project ~~vicinity~~ ~~area~~ was recently widened to a five-lane roadway (two through lanes in each direction with a center dual left turn lane). Folsom Boulevard lies within the jurisdiction of the City of Rancho Cordova and is a major east–west connector for the region.

The Folsom South Canal is located south of U.S. 50 and Folsom Boulevard and runs in an east–west direction and then crosses beneath U.S. 50 at the eastern limits of the project, continuing toward Hazel Avenue on the north side of U.S. 50. The Folsom South Canal is designated as park land by the November 2011 Sacramento County General Plan and as Open Space by the 2006 Rancho Cordova General Plan. It is approximately 27 miles in length and is owned and maintained by USBR as part of its Central Valley Project. The canal originates at Lake Natoma on the American River to the northeast of the project site and carries water to the Sacramento Municipal Utility District (SMUD)–owned Rancho Seco power-generation facility. The canal also contains a maintenance road paralleling the length of the canal that is commonly used as a public recreational cycling and pedestrian trail.

The Westborough Planning Area lies directly south of the Folsom South Canal and is intersected by the proposed Rancho Cordova Parkway Interchange. This SPA consists primarily of vacant land and will be developed into a residential community.

In 2002, prior to incorporation of the City of Rancho Cordova, Sacramento County approved the Sunridge Specific Plan (SRSP) for an area located south of Douglas Road and east of Sunrise Boulevard. The SRSP designated 2,605 acres of land for urban land uses within what became the incorporated city limits of the City of Rancho Cordova. At total buildout, the SRSP was approved for a maximum of approximately 10,000 residential units at various densities, 173 acres of commercial uses, 78 acres of parks, 44 acres of school uses, drainage basins, and open-space areas; however, upon more detailed development of individual development plans proposed within the former SRSP area, it is

now expected that, at buildout, the SRSP will contain approximately 8,700 residential units<sup>9</sup>.

Individual residential and commercial developments within the former SRSP area are in various states of development. Some, such as the Anatolia I, II, and III developments, are at completion of construction. Others, such as Anatolia IV and Montelena, are in the midst of construction activities, which are soon to be completed. Each individual development project that is completed continues to contribute traffic to the Sunrise Boulevard corridor.

### **Future Land Uses**

A number of large projects are approved or proposed that would increase the acreage of residential, commercial, school, and park uses in the project ~~area and its~~ vicinity. **Table 2.1.1-2** provides a list and description of these projects and other approved and proposed large-scale projects in ~~the project vicinity and around the project area~~. **Figure 2.1.1-2** shows the location of the projects listed in **Table 2.1.1-2**.

**Table 2.1.1-2**  
**List of Approved and Proposed Development Projects**  
**near the Rancho Cordova Parkway Interchange Project**

<b>Project Name and Jurisdiction</b>	<b>Status</b>	<b>Description</b>
Westborough (Westborough Planning Area)—City of Rancho Cordova	Proposed	Proposed 5,100 residential units and commercial development on 1,137 acres south of U.S. 50 and north of White Rock Road, between Sunrise Boulevard in the west and Hazel Avenue in the east. The proposed Rancho Cordova Parkway roadway would bisect the Westborough project.
Easton Project—County of Sacramento	Approved	Approved 4,883 residential units and commercial development on 979 acres south of U.S. 50 and north of White Rock Road, between Sunrise Boulevard in the west and Hazel Avenue in the east. Located immediately east of and contiguous to the proposed Westborough development.
Rio del Oro Specific Plan (Rio del Oro Planning Area)—City of Rancho Cordova	Approved	Approved 11,601 residential units, commercial development, various parks, and wetland preserve on 3,828 acres located south of White Rock Road, north of Douglas Road, and east of Sunrise Boulevard.

<sup>9</sup> Since incorporation of Rancho Cordova, the City has taken action to unadopt the Sunrise-Douglas Community Plan and the Sunridge Specific Plan. Land uses under these plans have been superseded by the development-specific approvals and the City of Rancho Cordova General Plan. It should be noted that condition TC-28 in the Sunridge Specific Plan (requirement to participate in the construction of a new, ultimate six-lane, south-only roadway to connect Douglas Road to U.S. 50 at the location of the proposed Rancho Cordova Parkway Interchange) has been applied to development projects located within the former Sunridge Specific Plan.

Project Name and Jurisdiction	Status	Description
Anatolia I, II, and III—City of Rancho Cordova	Approved	A total of 2,714 residential units on a total of 736 acres located within the SDCP/SRSP south of Douglas Road, north of Kiefer Boulevard, and east of Sunrise Boulevard.
Montelena—City of Rancho Cordova	Approved	874 residential units on 252 acres located within the SDCP/SRSP south of Douglas Road and west of Jaeger Road.

## Environmental Consequences

### **No Build Alternative (2037 Conditions without the Project)**

#### *Permanent Impacts*

Under the No Build alternative, without the new Rancho Cordova Parkway Interchange access to U.S. 50, congestion would only worsen along the existing transportation network, including U.S. 50. The SRSP Conditions of Approval (Zoning Condition 48, which has been applied to individual development projects) limit that development to 6,500 residential dwelling units (out of a total of 8,214) until an interchange at the project location is constructed. Without this interchange, 1,714 residential units (plus some of the planned land uses around the immediate interchange area) would develop elsewhere, most likely further to the east or south in places like Folsom, El Dorado Hills, Rancho Murieta, or Elk Grove (based on review of development scenarios used in the Sacramento Area Council of Governments [SACOG] Preferred Blueprint Scenario). Thus, under the No Build alternative, regional development and growth assumptions would not be consistent with those in the City’s General Plan or the SACOG Metropolitan Transportation Plan (MTP).

Please see Section 3.2.1 for additional information on land use impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures are proposed.

### **Alternative 3 (Proposed Project)**

#### *Permanent Impacts*

Alternative 3 (proposed project) would require right-of-way acquisition of 5.803 acres and the relocation of one business (former Your Home Resort at 2300 Mineshaft Lane). This right-of-way acquisition would not substantially alter current land use conditions. Alternative 3 would also not alter planned land use conditions in the project vicinity area.

and has been designated for an interchange facility in the City of Rancho Cordova General Plan and the Sacramento County General Plan.

### *Temporary Impacts*

Temporary construction easements are anticipated ~~at~~ select locations of the project ~~site~~area. These construction easements would not conflict with existing land uses in the project ~~vicinity~~area.

Please see Section 3.2.1 for additional information on land use impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures are proposed.

#### **2.1.1.2. Consistency with Federal, State, Regional, and Local Plans**

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

###### *Sacramento Area Council of Governments Preferred Blueprint Scenario*

SACOG adopted its Preferred Blueprint Scenario (Blueprint) in December 2004. The Blueprint process is a regional vision to accommodate the projected growth and long-term needs of the region over the next 50 years. The Blueprint is intended to guide land use and transportation choices through 2050, during which time the region's population is projected to grow from its current population of 2.0 million to over 3.8 million and the number of jobs is projected to double to nearly 1.9 million. The Blueprint proposes a concentrated, compact development pattern in the region with a balance of employment, residential, shopping, and recreational uses linked to transportation system improvements.

The Blueprint process depicts a way for the region to grow through 2050 generally consistent with seven principles of "Smart Growth." According to the SACOG Blueprint, the seven principles include: providing a variety of transportation choices; offering housing choices and opportunities; taking advantage of compact development; using existing assets; incorporating mixed land uses; preserving open space, farmland, and natural beauty through natural resources conservation; and encouraging distinctive, attractive communities with quality design.

The Blueprint process received broad support from most of its member agencies, including the City, although the Blueprint itself is advisory and does not establish actual land use restrictions for the City. However, although it is only advisory, the Blueprint is the most authoritative policy guidance in the Sacramento region for long-term regional

land use and transportation planning. A number of jurisdictions are either adopting the Blueprint concepts or are considering and encouraging projects consistent with the Blueprint. During the initial stage of development of the City's General Plan process, the Rancho Cordova City Council endorsed the SACOG Blueprint process and the preferred Blueprint Scenario C (or Blueprint Plan). The City's current General Plan is consistent with the Blueprint.

The Blueprint is the top-tier planning document that helps drive more detailed transportation planning documents, such as the MTP and the Metropolitan Transportation Improvement Plan (MTIP).

### *Metropolitan Transportation Plan*

The MTP is a 28-year plan for transportation improvements in the six-county greater Sacramento region, based on projections for growth in population, housing, and jobs.

SACOG is the metropolitan planning organization responsible for developing the state- and federally required MTP every four years, in coordination with the 22 cities and six counties in the greater Sacramento region. Under memoranda of understanding, long-range transportation plans in El Dorado and Placer counties are also incorporated into the MTP.

Regardless of city- or county-designated transportation projects, local improvements must be included in the regional MTP to receive state and federal funding. The most recent MTP for 2035 proposes using \$41.7 billion in transportation funds to operate, maintain, and expand the region's transportation system. Expenditures include \$14.3 billion for transit; \$12.4 billion for road maintenance; \$11.3 billion for road capital projects; \$2.3 billion for programs, planning, and transportation enhancements; and \$1.4 billion for bicycle and pedestrian projects.

The interchange portion of the proposed project is identified in the Final MTP 2035 with the following project description: "Interchange: Rancho Cordova Pkwy./U.S. 50. Auxiliary lanes on U.S. 50 between Hazel Ave. and Sunrise Blvd." The projected cost for the interchange portion of the project in the Final MTP 2035 is \$125,635,000, and the project is identified for completion in 2013. The roadway portion of the proposed project is identified in the Final MTP 2035 with the following project description: "New road: 6 lane road from U.S. 50 to White Rock Rd. (Phase I)." The projected cost for the roadway portion of the project in the Final MTP 2035 is \$12,678,000, and it is identified for completion in 2016.

### *Metropolitan Transportation Improvement Program*

As the designated metropolitan planning organization for the region, SACOG prepares and maintains a federal MTIP. The program includes a listing of all transportation-related projects requiring federal funding or other approval by the federal transportation agencies. The MTIP also lists nonfederal, regionally significant projects for information and air quality modeling purposes.

Projects included in the MTIP are consistent with SACOG's MTP and are part of the area's overall strategy for providing mobility, congestion relief, and reduction of transportation-related air pollution in support of efforts to attain federal air quality standards for the region. The MTIP is intended to implement the goals and objectives of the MTP.

The ~~2011/2014~~2013/16 MTIP is the most recent and approved MTIP for the region and was approved on ~~September 9, 2010~~August 16, 2012.

### *Sacramento County General Plan*

The Sacramento County General Plan serves as the overall guiding policy document for the county. The existing County General Plan was adopted in November 2011. The central focus of the County General Plan is the Land Use Element, which sets the policies for the distribution and intensity of land uses. The General Plan addresses plans for growth in the next planning cycle (2005/2030) as well as addresses new emerging planning issues. The General Plan's Transportation Plan diagram identifies the proposed interchange area and an ultimate thoroughfare (six-lane) roadway at the proposed location as future facilities.

The General Plan's Land Use Diagram shows the area within ~~and surrounding~~ the project ~~vicinity~~area north of U.S. 50 as Low Density Residential (1–12 dwelling units per acre) and areas south of U.S. 50 as Intensive Industrial and Extensive Industrial.

The County General Plan Land Use section does not identify any land use policies that relate to the proposed project. Other General Plan policies not related to land use issues are discussed in the relevant EIR environmental analysis sections.

### *City of Rancho Cordova General Plan*

The City of Rancho Cordova General Plan serves as the overall guiding policy document for the City. Upon incorporation in July 2003, the City of Rancho Cordova adopted the existing Sacramento County General Plan to serve as the City's interim General Plan and to guide development in the city until the formal adoption of its own General Plan. On

June 26, 2006, the City adopted the first Rancho Cordova General Plan. The General Plan Land Use Book and associated General Plan Land Use Map combine geographical areas of the city with generalized and specific land use designations to guide the city's future development patterns.

The General Plan references the proposed Rancho Cordova Parkway as one of the primary circulation pathways into and around one of the new planning areas designated in the General Plan. The proposed interchange and Rancho Cordova Parkway are shown in the Circulation Plan of the General Plan. The parkway is envisioned as an ultimate six-lane expressway and as a potential enhanced transit corridor with conceptual bus rapid transit.

### *Community Plan and Specific Plan Areas*

A community plan consists of the policy framework (including both guiding principles and policies, land use holding capacity and acreage estimates, and a basic infrastructure framework) to guide community development. Community plans do not grant land use entitlements. Entitlements to develop subareas (including the proposed project site) within the community plan areas are granted through the adoption of specific plans, use permits, subdivision maps, and related entitlements. Community plans and subsequent specific plans form a tiered process for planning and approving development proposals.

A specific plan gives city governments the ability to plan for cumulative neighborhood changes by providing a relatively detailed plan for the development of a particular part of a city. A specific plan often includes a master environmental impact review for the entire plan area.

SPAs are similar to specific plans. The County has historically used SPAs to address the needs of projects or geographical areas with special environmental and social circumstances. The SPA process can be a valuable planning tool for both applicants and the City. These focused planning tools provide the opportunity for developing unique planning standards (e.g., lot sizes, setback standards, permitted uses) in response to site-specific issues. They also provide for a more creative development than could be achieved solely through standard zoning regulations. The current SPAs in the county include, but are not limited to, Metro Air Park, Calvine/Highway 99, Garden Highway, Fair Oaks Village, Zinfandel, Antelope Station, and McClellan Park.

### *Cordova Community Plan*

The area described by the Cordova Community Plan comprises approximately 37,500 acres, or 59 square miles. This area is bordered by the American River and the City of

Folsom on the north; Prairie City Road, Grant Line Road, and White Rock Road on the east; Douglas Road, Kiefer Boulevard, and Jackson Highway (SR 16) on the south; and the City of Sacramento and Watt Avenue on the west. Originally adopted by the County of Sacramento in 1978, the Cordova Community Plan underwent an update in May 2003 and has guided the planning context of the newly incorporated City of Rancho Cordova. The Roadway Diagram (Exhibit 6.1.1) of the Cordova Community Plan (<http://www.per.saccounty.net/PlansandProjectsIn-Progress/Documents/Specific%20Plans/Cordova-CP.pdf>) denotes the proposed interchange and parkway. The plan also identifies the interchange and roadway as a means to improve access to alternate modes of transportation (i.e., light rail) for commuters as the area further develops. Both the County and City continue to work in coordination to implement the strategies contained in the plan.

### *Westborough Planning Area*

The project site area south and east of the Folsom South Canal is located in the Westborough Planning Area. This planning area is currently made up of land owned by GenCorp ([Aerojet's parent company](#)) and is identified within the Rancho Cordova General Plan. It is envisioned to consist primarily of residential development focused around a regional town center just to the south of the proposed interchange. The proposed uses envisioned for this planning area would help to improve the jobs/housing balance in the city.

### *South Sacramento Habitat Conservation Plan*

Sacramento County contains diverse habitats and sensitive plants and wildlife. In an effort to properly manage these sensitive species and habitats, the South Sacramento Habitat Conservation Plan (SSHCP) is in the process of being prepared and will address the conservation and development of lands in this portion of the county. The purpose of the plan is to encourage and simplify the process of conserving sensitive habitats for special-status species. Once the plan is approved, it will allow for incidental take of covered species with the requirement of mitigation for lost habitat at approved ratios.

## **Environmental Consequences**

### ***No Build Alternative (2037 Conditions without the Project)***

The No Build alternative would conflict with the City of Rancho Cordova General Plan and the Sacramento County General Plan by not providing the planned interchange facility and associated roadway extension. This alternative would also conflict with the SACOG 2035 MTP and ~~2011/2014~~[2013/16](#) MTIP.

### **Alternative 3 (Proposed Project)**

#### *Consistency with the SACOG Blueprint*

SACOG's Preferred Blueprint Scenario, adopted in December 2004, envisions a high-density mixed-use center or corridor in the immediate vicinity of the interchange with medium- to high-density mixed residential in the area that Rancho Cordova Parkway would traverse.

#### *Consistency with the ~~2011/2014~~2013/16 Metropolitan Transportation Improvement Plan*

The interchange portion of the proposed project is included in the ~~2011/2014~~2013/16 MTIP as project number SAC24220 and described as "At US 50 and Rancho Cordova Pkwy.: Construct new interchange including auxiliary lanes on U.S. 50 between Hazel Ave. and Sunrise Blvd. and a four lane arterial connection to US 50 of Rancho Cordova Pkwy. to WhiteRock Rd.~~At U.S. 50 and Rancho Cordova Parkway: Construct new interchange including auxiliary lanes on Highway 50 between Hazel Avenue and Sunrise Boulevard and a four lane arterial connection to U.S. 50 of Rancho Cordova Pkwy. to White Rock Rd.~~"

#### *Consistency with Sacramento County General Plan Policies*

Although no Sacramento County General Plan policies relate directly to the proposed project, it is shown on the General Plan Transportation Plan diagram and is thus consistent with this EIR/EA. Other General Plan policy issues are discussed in the relevant EIR/EA sections.

#### *Consistency with City of Rancho Cordova General Plan Policies*

The proposed project would be consistent with City of Rancho Cordova General Plan policies. Other General Plan policy issues are discussed in the relevant EIR/EA sections.

#### *Consistency with Community and Specific Plans*

The proposed project would be consistent with community and specific plans within ~~and~~ ~~near~~ the project vicinity~~area~~ as they relate to the land uses identified within these plans. Other community and specific plan policies not related to land use issues are discussed in the relevant EIR/EA sections.

#### *Consistency with South Sacramento Habitat Conservation Plan*

Project consistency with the SSHCP is not analyzed in this EIR/EA, because the SSHCP has not been adopted. If the SSHCP is finalized and approved prior to commencement of

mitigation pursuant to the mitigation and monitoring plan developed for the project, the U.S. Army Corps of Engineers (USACE), the Central Valley Regional Water Quality Control Board (Central Valley RWQCB), and the City may consider (if applicable) modifications to the mitigation and monitoring plan to be consistent with the SSHCP. This is discussed further in Section 2.3.5, “Threatened and Endangered Species.”

Please see Section 3.2.1 for additional information on land use impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures are proposed.

#### **2.1.2. Parks and Recreational Facilities**

##### **Affected Environment**

Two public parks, Prospect Hill Park and Gold Station Park, are located within one-half mile of the project [sitearea](#) in the Gold River Community. Prospect Hill Park is approximately 7 acres and is located on Prospect Hill Drive and Tenderfoot Drive approximately 500 feet north of the project. Gold Station Park is approximately 2 acres and is located near the northeast corner of Gold Station Drive and Amalgam Way approximately 1,000 feet north of the project. Both of these parks include picnic areas, playing fields, and playgrounds and are maintained by the Cordova Community Parks Department.

There are several bicycle facilities located within one-half mile of the project [sitearea](#). The Folsom South Canal has a maintenance roadway used as a public bicycle trail that runs parallel to the canal. The nearest access points to the canal bike trail are at Hazel Avenue in the east and at Sunrise Boulevard in the west. The Citrus Road bike trail undercrossing is also a public bicycle trail running along the western project boundary underneath the Fair Oaks Branch overhead structure, as shown on **Figures 2.1.1-1 and 2.1.1-2**. The Citrus Road bike trail intersects a Class II bike lane along Folsom Boulevard approximately one-quarter mile south of the U.S. 50 undercrossing. A network of privately owned recreational trails is located within the Gold River Community, some of which lead north and west from Prospect Hill Park and are within a half-mile of the project.

Trails and publicly owned parks used for recreational purposes by the general public are protected resources under 49 USC 303, commonly known as Section 4(f). The Folsom South Canal bicycle trail, the Citrus Road bike trail, and Prospect Hill and Gold Station Parks would be considered Section 4(f) resources. The privately owned trails in the Gold

River Community are not considered Section 4(f) resources because they are not publicly owned. The Class II bike lane along Folsom Boulevard is not considered a Section 4(f) resource because it is primarily used for transportation (commuter) purposes and is not a recreational facility. See **Appendix B** for additional information regarding resources evaluated relative to the requirements of Section 4(f).

## **Environmental Consequences**

### ***No Build Alternative (2037 Conditions without the Project)***

Because no physical changes would take place under the No Build alternative, this alternative would result in no effects to parks and recreational facilities.

### ***Alternative 3 (Proposed Project)***

This project alternative would not affect Prospect Hill Park or Gold Station Park. Furthermore, the proposed project would not result in a use of Prospect Hill Park or Gold Station Park under Section 4(f). There would not be an actual use of these parks because no part of the parks would be incorporated into the transportation facilities associated with the proposed project. There would be no constructive use of these parks because there are no proximity impacts that would rise to the level of substantial impairment. Prospect Hill Park is located behind rows of residences and would be shielded by the residences from any potential added traffic noise or visual intrusions. Gold Station Park is located behind several commercial businesses that would shield it from any potential added traffic noise or visual intrusions. The proposed project also would not temporarily use any part of these parks for the construction staging, and actual construction is not within the limits of the parks boundaries.

The existing Class I bike trail along Citrus Road, including the Citrus Road undercrossing, connects Class II bike lanes on Sunrise Boulevard with those on Folsom Boulevard, thus routing bicyclists and pedestrians around the Gold River Community. Because bicycle activities are not typically of a nature that causes substantial wear and tear of pavement materials, the effects of increased trail use are not expected to be appreciably different from those resulting from the use of current bicycle/pedestrian routes on Coloma Road, Gold Express Drive, and Gold River Drive compared to conditions without construction of the project.

The project would extend the interchange bridge structure south over Folsom Boulevard and the Folsom South Canal to provide clearance over the public bicycle trail that runs parallel to the Folsom South Canal. Bridge support columns would need to be installed in or near the right-of-way of the Folsom South Canal. These bridge support columns,

however, would not encroach on the bicycle trail or its operation once the construction is complete. During construction, public access may be temporarily restricted at the sections of the bicycle trail near the bridge support columns.

In addition, project construction activities associated with widening the westbound U.S. 50 auxiliary lane on the Fair Oaks Branch overhead structure above the Citrus Road bicycle undercrossing could require temporary and sporadic bicycle lane closures during erection of the proposed bridge spans and falsework.

#### *De Minimis* Section 4(f) Uses

Both the Folsom South Canal bike trail and the Citrus Road bike trail would be temporarily used by the project according to the provisions of Section 4(f). Because the trails may be subject to total closures at times during construction, the exception for temporary use is not met, as the closures would not meet the requirement that there be no interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis, per 23 Code of Federal Regulations (CFR) 774.13(d).

Therefore, the temporary closure of these sections of trail would be considered a use; however, the use would be *de minimis*.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users amendment to the Section 4(f) legislation simplifies the process and approval of projects that have only *de minimis* impacts on resources protected by Section 4(f). This allows the U.S. Department of Transportation to determine that a use of a Section 4(f) resource, after consideration of any avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that resource.

Caltrans' preliminary determination is that the uses of the trails would be *de minimis* because the trails would remain open for the majority of the construction period and because there would not be any actual, permanent use of the trails; all of the bridge columns for the proposed project would be located outside the boundaries of the trails. Furthermore, as detailed below under "Avoidance, Minimization, and/or Mitigation Measures," extensive measures to minimize interference with trail activities would be undertaken. Thus, the Section 4(f) uses of the Folsom South Canal and Citrus Road bicycle trails by the proposed project to the protected activities, features, and attributes of the trails would be *de minimis*. In addition, the public will be afforded an opportunity to review and comment on the effects of the project to the protected activities, features, and attributes of these bicycle trails concurrent with public review of this EIR/EA.

To satisfy the Section 4(f) requirements for *de minimis* determinations, the officials with jurisdiction over the resource must concur in writing that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f). The written concurrence letters from USBR (for the Folsom South Canal bicycle trail) and City (for the Citrus Road undercrossing bicycle trail) ~~will be procured after the public review of this EIR/EA~~ are included in Appendix B.

Please see Section 3.2.2 for additional information on park and recreation facility impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

The construction contractor will minimize the duration of the closures of the Folsom South Canal and Citrus Road bicycle trails to the shortest period necessary to complete construction activities. The trails will remain open during regular trail hours (daytime hours) unless construction activities are occurring that require closure of the trails for either physical or public safety reasons. Signage will be placed at the entrances to the Folsom South Canal trail at Hazel Avenue and Sunrise Boulevard and at Folsom Boulevard and Sunrise Boulevard for the Citrus Road bicycle trail to notify users of the closures. When feasible, this signage will also advise the users of alternative trail routes that they may use. On behalf of Caltrans, the City will notify local bicycling groups and associations prior to the trail closures and notify them of the reopening in an effort to disseminate the information to their members. The features and attributes of the bicycle trail will be fully restored once the construction of the project is complete.

#### **2.1.3. Growth**

##### **Regulatory Setting**

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with the National Environmental Policy Act of 1969 (NEPA), require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. CEQA Guidelines Section 15126.2(d) requires that environmental documents "discuss the ways in which the proposed project could foster

economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment”

## **Affected Environment**

### ***Sacramento Area Council of Governments Blueprint***

The December 2004 SACOG Blueprint is discussed in detail in Section 2.1.1, “Land Use,” of this EIR/EA. As noted in Section 2.1.1, SACOG’s Preferred Blueprint Scenario identifies the proposed interchange and envisions a high-density mixed-use center in the vicinity of the interchange with medium- to high-density mixed residential in the area that Rancho Cordova Parkway would traverse.<sup>10</sup>

### ***City of Rancho Cordova General Plan***

The City of Rancho Cordova General Plan Land Use section and associated General Plan Land Use Map combine geographical areas of the city with generalized and specific land use designations to guide the city’s future development patterns. The intent of the General Plan Land Use Map is to establish a variety of new land use designations that reflect more mixed, and in some cases, a higher density of development envisioned for the city. These mixed-use categories provide for residential, commercial, and office uses, all on a single site. The General Plan references the proposed Rancho Cordova Parkway as one of the primary circulation pathways into and around the new planning areas designated within the General Plan.

### ***Development Projects Identified in the General Plan***

As detailed in **Table 2.1.1-2**, several large developments are either planned, under construction, or have already been constructed in Rancho Cordova. These include but are not limited to the Westborough development, the Rio del Oro Specific Plan area, and the Anatolia I, II, and III series of developments. The proposed project would either directly or indirectly serve all of these developments and others planned or under construction in Rancho Cordova south of U.S. 50 and east of Sunrise Boulevard.

### ***Sacramento County General Plan***

The Sacramento County General Plan serves as the overall guiding policy document for the county. The Sacramento County General Plan’s November 2011 Transportation Plan Map shows the proposed interchange area and a pre-2030 thoroughfare roadway at the proposed location.

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<sup>10</sup> SACOG Sacramento Region Blueprint, Preferred Blueprint Scenario, Rancho Cordova Base Map. Adopted December 2004 by SACOG Board of Directors.

### **Components of Growth**

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since the general plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

### **Capacity and Growth**

Rancho Cordova increased in population both before and after its incorporation in July 2003. Its neighbors, which include Sacramento, Folsom, and unincorporated areas of Sacramento County, have also been experiencing growth. SACOG and the U.S. Census Bureau (Census 2010) prepare population projections for the greater Sacramento region. According to population data presented by the California Department of Finance (DOF) based on Census 2010 data, Sacramento County had a population of approximately 1,223,499 in 2000 and a population of 1,418,788 in April 2010. The population in the county is projected to be 1,646,045 by 2020 and 1,986,543 by 2035. The population of unincorporated Sacramento County is projected to be approximately 755,697 by 2020.

The population of the City of Rancho Cordova increased by 3 percent from 1990 to 2000. In 1990, the City of Rancho Cordova had approximately 51,322 persons, increasing to approximately 53,065 in 2000. In 2005, the DOF estimated a city population of 55,109. In 2010, the city's population was 64,776 (DOF 2010). In addition, the city is projected to have an approximate population of 169,081 through the General Plan time frame of 2025, which is an increase of more than 207 percent over the city's 2005 population and an increase of 161 percent over the city's 2010 population.

When necessary highway improvements are not made, the result is severe congestion that reduces mobility in a given area. The City needs to improve its transportation infrastructure to prevent this situation. It is assumed that within Rancho Cordova, growth will continue to occur regardless of the highway system. More desirable land, housing, jobs, or other factors will bring new residents to the area even if there is considerable congestion on the roadways. If the highway and roadway system does not expand with the increase of new residents and businesses, the growth level will slow and the level of service will continue to deteriorate.

**Table 2.1.3-1** lists the planned 2035 roadway and transit improvements within the study area and the expected completion year of each. These improvements would help to increase roadway and transit capacity within and surrounding Rancho Cordova to avoid growth-constraining effects.

Section 2.1.8, “Traffic and Transportation/Pedestrian and Bicycle Facilities,” of this EIR/EA provides information on future traffic projections based on the proposed project and growth within Rancho Cordova and surrounding areas, including Sacramento and Folsom and travel between the three cities. Based on approved regional and local planning documents, it is anticipated that continued pressure for residential and suburban growth is expected to occur in ~~and around the proposed project area~~ the project vicinity.

**Table 2.1.3-1  
Roadway Improvements in the 2035 Metropolitan Transportation Plan**

Location	Roadway Improvements	Tentative Year of Completion
<b>City of Rancho Cordova</b>		
Douglas Road Widening	Widen: 6 lanes from Sunrise Blvd. to Grant Line Rd. (Includes intersection improvements at Jaeger Rd., Grant Line Rd., and Sunrise Blvd.)	2035
Grant Line Road	Widen & complete: 4-lane expressway from Hwy. 16 to White Rock Rd. (Includes intersection improvements at Jaeger Rd., Kiefer Blvd., International Dr., and State Route 16) (Phase I)	2035
International Drive	New road: 6-lane road from Sunrise Blvd. to White Rock Rd. (Includes intersection improvements at Sunrise Blvd.)	2035
International Drive	New road: 6- and 4-lane arterial from Kilgore Dr. to Grant Line Rd. including intersection improvements at Kilgore Road, Sunrise Blvd., and Rancho Cordova Parkway	2035
Sunrise Boulevard	Widen: 6 lanes from Jackson Hwy. to north of Douglas Rd. (Includes intersection improvements at Kiefer Blvd.)	2020
Light Rail Station at Mineshaft	Design and build a light rail station at Mineshaft	2035
Rancho Cordova Pilot Transit Shuttle System	The City is initiating new transit service that will provide shuttle connections to Sacramento Regional Transit's Gold Line. Local fees are currently being collected that will support the shuttle program from the new development areas. After several years of testing and adjusting the service, the City plans to initiate a system that will be owned and operated internally and will be appropriately coordinated to provide connectivity with the region's transit service providers.	2009
<b>City of Folsom</b>		

Location	Roadway Improvements	Tentative Year of Completion
Folsom ITS	Construct Intelligent Transportation Systems infrastructure at various locations within the city	2008
U.S. 50 at Oak Avenue	New interchange: 4 lanes	2019
U.S. 50 at Empire Ranch Road	New interchange: 4-lane Empire Ranch Rd./U.S. 50	2010
<b>City of Sacramento</b>		
Sacramento Valley Intermodal	In Sacramento, develop intermodal transportation terminal for heavy rail, light rail, and bus service. Realign and straighten the existing mainline Union Pacific Railroad freight and passenger rail tracks, provide passenger facilities that connect the depot to the relocated platforms.	2020
<b>Sacramento County</b>		
Bikeway Master Plan Construction Phase 2	New: on-street bikeways, including shoulder widening to provide shoulders for the bike lanes in various locations throughout Sacramento County (Phase II)	2010
Greenback Lane Widening	Widen to 6 lanes from Fair Oaks Boulevard to Hazel Avenue	2035
Hazel Avenue	Widen: 6 lanes on American River bridge and approaches; Hazel from American River bridge to Madison Ave. (with bike lanes and signals)	2013
Hazel Avenue	New road: 4-lane road from Easton Pkwy. to U.S. 50	2035
Hazel Avenue	Hazel Ave. at Gold River Rd.: add grade separation, ramps, and frontage connections	2031
Hazel Avenue	Improvements: Folsom Blvd. to U.S. 50: multimodal corridor improvements and interchange improvement	2017
Hazel Avenue	Widen to 6 lanes from Madison Avenue to Sacramento/Placer County line	2022
Hazel Avenue Extension <sup>11</sup>	New road: 4-lane limited access road through Aerojet's property (between Easton Valley Pkwy. and Grant Line Rd./White Rock Rd.)	2023
Sunrise Boulevard Widening	Widen: 4 lanes from Jackson Hwy. to Grant Line Rd.	2017
Kiefer Boulevard	New road: 4 lanes from Bradshaw Rd. to Sunrise Blvd. (Includes bicycle and pedestrian facilities)	2029
<b>Sacramento Regional Transit</b>		
Gold River Busway/Park and Ride	Facility for Sunrise Enhanced Bus/bus rapid transit including improvements to Citrus Road	2018
Gold Line Double Track (Past Hazel Light Rail)	Provide 15-minute light rail transit service to City of Folsom	2013

Source: Metropolitan Transportation Plan for 2035, SACOG 2008; Appendix A-1: Final MTP2035 Public Transit Including Rail Projects, and A-2: Final MTP 2035 Bicycle, Pedestrian, Roads, and Other Projects

<sup>11</sup> Note: This project is not listed in SACOG's Draft Final 2035 Metropolitan Transportation Plan/Sustainable Communities Strategy List of Project (updated February 2012) since its construction prior to 2035 has been deemed infeasible by Aerojet.

### *Population Growth*

SACOG projects that the population of Rancho Cordova will grow from the estimated 2005 population of 50,679 to a 2035 population of 162,825 (2035 MTP Appendix D2, Land Use Allocation). The City's General Plan expects approximately 75,923 housing units at buildout (2050) within existing city limits (City of Rancho Cordova General Plan EIR, June 2006b). In addition, SACOG projects the city's jobs/housing ratio will change from 2.7 in 2005 to 1.3 by 2035, while implementation of the General Plan has the capacity to generate approximately 102,878 jobs at buildout within the city limits, with a resulting jobs/housing ratio of 1.35 in 2030. Thus, the City's General Plan would accommodate growth projected by SACOG and is anticipated to provide improved jobs/housing balance conditions in the city than what is currently estimated by SACOG. The environmental effects of the city's planned growth were evaluated in the City of Rancho Cordova General Plan Draft and Final EIRs (State Clearinghouse No. 2005022137), which are hereby incorporated by reference.

### **Environmental Consequences**

Growth-related effects of a transportation project include effects that encourage or facilitate land use or development that changes the location, rate, type, or amount of growth. When assessing a project's growth-related effects, it is important to consider the reasonably foreseeable growth and land use change with and without the project; the extent to which the project will influence the overall amount, type, location, or timing of that growth; and whether project-related growth will put pressure on or cause impacts to environmental resources of concern.

### ***No Build Alternative (2037 Conditions without the Project)***

The No Build alternative could result in inadequate levels of service and traffic congestion on area roadways, which could constrain growth in Rancho Cordova, and result in the displacement of growth to other areas in the region that are not planned for growth. Without the new Rancho Cordova Parkway Interchange access to U.S. 50, land development served by the interchange would be less intense, causing some amount of development to occur elsewhere.

Further, the SRSP Conditions of Approval (Zoning Condition 48 which has been applied to individual development projects) limit that development to 6,500 residential dwelling units (out of a total of 8,214) until an interchange at the project location is constructed. Without this interchange, 1,714 residential units (plus some of the planned land uses around the immediate interchange area) would develop elsewhere, most likely further to the east or south in places like Folsom, El Dorado Hills, Rancho Murieta, or Elk Grove

(based on review of development scenarios used in the SACOG Blueprint process). This amount of growth displacement could be much higher if Policy LU.2.5<sup>12</sup> of the Rancho Cordova General Plan is applied to the remainder of the Sunrise-Douglas Community Plan area and other development in the southern portion of the city, or if conditions of approval are applied to other developments, like the Rio del Oro Specific Plan area, that limit the amount of development that may occur until a connection to U.S. 50 is constructed.

The displacement of growth to other areas that are not planned for growth could lead to potentially severe environmental effects to resources of concern, including water and sewer service, conversion of open space to urban uses, conversion of agricultural space to nonagricultural use, increased vehicle emissions resulting from residents driving farther distances to reach employment and commercial centers, impacts to biological resources, and impacts to visual resources.

### ***Alternative 3 (Proposed Project)***

The proposed project is intended to correct existing operational deficiencies on area roadways and to accommodate increased traffic demand generated by approved and planned development being undertaken as part of the City of Rancho Cordova General Plan and regional plans.

#### *Extent of Urban Development Anticipated to Be Accommodated*

The project would accommodate buildout of planned development areas in the city, especially those areas south of U.S. 50 and east of Sunrise Boulevard. As discussed above, the SRSP Conditions of Approval (Zoning Condition 48 which now applies to individual development projects) limit that development to 6,500 residential dwelling units (out of a total of 8,214) until an interchange at the project location is constructed. Without this interchange, 1,714 residential units would not be constructed in the SRSP area. While the SRSP is the only development in the area that is currently constrained by construction of the proposed project, it is possible that future development projects may include conditions of approval or mitigation measures that constrain the amount of growth that may occur without construction of the proposed project, as would be consistent with City of Rancho Cordova land use policies, including Policy LU.2.5, referenced above. Based on this, it is anticipated that the proposed project would influence growth in the Rancho Cordova area, particularly in the area south of U.S. 50 and east of Sunrise Boulevard by allowing the full development of planned projects in

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<sup>12</sup> Policy LU.2.5—Phase growth based on infrastructure capacity, infrastructure financing, and the timing of the design, approval/permitting, and construction of transportation facilities and other infrastructure.

this area. In this respect, the proposed project is consistent with regional planning policy and can be considered to provide the necessary infrastructure to support traffic infrastructure for planned and approved growth.

Growth in Rancho Cordova, particularly in the areas south of U.S. 50 and east of Sunrise Boulevard, is in part facilitated by the proposed project in that it allows for the full development of planned and/or approved projects in the area. Impacts associated with such residential and commercial growth, however, were addressed and analyzed at the time the City adopted its General Plan and certified its General Plan EIR in June 2006. These impacts include, but are not limited to, impacts to land use policies; agricultural resources; population, housing, and employment; transportation and circulation; air quality; noise; geology and soils; water supplies; biological resources; cultural and paleontological resources; public utilities; and visual resources.

### *Changes to Accessibility*

Alternative 3 (proposed project) would improve accessibility to existing, approved, and future planned development south of U.S. 50. The rate of growth is not expected to substantially increase with the implementation of this alternative beyond what has been anticipated by the City and SACOG.

### *Growth Pressures*

Alternative 3 (proposed project) would increase accessibility between homes and jobs, and would accommodate the planned rate of growth in the area. The proposed project would not result in a change in the location, rate, type, or amount of growth planned under regional and local plans, and would therefore not result in environmental impacts beyond what were already considered under regional and local plans and their respective environmental documents.

Please see Section 3.2.18 for additional information on growth-related impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures are proposed.

### **2.1.4. Community Impacts**

#### **Regulatory Setting**

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 USC

4331[b][2]). The Federal Highway Administration (FHWA), in its implementation of NEPA (23 USC 109[h]), directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

### **Affected Environment**

The proposed interchange would be located on U.S. 50, which runs in an east–west direction. U.S. 50 divides the project [site and vicinity area](#) into two portions, with one portion north of the highway and the other portion south of the highway. This division creates a perceived and physical separation between newer and older development in the area.

#### ***South of U.S. 50***

To the south of U.S. 50 are Folsom Boulevard, several businesses, the Union Pacific Railroad (UPRR) and light rail tracks, Folsom South Canal, Buffalo Creek, a large vacant area of undeveloped land, and White Rock Road at the southern limits of the project. The new interchange would cross over U.S. 50, Folsom Boulevard, railroad tracks, Folsom South Canal, and Buffalo Creek, where the parkway would continue south through the currently undeveloped area to White Rock Road. The project would provide a new connection to and from U.S. 50 through an area where there is currently no development. According to the Rancho Cordova General Plan that was adopted in June 2006, existing and future land uses in the southern portion of the project [vicinity area](#) are designated for commercial and medium-density residential.

The Westborough Planning Area lies directly south of and is bisected by the proposed Rancho Cordova Parkway roadway extension. This Planning Area consists primarily of vacant land, with plans for it to develop into a residential community. The Folsom South Canal, which is under the jurisdiction of USBR, is also located south of the proposed interchange. The Folsom South Canal runs in an east–west direction and then crosses

beneath U.S. 50 in the eastern limits of the project site-area, continuing toward Hazel Avenue on the north side of U.S. 50.

Because the existing condition of the project site and surrounding area south of U.S. 50 is primarily open space and commercial along Folsom Boulevard, a low level of community cohesion is indicated for this ~~portion of the project~~ area.

### **North of U.S. 50**

North of U.S. 50, the Gold River Community lies between the highway and the American River. Gold River abuts the northern limits of the proposed interchange on U.S. 50. Gold River is a master-planned, low-density residential community located in unincorporated Sacramento County directly north of the proposed interchange. The community comprises 25 single-family home “villages” and spans approximately 950 acres with nearly 3,000 homes ranging in size from 1,500 square feet to 5,000 square feet. Based upon 2010 U. S. Census data, as presented by DOF, the community has 7,994 residents. Approximately 60 parcels within Gold River abut the northern perimeter of the U.S. 50 right-of-way. There is also a vacant parcel located between the Gold River residences and U.S. 50 that was set aside during development of the community for the location of the proposed interchange. Gold River is located within the boundaries of the Cordova Community Plan and is included within the Sacramento County General Plan of 2005–2030 (amended November 9, 2011). Each of the villages is governed by its own homeowners association, which is responsible for front yard landscaping (front home maintenance is included in some villages) and enforcement of Conditions, Covenants, and Restrictions.

According to DOF, the 2010 ethnic makeup of Gold River, a 2010 Census Designated Place within Sacramento County, is 69.6 percent White, followed by 17.8 percent Asian, 6.5 percent Hispanic, and 2.3 percent Black. Also, U.S. Census American Community Survey 5-Year Estimates for Years 2005–2009 indicate that over this time period, approximately 96 percent of available housing units within Census Tract 87.02, which contains the Gold River Community, were owner-occupied. The 2005–2009 five-year estimate of median household income within Census Tract 87.02 was \$111,811, approximately 224 percent higher than the 2005–2009 median household income for the entire City of Rancho Cordova. The ethnic homogeneity, high income, and high level of owner-occupants help establish that the Gold River Community would have a high degree of cohesion. Additionally, the number of residents who participated and commented in the public-outreach informational meeting held for this project on July 27, 2005, and during the CEQA Notice of Preparation (NOP) comment period from

September 9, 2005, through October 8, 2005, suggests a high degree of cohesion within the Gold River Community.

Outside of the Gold River Community, commercial and office space development is located north of U.S. 50, toward the eastern portion of the project [sitearea](#), approaching Hazel Avenue. Commercial, industrial, and office space development is also located north of U.S. 50 near the western portion of the project [sitearea](#).

There are no emergency service facilities such as fire stations, police stations, or hospitals/medical facilities or community services such as schools, libraries, or post offices within the proposed project site or in the immediate vicinity. The closest parks to the site are located north of U.S. 50 in the Gold River Community and include Prospect Hill Park and Gold Station Park.

### **Environmental Consequences**

The City prepared a Community Impacts Memo to Caltrans in March 2011 to assess the project's potential community impacts, including impacts to community character and cohesion.

#### ***No Build Alternative (2037 Conditions without the Project)***

The No Build alternative would not require right-of-way acquisition from any residences or businesses because no improvements would be made. Because no changes would occur to the existing conditions of the area, community cohesion within the Gold River Community would not be affected. Without construction of the proposed interchange, area and regional traffic circulation problems would increase, with possible negative effects to quality of life in surrounding established residential communities, particularly to the south of U.S. 50 along the Sunrise Boulevard corridor, resulting from increased traffic congestion through the area, longer commute times, and longer travel distances to reach development planned and approved in the City of Rancho Cordova.

#### ***Alternative 3 (Proposed Project)***

The proposed project would not add to the physical and perceived division of the project [vicinityarea](#) along U.S. 50, but rather would provide for improved circulation throughout the community and region, which could encourage community cohesion.

The project would provide a new connection to and from U.S. 50 through an area where there is currently no development; therefore, it would not divide an established neighborhood. The proposed roadway facilities are part of the future circulation and land use plans for the area and would be consistent with land uses planned for the area.No

community services or public facilities would be removed or constructed in association with this proposed alternative that would affect nearby residents.

The existing Class I bike trail along Citrus Road, including the Citrus Road undercrossing, connects Class II bike lanes on Sunrise Boulevard with those on Folsom Boulevard, thus routing bicyclists and pedestrians around the Gold River Community. Because bicycle activities are not typically of a nature that causes substantial wear and tear of pavement materials, the effects of increased trail use are not expected to be appreciably different from those resulting from the use of current bicycle/pedestrian routes on Coloma Road, Gold Express Drive, and Gold River Drive compared to conditions without construction of the project.

Construction of the project would have no impact on social values in the community, nor would it affect a community landmark or social gathering place, cause changes in population that are not already foreseen, or cause certain people to be separated or set apart from others. The project would not be expected to result in any adverse effects to any minority, low-income, disadvantaged, or low-mobility groups in the vicinity of the project.

The project may contribute to changes in the general quality of life for residents living immediately adjacent to the proposed interchange location. The proposed project would result in increases in noise levels (+1 decibel) at certain locations adjacent to the project [sitearea](#) (see Section 2.2.6, “Noise”) and changes in the visual setting of the area (see Section 2.1.9, “Visual/Aesthetics”), which could contribute to changes in the quality of life for residents living immediately adjacent to the proposed interchange location. These effects would be limited to those residents living immediately adjacent to the proposed interchange location.

Please see Section 3.2.1 for additional information on land use impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

The proposed interchange would be designed as a south-only interchange and would not allow vehicles to exit U.S. 50 into the Gold River Community. Avoidance, minimization, and/or mitigation measures to address noise and visual impacts are outlined in Section 2.2.6, “Noise,” and Section 2.1.9, “Visual/Aesthetics.”

### 2.1.5. Relocations

#### Regulatory Setting

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and 49 CFR Part 24. The purpose of the RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons would not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see **Appendix D** for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.). Please see **Appendix C** for a copy of Caltrans' Title VI Policy Statement. The City would be responsible for any relocations.

#### Affected Environment

The area of the proposed project north of U.S. 50 consists of several commercial and light industrial businesses along Pyrites Way, west of the planned interchange, and along Gold Country Boulevard east of the interchange. Other current land uses adjacent to the proposed freeway northern on- and off-ramps include a vacant field (Lot C as described below) and some single-family residential homes in the Gold River Community.

The area immediately north of the proposed overpass is characterized by fallow and undeveloped land, with the Gold River residential community located immediately beyond that. Prior to the development in the late 1980s of the Gold River Community, traffic congestion along Sunrise Boulevard was already identified as an issue requiring resolution. As a result, the initial 1988 Gold River General Development Plan granted the County an offer of dedication of right-of-way designated as an "interchange study area." Then, as a condition of approval of the Gold River Unit 17 subdivision in 1992, the Natomas Land Company dedicated "Freeway Interchange Lot (Lot C)" to the County to provide an additional access point to U.S. 50 from the south; this improvement was then incorporated into the County's General Plan, adopted in 1993.

To the south of U.S. 50 are Folsom Boulevard, several businesses, the UPRR and light rail tracks, Folsom South Canal, Buffalo Creek, a large area of undeveloped land, and White Rock Road at the southern limits of the project. The new interchange would cross over U.S. 50, Folsom Boulevard, railroad tracks, Folsom South Canal, and Buffalo Creek, where the parkway would continue south through the currently undeveloped area to White Rock Road. The project would provide a new connection to and from U.S. 50

through an area where there is currently no development. According to the Rancho Cordova General Plan that was adopted in June 2006, existing and future land uses ~~in the south~~ ern portion of the project area of the interchange portion of the proposed project are designated for commercial and medium-density residential.

The only two commercially developed properties south of U.S. 50 within the proposed project footprint are the Wood Furniture Gallery, a furniture store located at 11541 Folsom Boulevard (located between a slight southerly bend in Folsom Boulevard and U.S. 50), and the former Your Home Store, located at 2300 Mineshaft Lane. The former Your Home Store is located on a narrow slice of property between the Sacramento Regional Transit (Sac RT)/UPRR right-of-way to the north and the Folsom South Canal to the south. Currently, the building appears to be vacant, although in the recent past it has been used as office/administrative facilities for several businesses, such as recreational vehicle and auto dealerships that occupied the remainder of the parcel. Additionally, there is another building to the east of the former Your Home Store that relies on the “main” building for its connections to electricity, lighting, and telephone.

## Environmental Consequences

### ***No Build Alternative (2037 Conditions without the Project)***

The No Build alternative would not require any residential or business relocation because the proposed project would not be built.

### ***Alternative 3 (Proposed Project)***

The estimated right-of-way acquisitions by property type are detailed in **Table 2.1.5-1**. All acquisition would be “partial” acquisition, which means the project would require acquisition of only a portion of a parcel to accommodate the proposed project.

**Table 2.1.5-1  
Alternative 3 Estimated Right-of-Way Acquisitions**

Property Type	Ownership	Acquisition Area (acre)	Full/Partial	Acquisition Type	Business Relocation? Y/N
Commercial	Nolasco (the Wood Furniture Gallery)	1.328	Partial	Temporary Construction Easement and Fee	No
Commercial	Willis Trust (Former Your Home Store)	1.724	Partial	Fee	Yes (Former Your Home Store)

Property Type	Ownership	Acquisition Area (acre)	Full/Partial	Acquisition Type	Business Relocation? Y/N
Utility Agency	Folsom South Canal	1.057	Partial	Aerial Easement	No
Private Transportation	UPRR & Sacramento Regional Transit	0.263	Partial	Aerial Easement	No
County Road	Sacramento County (Folsom Boulevard)	1.019	Partial	Aerial Easement	No
County Road	Sacramento County (Folsom Boulevard)	0.394	Partial	Fee	No
Single-family Residential	Bolton (privately owned residence)	0.008	Partial	Temporary Construction Easement	No

Source: AECOM 2007

Implementation of the proposed project would result in a partial right-of-way acquisition of the parcel located at 11541 Folsom Boulevard, upon which the Wood Furniture Gallery furniture store is currently located, to accommodate the east-bound interchange off-ramp. Because of the store's proximity to U.S. 50, the addition of an interchange off-ramp would encroach into the store's parking lot. The project would require modification of the building's parking lot to accommodate the new off-ramp. The Wood Furniture Gallery store would not need to be relocated to accommodate the proposed project.

The project would require a partial right-of-way acquisition of the parcel located at 2300 Mineshaft Lane, upon which the former Your Home Store building is located, to accommodate the interchange overpass structure. Because the height of the main building of the Your Home Store would be taller than the proposed interchange overpass structure, the proposed project would result in either a partial or complete demolition of the main building of the Your Home Store, although complete demolition of the main building is most likely. If complete demolition of the main building of the Your Home Store is necessary, any tenants of the building would need to be relocated to accommodate the proposed project.

Other aerial easements and one small section of Folsom Boulevard within this same parcel would be required for the project. No business or residential relocations are associated with these easements. A very small portion of one residential parcel (Bolton parcel) would also require a temporary construction easement that would not affect local business access.

Acquisition of a small strip of land (0.008 acre) at the edge of a privately owned single-family residential parcel (Bolton parcel) may be required to accommodate a retaining wall for the interchange's eastbound on-ramp. Depending on the type of retaining wall design, a temporary construction easement may be needed instead of acquisition of a parcel, or no easement or acquisition may be needed at all. Whether a temporary construction easement, partial acquisition, or no action will be required for this parcel will be determined as the type of wall to be used in this area is ascertained during the design phase of project development.

All relocation activities, if any are necessary, would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources would be available to all displacees without discrimination.

Rancho Cordova, as a major center for commercial and industrial businesses and facilities in the Sacramento region, has ample land to which these businesses can relocate and still remain economically viable.

No other businesses or residents would need to be relocated for the proposed project.

Please see Section 3.2.18 for additional information on relocation impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

Alternative 3 (proposed project) was designed to minimize right-of-way acquisition and relocation of residents and businesses to the greatest extent feasible. Relocation of one business will be performed in accordance with federal law (the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended).

No additional avoidance, minimization, and/or mitigation measures are proposed.

#### **2.1.6. Environmental Justice**

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

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994. This executive order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the

U.S. Department of Health and Human Services (HHS) poverty guidelines. For 2009, this income level was \$21,954 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in **Appendix C** of this EIR/EA.

### ***Affected Environment***

The proposed project site in Alternative 3 includes no homes or community centers. There are several commercial businesses bordering the project along the north and south sides of U.S. 50 and Folsom Boulevard. However, the project will require right-of-way acquisition from only two of these businesses. There is only one residential community, Gold River, adjacent to the northern portion of the proposed project. Based on the Census data for the proposed project [vicinityarea](#), no low- to moderate-income or minority communities are present in the Gold River Community. The following information is provided to expand the discussions on socioeconomic, racial, and relocation impacts in order to comply with the principles of Executive Order 12898.

Data from U.S. Census 2010 and Census American Community Survey 5-Year Estimates for Years 2005–2009 were reviewed to determine the race and income characteristics of the census tracts in the immediate area of the proposed project (**Table 2.1.6-1** and **Table 2.1.6-2**). These include 2010 Census Tracts 87.05 (south of U.S. 50, including a roughly 28-square-mile, mostly rural area) and 87.02 and 87.03 (north of U.S. 50, including the Gold River residential development). American Community Survey 5-Year Estimates are based on 2000 Census Tract 87.01 for the area south of U.S. 50 corresponding to 2010 Census Tract 87.05, and Tract 87.02, roughly covering the same area north of U.S. 50 as 2010 Tracts 87.02 and 87.03. See **Figure 2.1.6-1**.

#### *Race in Proposed Project [VicinityArea](#)*

Based on the 2010 Census data for the total affected area, which includes Census Tracts 87.05 (proposed project site location and rural areas south of U.S. 50) and Census Tracts 87.02 and 87.03 (Gold River Community north of U.S. 50), Whites or Caucasians make up 60.9 percent of the total population, compared to 3.8 percent for Black or African American, 0.2 percent for American Indian and Alaska Native, 22.3 percent for Asian (including Chinese, Japanese, Filipino, and Vietnamese), 0.2 percent for “some other” race, and 3.8 percent for “two or more” races. Persons of Hispanic or Latino origin (not

considered a race by the U.S. Census Bureau) make up approximately 8.2 percent of the total population of these three census tracts in Census Year 2010.

**Table 2.1.6-1  
Race—Total Population, Census Tracts 87.02 and 87.03**

	Census Tract 87.05 (South of U.S. 50)	Census Tract 87.05 Percentage of Race/Total	Census Tracts 87.02 & 87.03 (North of U.S. 50—Gold River)	Census Tracts 87.02 & 87.03 Percentage of Race/Total*	All Census Tracts Percentage of Race/Total
<b>Total</b>	<b>4,397</b>		<b>7,994</b>		<b>12,391</b>
White alone	1,987	45.2	5,566	69.6	60.9
Black or African American alone	294	6.7	184	2.3	3.8
American Indian and Alaska Native alone	11	0.3	18	0.2	0.2
Asian alone	1,358	30.9	1,410	17.6	22.3
Native Hawaiian and Other Pacific Islander alone	30	0.7	26	0.3	0.5
Hispanic or Latino *	489	11.1	523	6.5	8.2
Some other race alone	9	0.2	11	0.1	0.2
Two or more races	219	5.0	256	3.2	3.8

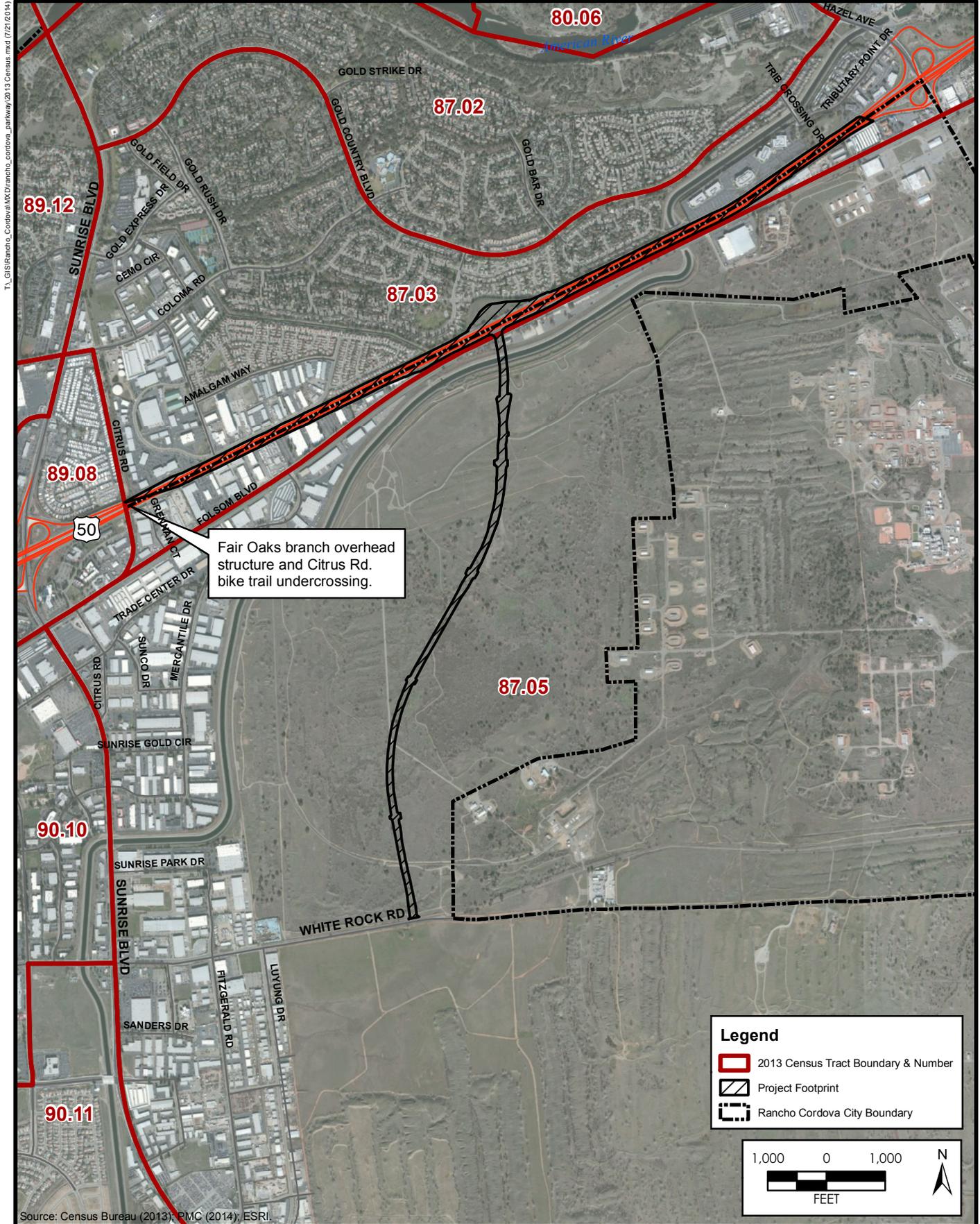
Source: U.S. Census Bureau, Census 2010

\* U.S. Census Bureau considers Hispanic or Latino a place of origin and not a race, so percentages of race total may be greater than 100 percent as this number includes persons that may indicate a place of origin and also a race.

*Income Level and Low-Income Level in Proposed Project Vicinity Area*

FHWA’s “Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” states that low income means a household income at or below the HHS poverty guidelines. **Table 2.1.6-2** shows the 2009 HHS Poverty Guidelines for median household income for the contiguous states and Washington, D.C. The 2009 HHS Poverty Guidelines were compared with American Community Survey 5-Year Estimates for Years 2005–2009, the most recent median household income data for the 2000 Census Tracts 87.01 south of U.S. 50 and 87.02 north of U.S. 50.

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**Figure 2.1.6-1**  
2013 Census Tract Map of Project Area



**Table 2.1.6-2**  
**2009 U.S. Department of Health and Human Services Poverty Guidelines for**  
**Contiguous States and Washington, D.C. (in Dollars)**

Size of Family Unit	2009
1	10,956
2	13,991
3	17,098
4	21,954
5	25,991
6	29,405
7	33,372
8	37,252

Source: 2009 U.S. Department of Health and Human Services Poverty Guidelines for median household income for the contiguous states and Washington, D.C.

The U.S. Census Bureau lists an average household size of 2.58 persons for Census Tract 87.01 and 2.44 persons for Census Tract 87.02 for 2005–2009, for an average of 2.51 persons for the two tracts closest to the proposed project [sitearea](#). **Table 2.1.6-3** shows the median household income using 2005–2009 American Community Survey data for the project [vicinityarea](#) using 2000 Census Tracts 87.01 and 87.02.

**Table 2.1.6-3**  
**Median Household Income in the Past 12 Months**  
**(2009 Inflation-adjusted [in Dollars])**

	Census Tract 87.01 (South of U.S. 50)	Census Tract 87.02 (North of U.S. 50)
Median household income in 2009	90,014	111,811
Percentage of families below poverty level in 2009	3.3	0.9

Source: U.S. Census Bureau, American Community Survey 2005–2009

Both Census Tracts 87.01 and 87.02 show a median household income in 2009 that exceeds the HHS poverty guidelines for a family size of eight or greater in 2009. This table also indicates that a very low percentage of the total families within these census tracts were below the poverty level in 2009. Census Tract 87.02 includes a mobile home community in its southwestern corner bordered by Sunrise Boulevard on the west, Citrus Road on the east, Coloma Road on the north, and U.S. 50 on the south, which may provide housing for some members of a low-income group.

## Environmental Consequences

### **No Build Alternative (2037 Conditions without the Project)**

The No Build alternative would not result in any changes to the environment of minority and low-income populations.

### **Alternative 3 (Proposed Project)**

As a whole, the project would affect all races and would not have disproportionately high and adverse effects to any one particular race.

The low-income (averaging approximately 2 percent) population north and south of U.S. 50 adjacent to the proposed project ~~site footprint~~ remains a small minority of the entire project ~~vicinity area~~ and would not be disproportionately affected by the proposed project compared to other population groups affected by the proposed project. Effects and avoidance and minimization measures for noise, air quality, and aesthetics, as discussed in other EIR/EA sections, would be similar for the adjacent mobile home community as those for the more affluent Gold River residential development immediately adjacent to the northern portion of the project.

## **Avoidance, Minimization, and/or Mitigation Measures**

Based on the above discussion and analysis, Alternative 3 would not cause disproportionately high and adverse effects on any minority or low-income populations as per Executive Order 12898 regarding environmental justice. No avoidance, minimization, and/or mitigation measures are necessary.

### **2.1.7. Utilities/Emergency Services**

#### **Affected Environment**

##### **Utilities**

Utilities to the project ~~vicinity area~~ are provided by several entities, including power supplied by SMUD, water services provided by the Golden State Water Company and the City of Folsom, sewer services provided by Sacramento ~~County Sanitation District 4 Area Sewer District and Sacramento Regional County Sanitation District~~, natural gas provided by Pacific Gas and Electric Company, telephone services provided by AT&T, cable television provided by Comcast Cable, and solid waste services provided by Central Valley Waste Services. The City and County maintain storm drainage facilities in their respective jurisdictions within the project ~~site and surrounding~~ area.

## **Emergency Services**

Several service providers are responsible for emergency services in the project [vicinityarea](#) and its surrounding areas. The City contracts with the Sacramento County Sheriff's Department for police protection services within the city, and the Sheriff's Department provides police protection services within the unincorporated areas of the county. The Sacramento Metropolitan Fire District provides fire protection and emergency services in and around the project [vicinityarea](#).

Although the City's General Plan includes actions to attract a full-service hospital to Rancho Cordova, there are currently no full-service hospitals within the city limits. The nearest full-service hospitals are located in Carmichael (Mercy San Juan), Sacramento (UC Davis, Kaiser, Shriner's, Sutter General, and Mercy General), and Folsom (Mercy Hospital of Folsom).

## **Environmental Consequences**

### **Utilities**

#### *No Build Alternative (2037 Conditions without the Project)*

Under the No Build alternative, utilities would not be routed across U.S. 50, and their current routing would not be altered. Additionally, no additional demands for power, water, solid waste, or storm drainage facilities would occur because the project would not be constructed.

#### *Alternative 3 (Proposed Project)*

Under Alternative 3, the project would require relatively small amounts of electricity to power streetlights and traffic signals, which are not anticipated to result in a substantial drain on existing power supplies. It is anticipated that SMUD would have adequate power to supply the project's power needs, without compromising service to existing and future customers. Additionally, the project would tie in to existing nearby transmission facilities, likely in or near the Folsom Boulevard corridor within the project [vicinityarea](#), to provide power to the project [sitearea](#), and no new power-generating facilities or major transmission facilities would be required to supply the project with the required power. SMUD was sent an NOP for the Initial Study prepared for the project in September 2005. The Initial Study identified no significant impacts of the project to SMUD's ability to service the proposed project in addition to its other customers. To date, the City has not received any information from SMUD negating this determination or indicating that additional power-generating facilities or transmission facilities would be required to service the project.

Relatively small amounts of water would be required for irrigation of roadside landscaping. It is anticipated that existing water suppliers to the area would have adequate water to supply the project's irrigation needs, without compromising service to existing and future customers. The proposed project was identified in the City's General Plan. Section 4.12 of the Draft EIR prepared for the General Plan determined that policies and actions identified in the General Plan would be sufficient to ensure adequate water supplies as buildout of the city occurs within its current boundaries. Additionally, the project would tie in to existing nearby water transmission lines to provide irrigation to the project [sitearea](#), and no new transmission facilities would be required to supply the project with irrigation water.

Relatively small amounts of solid waste would be generated from construction of the project. Because the project is new construction and no demolition activities would take place, only small amounts of solid waste would be generated by the project during normal construction activities. It is anticipated that area landfills would have adequate capacity to accommodate these small amounts of solid waste.

Finally, the project would require collection and conveyance of stormwater runoff from the roadway surface during storm events. Because the project would construct a new interchange and roadway where none previously existed, the project would construct a roadside stormwater system that would be appropriately sized, according to Caltrans, County, or City requirements, as applicable, to adequately convey and treat stormwater from the roadway surface into the City's or County's municipal stormwater drainage facilities. The project's potential effects to water quality are discussed in detail in Section 2.2.2, "Water Quality and Stormwater Runoff," of this EIR/EA.

The City is coordinating with all utility providers in the project [vicinityarea](#) and, as the design of the project proceeds, will identify any utilities that may need to be relocated as a result of the proposed project. During project construction, the City and its contractors would coordinate potential utility relocations with utility companies to avoid or minimize service disruptions. The potential environmental effects of any required utility relocations are analyzed as part of this EIR/EA.

### **Emergency Services**

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative could ultimately result in negative impacts to emergency services within and surrounding the project [sitearea](#), as well as in the areas of Rancho Cordova south of U.S. 50 and east of Sunrise Boulevard. With existing and planned

growth within the City’s Planning Area, it is estimated that by 2025 Rancho Cordova will grow in population by more than 207 percent. The City’s General Plan anticipates the addition of 53,480 new housing units and 55,199 new jobs within the current city limits by 2030. Increased populations in the surrounding area will result in increased traffic and unacceptable traffic levels of service, resulting in traffic congestion and queuing on area roadways (see Section 2.1.8, “Traffic and Transportation/Pedestrian and Bicycle Facilities”). Under the No Build scenario, limited points of access would be provided to developments south of U.S. 50 and east of Sunrise Boulevard via Sunrise Boulevard, the future Hazel Avenue extension to Easton Parkway, and east–west connecting roadways between the two. Without the additional connectivity and reduction in traffic congestion that the proposed project would provide, worsening traffic levels of service and the resulting traffic queuing and congestion have the potential to obstruct or delay emergency vehicles traveling ~~through~~ and around the project ~~site~~area, particularly those vehicles utilizing Sunrise Boulevard south of U.S. 50.

### *Alternative 3 (Proposed Project)*

After the construction of the Rancho Cordova Parkway Interchange Project, three new points of access would become available to emergency vehicles: east- and westbound U.S. 50 at Rancho Cordova Parkway and Rancho Cordova Parkway at Douglas Road. With construction of the project, emergency vehicles would have an additional route by which to access points within Rancho Cordova south of U.S. 50 and east of Sunrise Boulevard to travel to locations within the city as well as to full-service hospitals located in Carmichael, Sacramento, and Folsom. Increasing accessibility to existing, planned, and approved development in the surrounding communities would also improve traffic levels of service and emergency services response times.

During construction of the project, however, temporary delays to emergency vehicles may occur along existing roadways, including U.S. 50, Folsom Boulevard, and White Rock Road, due to roadway detours and additional congestion caused by construction equipment and activities.

Temporary delays may occur during construction at the intersection of the proposed Rancho Cordova Parkway/White Rock Road intersection and along U.S. 50 and Folsom Boulevard between Sunrise Boulevard and Hazel Avenue. If emergency vehicles cannot pass through the construction area or if the construction activities result in a substantial delay in emergency vehicles passing through the construction area, residents and property in the area could be substantially affected.

Please see Section 3.2.3 for additional information on utility and emergency service impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Utilities***

No avoidance, minimization, and/or mitigation measures are proposed.

### ***Emergency Services***

During construction, emergency access on public roadways shall be available at all times to maintain emergency vehicle access through the area. At no time during the construction period will the entire width of a public roadway be closed to emergency vehicle traffic.

Prior to the start of construction, a Traffic Management Plan shall be developed that would reduce delays and obstructions caused by construction detours to the greatest extent possible. The plan developers shall coordinate with emergency service providers (i.e., fire and police) during plan development to ensure that traffic control measures proposed in the plan would meet the needs of the service providers. These detours shall be provided to all emergency service entities that service the area prior to their implementation to avoid impacts to emergency response times.

#### **2.1.8. Traffic and Transportation/Pedestrian and Bicycle Facilities**

This section describes the project's potential impacts on traffic and circulation, both during project operation and construction. The impact analysis examines the roadway, transit, and bicycle/pedestrian components of the overall transportation system under baseline year (2005) conditions,<sup>13</sup> conditions in the construction year (2016) when the project would complete construction and would begin full operation, and design year (2037) conditions,<sup>14</sup> and both with and without the proposed project.

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<sup>13</sup> The “baseline” year was identified based on the California Court of Appeal, Sixth District, in *Sunnyvale West Neighborhood Assn. v. City of Sunnyvale City Council*, which determined that one option for determining the appropriate baseline for use when analyzing traffic impact under CEQA is the existing physical conditions at the time of the issuance of the NOP. The NOP for the proposed project was released in September 2005; therefore, the “baseline” year was identified as 2005. In this section, baseline and existing conditions are used synonymously to mean the conditions that existed in 2005.

<sup>14</sup> The “design” year is based on the Caltrans Highway Design Manual requirement that design of new facilities should normally be based on the estimated traffic at least 20 years after completion of construction. Since construction is estimated to be completed in 2016, a design year of 2037 is 21 years after completion of construction, which meets the Highway Design Manual requirement.

## **Regulatory Setting**

### ***Federal***

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

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

### ***State***

Caltrans oversees the state highway system. The following policies pertain to the state highway portion of the proposed project.

#### ***Transportation Concept Report***

The *Highway 50 Corridor System Management Plan* (Caltrans District 3, 2009) has identified level of service (LOS) F as the 20-year concept LOS for the segment of U.S. 50 within the project [sitearea](#).

### ***Local***

#### ***Sacramento County***

The County requires that rural collectors operate at LOS D and urban area roads operate at LOS E at all times, unless it is infeasible to implement project alternatives or mitigation measures to achieve these levels of service according to General Plan Policy CI-9 in the Circulation Element of the Sacramento County General Plan (amended November 9, 2011).

#### ***City of Rancho Cordova***

The City requires that all roadways and intersections operate at LOS D at all times except when the City determines such operations would be infeasible and/or conflict with the achievement of other goals, according to the General Plan Policies C.1.2 and C.1.3.

## Affected Environment

A Traffic Operations Report for the project was prepared in June 2010. A supplemental Existing Plus Project Analysis Memorandum providing additional traffic information was prepared in March 2011 as well as a U.S. 50/Rancho Cordova Parkway Interchange Supplemental Analysis Memorandum in April 2011. Information contained in this section is based on this report and these memorandums.

Operational (i.e., traffic) conditions are typically described by transportation professionals in terms of LOS. LOS is a common, qualitative measure of the effect of a number of factors on traffic operation conditions, including speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, and convenience. LOS varies from LOS A (the best) to LOS F (the worst). Specific LOS definitions for freeway facilities and intersections are described in **Table 2.1.8-1** and **Table 2.1.8-2**.

**Table 2.1.8-1  
Freeway Mainline and Ramp Junction Level of Service Thresholds**

Level of Service	Description	Density <sup>1</sup>	
		Mainline	Ramp Junction
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11	≤ 10
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11–18	> 10–20
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18–26	> 20–28
D	Speeds decline slightly with increased flows. Freedom to maneuver within the traffic stream is more noticeably limited, and driver experiences reduced physical and psychological comfort.	> 26–35	> 28–35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35–45	> 35–43
F	Represents a breakdown in flow and oversaturated conditions.	> 45	> 43

Source: Highway Capacity Manual (Transportation Research Board, 2000) as found in Fehr & Peers, August 2010

Note:

<sup>1</sup> Density measured in vehicles per mile per lane.

**Table 2.1.8-2  
Intersection Level of Service Thresholds**

Level of Service	Description	Average Control Delay <sup>1</sup>	
		Signal	Stop Control
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10	≤ 10
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10–20	> 10–15
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20–35	> 15–25
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35–55	> 25–35
E	Operations with high delay values indicating poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55–80	> 35–50
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	> 80	> 50

Source: Highway Capacity Manual (Transportation Research Board, 2000), as found in Fehr & Peers, August 2010

Note:

<sup>1</sup> Delay measured in seconds per vehicle.

### **Traffic Study Area**

Figures 2.1.8-1 and 2.1.8 -2 show the project’s traffic study area and study locations for the proposed project. The study area includes the study locations described below.

### *Freeway Facilities*

#### Mainline Section

- U.S. 50 mainline between Zinfandel Drive and Folsom Boulevard interchanges

#### Ramp Junctions

- U.S. 50/Hazel Avenue eastbound off-ramp
- U.S. 50/Hazel Avenue eastbound loop on-ramp
- U.S. 50/Hazel Avenue eastbound slip on-ramp
- U.S. 50/Hazel Avenue westbound off-ramp
- U.S. 50/Hazel Avenue westbound loop on-ramp
- U.S. 50/Hazel Avenue westbound slip on-ramp

- U.S. 50/Sunrise Boulevard eastbound off-ramp
- U.S. 50/Sunrise Boulevard eastbound loop on-ramp
- U.S. 50/Sunrise Boulevard eastbound slip on-ramp
- U.S. 50/Sunrise Boulevard westbound off-ramp
- U.S. 50/Sunrise Boulevard westbound loop on-ramp
- U.S. 50/Sunrise Boulevard westbound slip on-ramp
- U.S. 50/Rancho Cordova Parkway eastbound on-ramp (proposed)
- U.S. 50/Rancho Cordova Parkway westbound on-ramp (proposed)
- U.S. 50/Rancho Cordova Parkway eastbound off-ramp (proposed)
- U.S. 50/Rancho Cordova Parkway westbound off-ramp (proposed)

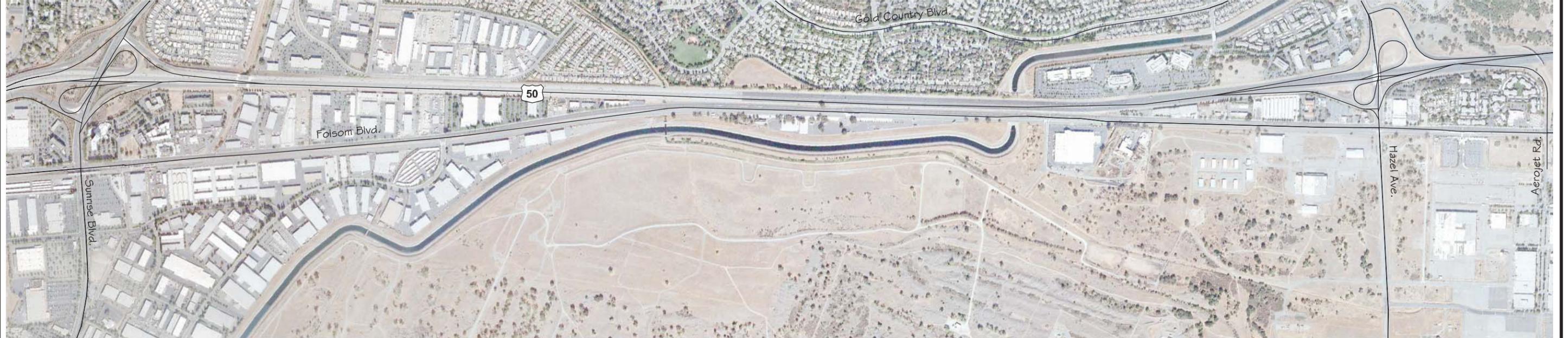
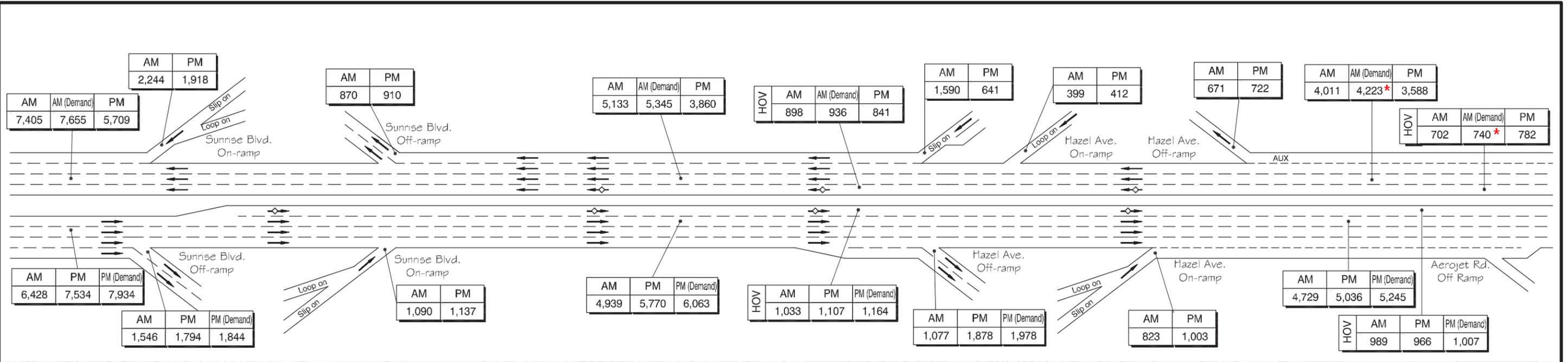
#### Study Intersections

- Sunrise Boulevard eastbound U.S. 50 off-ramp terminal intersection
- Sunrise Boulevard westbound U.S. 50 off-ramp terminal intersection
- Hazel Avenue eastbound U.S. 50 off-ramp terminal intersection
- Hazel Avenue westbound U.S. 50 off-ramp terminal intersection
- Rancho Cordova Parkway/westbound U.S. 50 ramps intersection (proposed)
- Rancho Cordova Parkway/eastbound U.S. 50 ramps intersection (proposed)
- Sunrise Boulevard/Folsom Boulevard
- Hazel Avenue/Folsom Boulevard
- Sunrise Boulevard/White Rock Road
- Rancho Cordova Parkway/White Rock Road (future)
- Grant Line Road/White Rock Road

Although the project limits for this project extend from Sunrise Boulevard to the Hazel Avenue intersection, the traffic study area and corresponding analysis results presented

below consider volume and capacity on U.S. 50 between Zinfandel Drive and Folsom Boulevard, beyond the physical project limits, to account for known bottlenecks that exist upstream/downstream of the study area on U.S. 50. In general, these bottlenecks constrain the traffic volume entering the study area.

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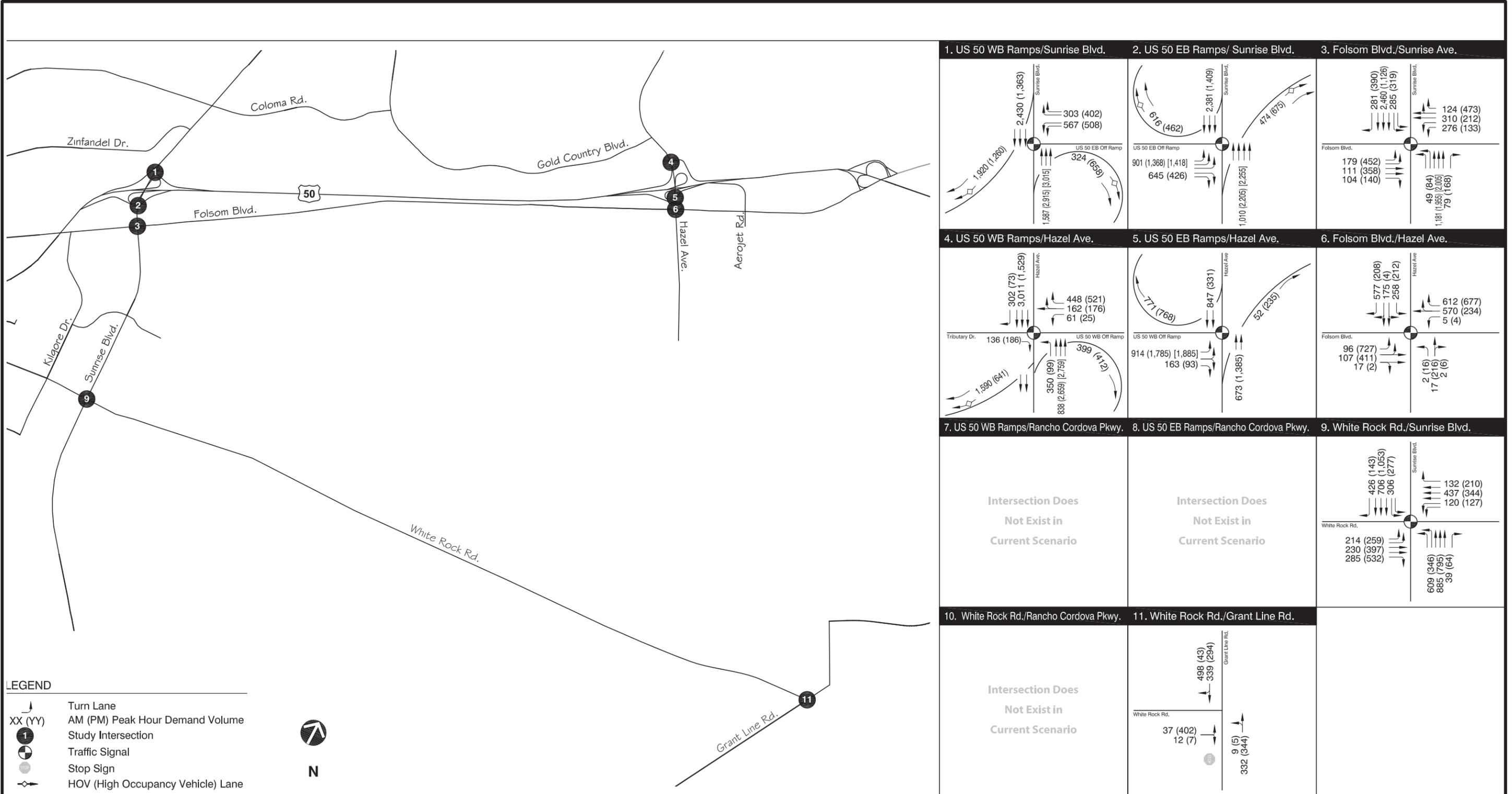
LEGEND

- Planned Roadway
  - | AM  | PM    |
|-----|-------|
| 823 | 1,003 |

 Peak Hour Freeway Volume
  - HOV (High Occupancy Vehicle) Lane
  - Auxiliary Lane
- \* The estimated westbound AM peak hour freeway demand volume may be higher due to the upstream bottleneck at the Folsom Blvd. interchange

Source: Fehr & Peers, April 13, 2011





1. US 50 WB Ramps/Sunrise Blvd.	2. US 50 EB Ramps/ Sunrise Blvd.	3. Folsom Blvd./Sunrise Ave.
4. US 50 WB Ramps/Hazel Ave.	5. US 50 EB Ramps/Hazel Ave.	6. Folsom Blvd./Hazel Ave.
7. US 50 WB Ramps/Rancho Cordova Pkwy.	8. US 50 EB Ramps/Rancho Cordova Pkwy.	9. White Rock Rd./Sunrise Blvd.
<p style="text-align: center;">Intersection Does Not Exist in Current Scenario</p>	<p style="text-align: center;">Intersection Does Not Exist in Current Scenario</p>	
10. White Rock Rd./Rancho Cordova Pkwy.	11. White Rock Rd./Grant Line Rd.	
<p style="text-align: center;">Intersection Does Not Exist in Current Scenario</p>		

Source: Fehr & Peers, April 13, 2011

Figure 2.1.8-2  
Baseline (2005) Conditions - Intersections



### *Roadway System*

The primary existing roadways near the proposed project are U.S. 50, Sunrise Boulevard, Hazel Avenue, and Folsom Boulevard. Each roadway is described below.

U.S. 50 is a major regional highway extending from Interstate 80 in West Sacramento through the Sacramento metropolitan area into the Sierra Nevada and the state of Nevada. Between the Folsom Boulevard and Zinfandel Drive interchanges, U.S. 50 is a seven- to eight-lane freeway including HOV lanes that begin (eastbound) and end (westbound) near the Sunrise Boulevard interchange. An auxiliary lane is provided between the Folsom Boulevard and Hazel Avenue interchanges in the westbound direction, and a mixed-flow lane is added and then dropped between the Hazel Avenue and Sunrise Boulevard interchanges (a span of approximately 3 miles). Another westbound mixed-flow lane is added at the Sunrise Boulevard westbound on-ramp.

- Sunrise Boulevard is a major north–south regional arterial roadway that extends from East Roseville Parkway in Roseville to Grant Line Road in southern Sacramento County. Sunrise Boulevard has one of only three bridges over the American River between the cities of Sacramento and Folsom. It provides six lanes (three in each direction) from White Rock Road and north into the city of Citrus Heights. The City’s General Plan designates Sunrise Boulevard as a six-lane roadway from Grant Line Road to north of Gold Country Boulevard and specifies special treatments (e.g., aggressive at-grade improvements, partial grade-separation treatments) north of International Drive.
- Hazel Avenue is another major north–south regional arterial roadway that extends from Nimbus Road at the Aerojet property (immediately south of U.S. 50) in Sacramento County to the Placer County/Sacramento County line just south of Roseville where it becomes Sierra College Boulevard. Hazel Avenue currently provides four lanes (two in each direction) and is currently being widened to six lanes from Gold Country Boulevard to Curragh Downs Drive, which is a segment that includes the Hazel Avenue Bridge over the American River. It provides one of the other American River bridge crossings between Sacramento and Folsom and is designated as a six-lane facility (with special treatments) in the Sacramento County General Plan and a six-lane facility in the City’s General Plan.
- Folsom Boulevard is a four-lane major arterial that parallels U.S. 50. Folsom Boulevard is a former alignment of U.S. 50 and has fronting commercial and industrial properties as a result. Both the Sac RT light rail line and the UPRR tracks run adjacent to Folsom Boulevard (on the south side). The light rail tracks

are grade-separated from Sunrise Boulevard just south of the Folsom Boulevard/Sunrise Boulevard intersection. Freight train service on the UPRR tracks is infrequent—about three to five trains per week primarily during off-peak hours.

To determine the existing operating conditions within the study area and the proposed interchange, intersection and freeway operations on U.S. 50 between Sunrise Boulevard and Hazel Avenue were analyzed. AM and PM peak hour traffic operations were evaluated for the study area freeway segments, ramp junctions, arterial roadways, and intersections using procedures and methodologies consistent with the *Highway Capacity Manual* (Transportation Research Board 2000).

#### *Freeway Corridor Average Peak Hour Speeds*

Average peak hour speed surveys were conducted to assess general traffic flow conditions and average travel speeds in the traffic study area. Although surveys were conducted for several different routes, data for the following two important travel routes were collected and summarized for this report, as described below.

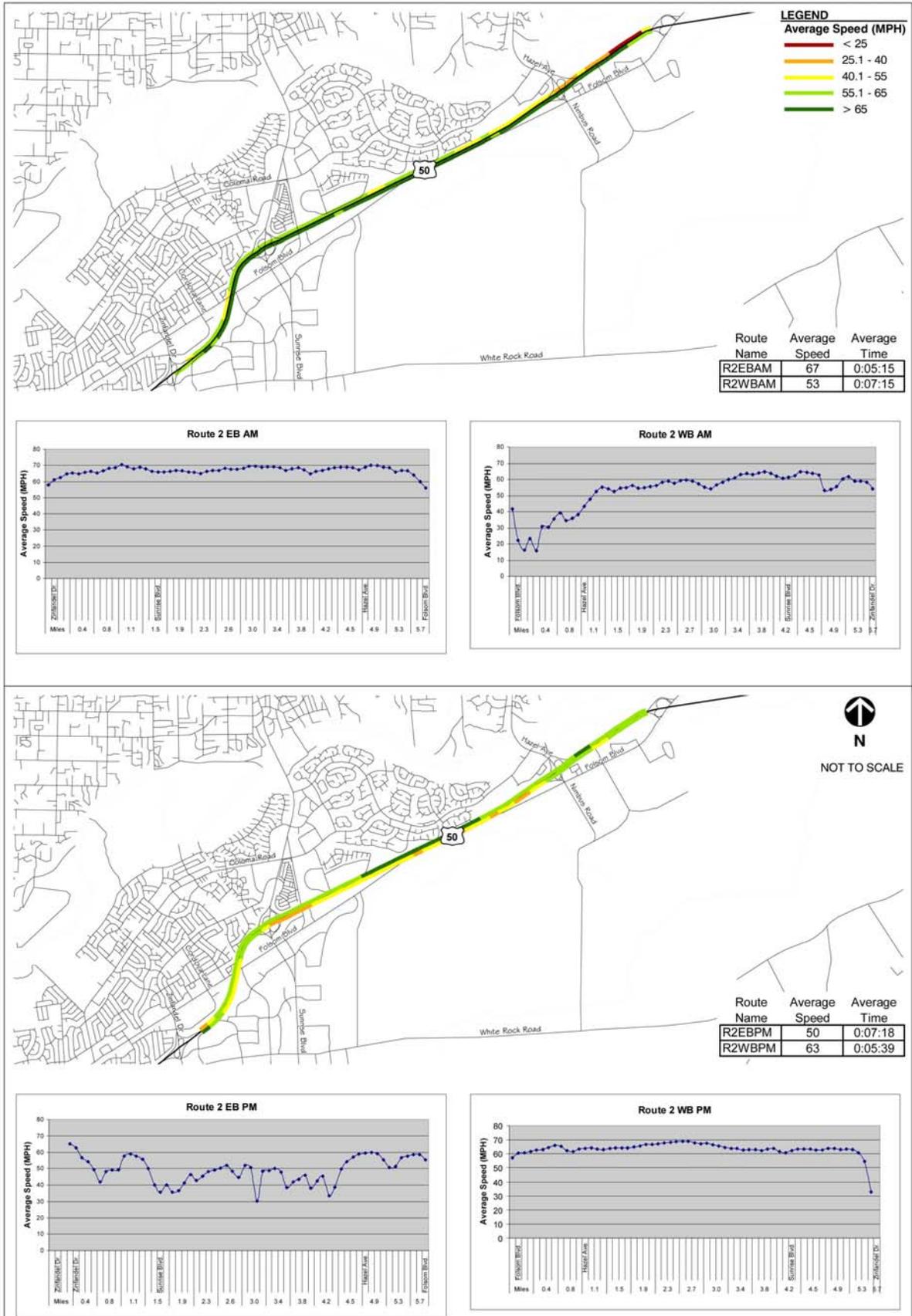
#### U.S. 50 Freeway Corridor (refer to **Figure 2.1.8-3**)

- Endpoints: Zinfandel Drive and Folsom Boulevard interchanges
- Covers travel on: Eastbound and westbound U.S. 50 mainline

#### Sunrise Boulevard to U.S. 50 (refer to **Figure 2.1.8-4**)

- Endpoints: Sunrise Boulevard/White Rock Road intersection and U.S. 50/Folsom Boulevard interchange
- Covers travel on: Northbound/southbound Sunrise Boulevard between White Rock Road and U.S. 50 and eastbound/westbound travel on U.S. 50 between Sunrise Boulevard and Folsom Boulevard

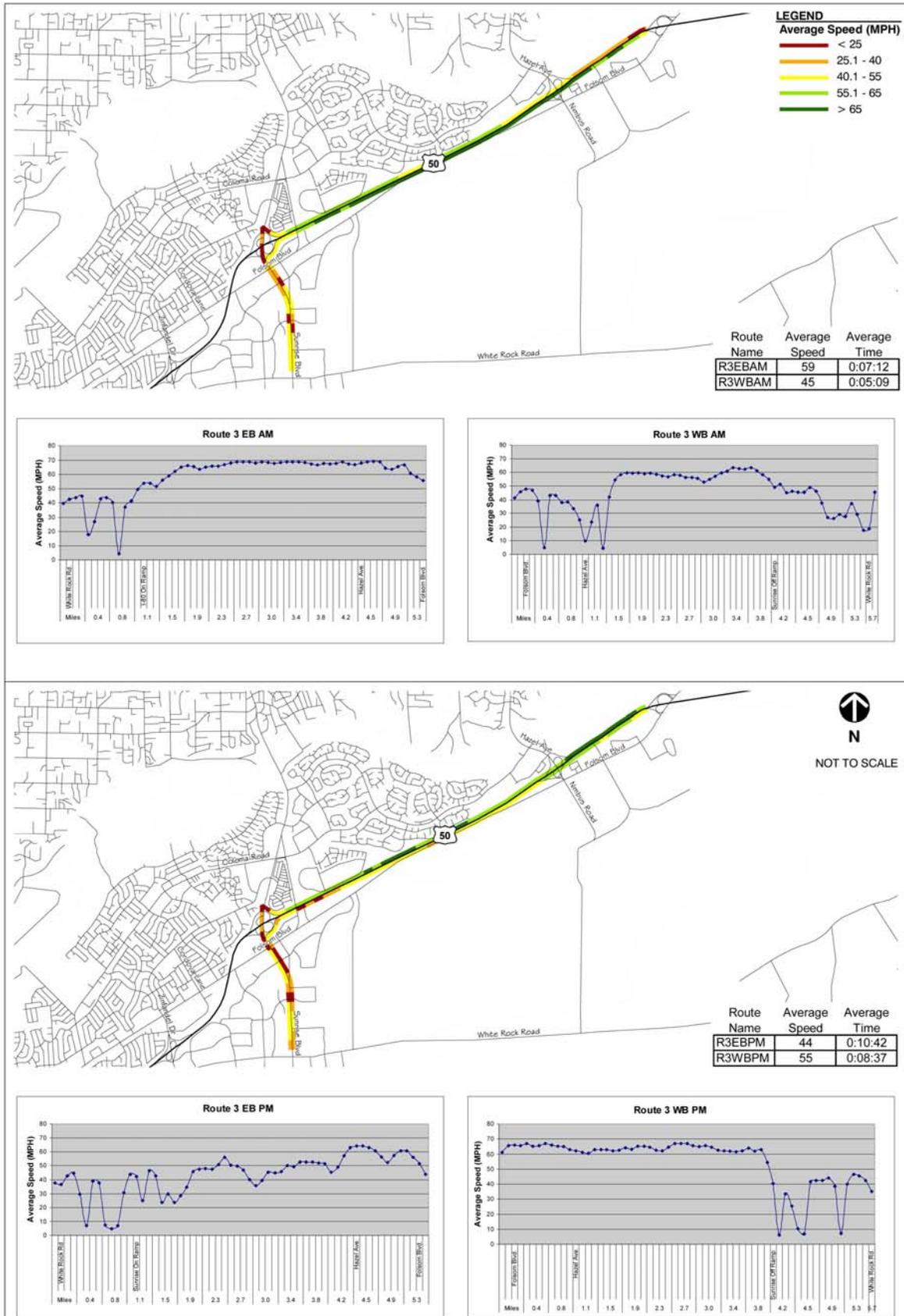
As shown on both **Figures 2.1.8-3** and **2.1.8-4**, westbound AM peak hour traffic on U.S. 50 experiences speeds of less than 25 miles per hour (mph) just west of the Folsom Boulevard interchange with some vehicle queuing, which is created by merging traffic from the westbound Folsom Boulevard on-ramp. Traffic speeds steadily increase on U.S. 50 proceeding westbound toward the Hazel Avenue interchange (i.e., at 25–40 mph), reaching the 40- to 65-mph range west of the Hazel Avenue interchange. Eastbound travel speeds on U.S. 50 during the AM peak are in the 40- to 55-mph range just east of



Source: Fehr & Peers, October 20, 2006







Source: Fehr & Peers, October 20, 2006





the Sunrise Boulevard interchange but increase and are maintained at the 55 mph to greater than 65 mph range up to the Folsom Boulevard interchange.

Sunrise Boulevard experiences travel speeds of less than 25 mph on various segments between U.S. 50 and White Rock Road, particularly on the U.S. 50 overcrossing up to Folsom Boulevard during both AM and PM peak hours, and on northbound Sunrise Boulevard approaching Folsom Boulevard during the PM peak hour. **Table 2.1.8-3** shows the average freeway speeds on the U.S. 50 freeway mainline from Zinfandel Drive to Folsom Boulevard (approximately 7 miles). The speeds shown are an average of all vehicles, including those entering and exiting the corridor, between Zinfandel Drive and Folsom Boulevard.

**Table 2.1.8-3  
Freeway Corridor Average Peak Hour Speed under Existing Conditions**

Route	Eastbound		Westbound	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Zinfandel Drive to Folsom Boulevard	67	50	53	63

Source: Fehr & Peers, August 2010

Notes: The freeway speeds cited in this table are calculated based on a compilation of speeds for all vehicles using the 7-mile segment of U.S. 50 between the Zinfandel Drive interchange and the Folsom Boulevard interchange.

### *Freeway Mainline Segment Operations*

**Figures 2.1.8-1** and **2.1.8-2** show the existing conditions for peak hour traffic volumes and lane configurations for the study area. **Table 2.1.8-4** summarizes the existing AM and PM peak hour LOS on U.S. 50 between Sunrise Boulevard and Hazel Avenue. Although the study area for this project extends from Sunrise Boulevard to the Hazel Avenue intersection, the analysis results presented below consider volume and capacity on U.S. 50 between Zinfandel Drive and Folsom Boulevard to account for known bottlenecks that exist upstream/downstream of the study area on U.S. 50. In general, these bottlenecks constrain the volume entering the study area.

The key bottleneck that constrains traffic entering the study area is in the westbound direction at the Folsom Boulevard interchange, particularly during the AM peak hour (largely due to the ramp metering on the Folsom Boulevard westbound on-ramp).

**Table 2.1.8-4  
Freeway Mainline Levels of Service—Existing Conditions**

Freeway Mainline Section	AM Peak		PM Peak	
	LOS <sup>1</sup>	Density <sup>2</sup>	LOS <sup>1</sup>	Density <sup>2</sup>
Eastbound—Sunrise Boulevard to Hazel Avenue	D	32	<u>F</u>	<u>64</u>
Westbound—Hazel Avenue to Sunrise Boulevard	E	38	C	23

Source: Fehr & Peers, August 2010

Notes: **Bold and underline font** indicates unacceptable operations.

1 LOS—level of service

2 Density in vehicles per mile per lane

During the AM peak hour, the westbound mainline from Hazel Avenue to Sunrise Boulevard operates at LOS E conditions. Because the amount of traffic entering the study area is constrained at the Folsom Boulevard westbound on-ramp, the flow of freeway traffic on the section between Hazel Avenue and Sunrise Boulevard generally operates unimpeded at average speeds between 40 and 65 mph.

During the PM peak hour, LOS F conditions occur for the eastbound mainline, which is the peak direction for the evening commute. This study section is characterized by high demand volumes and segments where the average speeds are below 25 mph.

*Freeway Ramp Junction Operations*

**Table 2.1.8-5** summarizes the existing AM and PM peak hour LOS at the Sunrise Boulevard and Hazel Avenue U.S. 50 interchange ramp junctions.

**Table 2.1.8-5  
Freeway Ramp Junction Levels of Service—Existing Conditions**

Freeway Ramp Junction	AM Peak		PM Peak	
	LOS <sup>1</sup>	Density <sup>2</sup>	LOS <sup>1</sup>	Density <sup>2</sup>
Eastbound Sunrise Boulevard on-ramp	D	34	<u>F</u>	<u>68</u>
Westbound Sunrise Boulevard on-ramp	E	37	C	25
Eastbound Sunrise Boulevard off-ramp	D	35	<u>F</u>	<u>92</u>
Westbound Sunrise Boulevard off-ramp	E	35	C	27
Eastbound Hazel Avenue to Aerojet Road weave section	E	39	<u>F</u>	<u>44</u>
Westbound Hazel Avenue loop on-ramp	E	39	D	30
Westbound Hazel Avenue slip on-ramp	<u>F</u>	<u>44</u>	C	25
Eastbound Hazel Avenue off-ramp	D	29	<u>F</u>	<u>61</u>
Westbound Hazel Avenue off-ramp	E	39	<u>F</u>	<u>53</u>

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

Notes: **Bold and underline font** indicates unacceptable operations.

1 LOS —level of service

2 Density in vehicles per mile per lane

For existing conditions, some of the on-ramps and off-ramps operate unacceptably during peak hours. During the AM peak hour, the heavy volume entering at Hazel Avenue westbound slip on-ramp results in LOS F conditions. During the PM peak hour, all ramps in the eastbound direction operate at LOS F conditions. The westbound Hazel Avenue off-ramp, which queues back to the mainline and is constrained by the heavy northbound traffic on the Hazel Avenue overcrossing of U.S. 50, also operates at LOS F.

### Intersection Operations

**Table 2.1.8-6** summarizes the existing conditions analysis results for key intersections in the traffic study area.

**Table 2.1.8-6  
Intersection Operations for Existing Conditions**

Intersection	AM Peak Hour		PM Peak Hour	
	LOS <sup>1</sup>	Delay <sup>2</sup>	LOS	Delay
Sunrise Boulevard/Folsom Boulevard	D	37	<b>F</b>	<b><u>120</u></b>
Sunrise Boulevard/U.S. 50 Eastbound ramps	C	31	<b>F</b>	<b><u>149</u></b>
Sunrise Boulevard/U.S. 50 Westbound ramps	D	46	<b>F</b>	<b><u>92</u></b>
Sunrise Boulevard/White Rock Road	D	41	D	47
Hazel Avenue/Folsom Boulevard	D	48	<b>F</b>	<b><u>127</u></b>
Hazel Avenue/U.S. 50 Eastbound ramps	B	14	<b>F</b>	<b><u>109</u></b>
Hazel Avenue/Tributary Point Drive/U.S. 50 Westbound ramps	D	53	<b>F</b>	<b><u>129</u></b>
Grant Line Road/White Rock Road	C	20	<b>F</b>	<b><u>119</u></b>

Source: Fehr & Peers, August 2010 and April 2011.

Notes: **Bold and underline font** indicates unacceptable LOS F conditions.

1 LOS—level of service

2 Delay is measured in seconds per vehicle

**Table 2.1.8-6** shows that all of the study intersections operate at LOS F conditions during the PM peak hour (with the exception of Sunrise Boulevard/White Rock Road). At the Sunrise Boulevard/Folsom Boulevard intersection, vehicle queues are long on both the northbound and southbound approaches. The northbound Sunrise Boulevard vehicle queues, in particular, frequently block entrance into the northbound right-turn lanes at the intersection. The Sunrise Boulevard overcrossing of U.S. 50 is also frequently congested during the PM peak hour, leaving limited space for vehicles to turn left onto Sunrise Boulevard from the eastbound off-ramp and contributing to the lengthy delays for traffic at both the eastbound and westbound Sunrise Boulevard off-ramps.

Similar conditions occur at the Hazel Avenue interchange during the PM peak hour. A bottleneck is created on northbound Hazel Avenue due to the traffic signal at Gold

Country Boulevard, the lane drop from three to two through lanes, and an increase in grade. This bottleneck, combined with heavy demand volumes at the off-ramps and congested conditions on the U.S. 50 overcrossing, contributes to lengthy delays at the intersections.

### Traffic Accidents

**Table 2.1.8-7** summarizes the traffic accident data compiled for U.S. 50 in the project vicinity by Caltrans' Traffic Accident Surveillance and Analysis System. The data shown are for the three-year period between January 2006 and December 2008.

**Table 2.1.8-7  
Freeway Mainline and Ramp Accident History**

Location	Total Accidents	Total Fatalities	Actual Accident Rate <sup>1</sup>	Statewide Average Accident Rate
<b>Mainline</b>				
Eastbound U.S. 50—Sunrise Blvd to Hazel Ave	92	0	0.42	0.73
Westbound U.S. 50—Hazel Ave to Sunrise Blvd	94	0	0.42	0.73
<b>Ramps</b>				
Eastbound U.S. 50 on-ramp from southbound Sunrise Blvd.	15	0	<b>2.47</b>	0.70
Eastbound U.S. 50 on-ramp from northbound Sunrise Blvd.	5	0	<b>0.81</b>	0.65
Eastbound U.S. 50 off-ramp to Hazel Ave.	11	0	0.80	1.20
Westbound U.S. 50 on-ramp from northbound Hazel Ave.	2	0	<b>1.04</b>	0.70
Westbound U.S. 50 on-ramp from southbound Hazel Ave.	10	0	<b>0.71</b>	0.65
Westbound U.S. 50 off-ramp to Sunrise Blvd.	43	0	<b>3.20</b>	1.20

Source: Fehr & Peers, Traffic Operations Report: U.S. 50/Rancho Cordova Parkway Interchange, August 2010

Notes: **Bold** type indicates that the actual accident rate on this segment is greater than the statewide average accident rate for similar facilities.

<sup>1</sup> For mainline sections, the rate is accidents per million vehicle-miles. For the ramps, the rate is accidents per million vehicles.

As shown in **Table 2.1.8-7**, a total of 186 accidents occurred with no fatalities on the U.S. 50 mainline within the study area. The accident rate on eastbound and westbound U.S. 50 between Sunrise Boulevard and Hazel Avenue was lower than the statewide average accident rate for similar freeway facilities. The on- and off-ramps at Sunrise Boulevard and the on-ramps at the Hazel Avenue interchange had higher accident rates than the statewide average accident rate for similar facilities. The accident rates on both

the westbound off-ramp and southbound to eastbound on-ramp at the Sunrise Boulevard interchange were more than double the statewide average. At the Hazel Avenue interchange, the accident rates for the northbound and southbound to westbound on-ramps were approximately 48 and 9 percent higher than the statewide average, respectively.

**Table 2.1.8-8** categorizes the accidents within the three-year period according to the type of accident.

**Table 2.1.8-8  
Freeway Mainline and Ramp Accidents by Type**

Location	Accident Type					Total
	Rear End	Broad-side	Side-swipe	Hit Object	Other <sup>1</sup>	
<b>Mainline</b>						
Eastbound U.S. 50—Sunrise Blvd. to Hazel Ave.	44	2	18	19	9	92
Westbound U.S. 50—Hazel Ave. to Sunrise Blvd.	42	2	19	29	2	94
<b>Ramps</b>						
Eastbound U.S. 50 on-ramp from southbound Sunrise Blvd.	9	0	4	2	0	15
Eastbound U.S. 50 on-ramp from northbound Sunrise Blvd.	4	0	1	0	0	5
Eastbound U.S. 50 off-ramp to Hazel Ave.	4	4	2	0	1	11
Westbound U.S. 50 on-ramp from northbound Hazel Ave.	2	0	0	0	0	2
Westbound U.S. 50 on-ramp from southbound Hazel Ave.	6	0	3	1	0	10
Westbound U.S. 50 off-ramp to Sunrise Blvd.	20	11	4	2	6	43

Source: Caltrans District 3, 2006

Note:

<sup>1</sup> The “other” category includes head-on, overturn, and other accident types.

As shown in **Table 2.1.8-8**, the majority of the accidents on the mainline were rear-end (46 percent) and hit-object (26 percent) collisions. Rear-end collisions on the mainline are likely caused by traffic congestion near the on- and off-ramps. Similarly, the majority of the accidents on the ramps were also rear-end collisions (52 percent). The high percentage of rear-end accidents on the off-ramps are likely caused by queuing downstream from Sunrise Boulevard and Hazel Avenue. For the eastbound on-ramp at

the Sunrise Boulevard interchange, excessive speed was cited as a contributing factor and approximately 60 percent of the accidents on this ramp were rear-end collisions.

### *Bicycle/Pedestrian System*

Within the study area, bicycling and walking activities rely heavily on the existing roadway system. A bicycle path is located adjacent to the Folsom South Canal south of U.S. 50. Class II bicycle lanes are located along Sunrise Boulevard and Hazel Avenue north of U.S. 50, and crosswalks and pedestrian ramps are also provided at signalized intersections.<sup>15</sup> Additionally, there is a Class I bicycle/pedestrian path that runs parallel to Sunrise Boulevard north of U.S. 50, which provides an undercrossing of U.S. 50 and connectivity between the American River Bike Trail and Citrus Road.<sup>16</sup>

Two grade-separated undercrossings are located within the study area between the Sunrise Boulevard and Hazel Avenue interchanges, providing connectivity between uses north and south of U.S. 50. Three grade-separated facilities are located outside of the project **sitearea** including an underpass just west of the Mather Field Road interchange, an overpass between the Mather Field Road and Sunrise Boulevard interchanges, and an overpass at Aerojet Drive just east of the Hazel Avenue interchange.

There are sidewalks and trail facilities in the unincorporated Gold River Community north of the proposed interchange site. Trail facilities in the Gold River Community are privately maintained by the Gold River Community Association and provide access through the community as well as connections to the American River Parkway Trail. The nearest Gold River Community trail to the proposed interchange site is located along the western side of Prospect Hill Drive.

## **Environmental Consequences**

### ***Traffic and Transportation***

The Traffic Operations Report and memorandums prepared for the project evaluated near-term and long-term freeway conditions to assess if the project would have a severe effect on highway safety and operation. The effects of construction activities on the operation of U.S. 50 during the construction of the project were also considered. The following scenarios were evaluated to assess the project's effects on U.S. 50 operations under baseline (2005) conditions, in the near-term (2016) and long-term (2037) that utilize the level of service standards described in the "Regulatory Setting" discussion above.

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<sup>15</sup> A Class II bicycle lane is a bicycle lane that shares the roadway pavement with vehicular pavement and includes striping and signage demarcating the bicycle facility.

<sup>16</sup> A Class I bicycle path is a dedicated path that is separated from roadway pavement and vehicular travel.

- Baseline Year (2005) Conditions:
  - 2005 Existing Conditions (Without Project)
  - 2005 Existing Plus Alternative 3 (Proposed Project)
- Construction Year (2016) Conditions:
  - 2016 No Project
  - 2016 Plus Alternative 3 (Proposed Project)
  - 2016 Plus Alternative 3 (Proposed Project) and Operational Improvements
- Design Year (2037) Conditions:
  - 2037 No Project and Operational Improvements
  - 2037 Plus Alternative 3 (Proposed Project) and Operational Improvements and Ramp Metering Strategies

The Operational Improvements referenced above include four operational improvements that were evaluated in conjunction with the 2016 Construction Year scenario, to assess the relative near-term benefits of these improvements on freeway mainline conditions with the proposed interchange. These improvements are part of a package of proposed near-term priority improvements by the 50 Corridor Mobility Partnership. All four of these improvements are planned for implementation prior to the Design Year and are thus included in the 2016 Plus Alternative 3 (Proposed Project) and Operational Improvement scenario and all 2037 scenarios.

- Hazel Avenue Interchange Eastbound Off-ramp—Addition of fourth lane on the off-ramp to provide dual right-turn and dual left-turn lanes at the ramp junction intersection.
- Hazel Avenue Interchange Westbound On-ramps—Merging the westbound loop on-ramp and slip on-ramp so there will be only one merge point with Highway 50.
- Eastbound Auxiliary Lane—From the Hazel Avenue interchange to just east of the Folsom Boulevard interchange. The MTP identifies an estimated completion year of 2014 for this project (i.e., “New: Eastbound Auxiliary Lane on Highway 50 from Sunrise Boulevard to east of Folsom Boulevard”).

- Hazel Avenue extension between U.S. 50 and Easton Valley Parkway—  
Extension of Hazel Avenue south to a connection with Easton Valley Parkway  
and Rancho Cordova Parkway. The MTP identifies this project as “Hazel  
Avenue—New Road: 4-lane road from Easton Valley Parkway to U.S. 50.”
- Ramp metering strategies include application of control devices like ramp  
signals to regulate the number of vehicles entering the mainline from on-  
ramps. The purpose of ramp metering strategies is to achieve operational  
efficiency and optimize freeway operation.

### **Construction Activities**

Construction and construction traffic impacts would occur along eastbound and westbound U.S. 50, Folsom Boulevard, and White Rock Road. Construction activities for the project would temporarily increase the amount of traffic on surrounding area roadways and potentially result in the temporary modification of travel lanes along U.S. 50 and Folsom Boulevard to accommodate construction.

Substantial traffic delays are not anticipated during construction of this project due to the amount of work that would occur outside of the travel corridor. According to the recommendations in the Transportation Management Plan Data Sheet (April 2010) lane closures on U.S. 50 would be prohibited during peak and daytime hours and on holidays. During construction of the proposed project, at least one high-occupancy vehicle lane and three general purpose lanes would remain in operation on U.S. 50 in both directions at peak periods. Shoulder closures would be needed to construct the auxiliary lanes. Several detour approaches have been considered for falsework erection/removal; detouring of traffic on to local roads would only be used as a last resort and is not anticipated to occur at this time. The full closure of U.S. 50 may be allowed during late evening to early morning hours to construct crossover lanes. Lane closure locations and approval will be coordinated with Caltrans District 3 Traffic manager prior to performing any lane closures.

The exact construction equipment and personnel to be used for the project are not known at this time; however, substantial construction traffic is expected during the construction period. Vehicular traffic associated with the project construction primarily consists of trucks used for the delivery and hauling of construction materials to and from the site, the hauling of dirt, the daily use of heavy earth-moving and other construction equipment, and travel to and from the site by construction workers and inspectors. Additional traffic would be generated from construction workers commuting to the site and the transportation of construction vehicles and equipment. Some of the construction vehicles and equipment would be left on-site for the duration of their use, while other construction

vehicles would make daily trips to the project site. The need for certain types and number of vehicles and equipment would depend on the phase of the project. Construction activities creating the most traffic would involve heavy haul trucks importing fill.

### Traffic Operations—Baseline Year (2005) Conditions

The NOP for the proposed project was published in September 2005. As such, the year 2005 represents the “baseline” condition for the project. An analysis of the project Baseline Year (2005) traffic conditions compared to a Baseline Year (2005) Plus Project scenario is presented here to provide a comparative analysis of the project’s traffic effects under a Baseline Year (2005) scenario.

### Intersection Operations

**Table 2.1.8-9** compares traffic level of service and delay for key intersections within the project study area both under Existing conditions (i.e., 2005 conditions without any improvements) and Existing Plus Project conditions (i.e., 2005 conditions with operation of the proposed project). **Figures 2.1.8-5** and **2.1.8-6** show peak hour traffic volumes and lane configurations under Existing Plus Project conditions on U.S. 50 through the project site and surrounding area and at key intersections, respectively.

**Table 2.1.8-9  
Intersection Operations for Existing Plus Project Conditions**

Intersection	Existing		Existing Plus Project	
	AM	PM	AM	PM
1. Sunrise Blvd./Westbound U.S. 50 Ramps	D (46)	<b>F (92)</b>	D (38)	B (12)
2. Sunrise Blvd./Eastbound U.S. 50 Ramps	C (31)	<b>F (149)</b>	B (15)	B (15)
3. Sunrise Blvd./Folsom Blvd.	D (37)	<b>F (120)</b>	C (32)	<b>F (80)</b>
4. Hazel Ave./Westbound U.S. 50 Ramps	D (53)	<b>F (129)</b>	E (55)	<b>F (100)</b>
5. Hazel Ave./Eastbound U.S. 50 Ramps	B (14)	<b>F (109)</b>	B (10)	<b>F (87)</b>
6. Hazel Ave./Folsom Blvd.	D (48)	<b>F (127)</b>	D (42)	C (33)
7. Rancho Cordova Pkwy/Westbound U.S. 50 Ramps	N/A <sup>1</sup>		A (6)	A (7)
8. Rancho Cordova Pkwy/Eastbound U.S. 50 Ramps			A (1)	A (1)
9. Sunrise Blvd./White Rock Road	D (41)	D (47)	D (43)	D (48)
10. Rancho Cordova Pkwy./White Rock Road	N/A <sup>1</sup>	N/A <sup>1</sup>	B (13)	B (13)
11. Grant Line Road/White Rock Road	C (20)	<b>F (119)</b>	C (20)	<b>F (177)</b>

Source: Fehr & Peers, March 2011 and April 2011

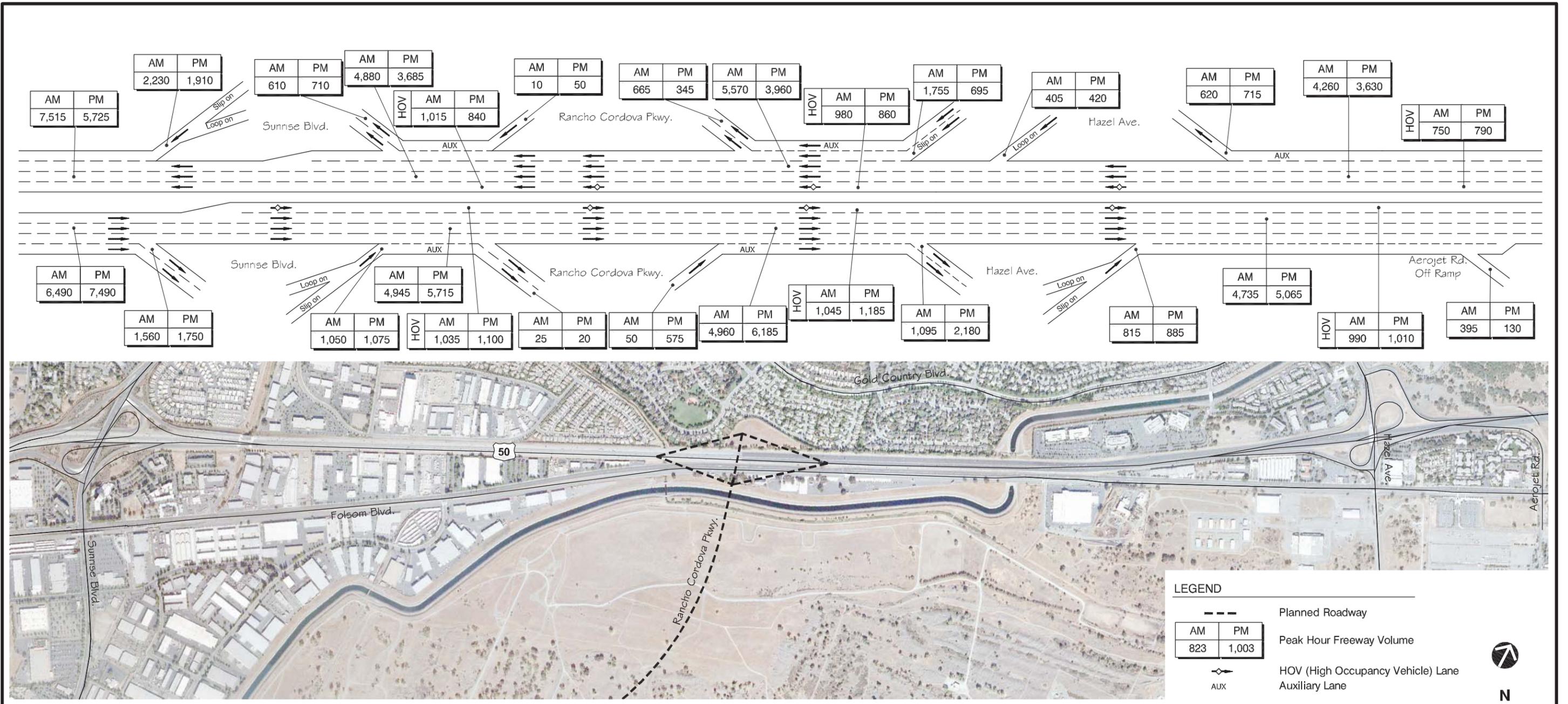
Notes: **Bold and underline font** indicate unacceptable level of service (LOS) F conditions. LOS and delay (in seconds per vehicle) are reported.

<sup>1</sup> N/A—not applicable—These study intersections do not exist under the scenarios indicated.

Under the Existing Plus Project condition, traffic levels of service and delay would remain the same or improve at all intersections in both the AM and PM peak hours as compared to the Existing condition, with the exception of the Hazel Avenue/westbound U.S. 50 ramps in the AM peak hour and the Grant Line Road/White Rock Road intersection in the PM peak hour. In the AM peak hour, Hazel Avenue/westbound U.S. 50 ramps would see level of service slightly worsen from LOS D to LOS E, and delay would increase by 2 seconds per vehicle. Under the Existing Plus Project condition, however, this intersection would still operate acceptably at LOS E. The Grant Line Road/White Rock Road intersection under Existing Plus Project condition would have an increase of delay of 58 seconds. While this impact is marked, the following intersection improvement is included in the planned and funded White Rock Road improvement project by Sacramento County and would alleviate this impact:

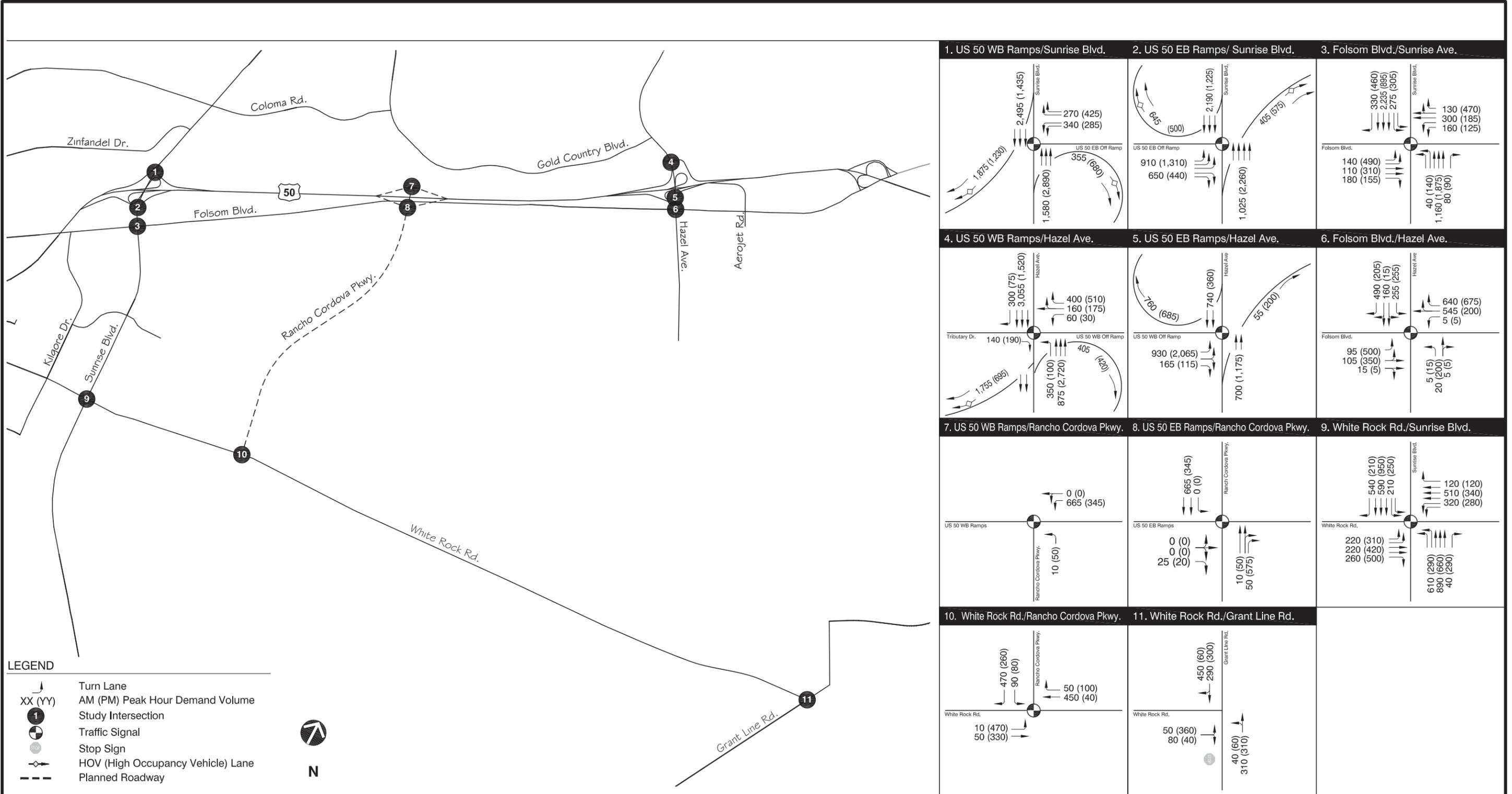
- Grant Line Road/White Rock Road: Realign White Rock Road as an east/west continuous road with a side-street stop intersection at Grant Line Road. This planned improvement will improve the level of service to C (Fehr & Peers, April 2011).

Given this planned improvement and the timing of the proposed project (2016), no further measures are required.



Source: Fehr & Peers, April 13, 2011





1. US 50 WB Ramps/Sunrise Blvd.	2. US 50 EB Ramps/ Sunrise Blvd.	3. Folsom Blvd./Sunrise Ave.
4. US 50 WB Ramps/Hazel Ave.	5. US 50 EB Ramps/Hazel Ave.	6. Folsom Blvd./Hazel Ave.
7. US 50 WB Ramps/Rancho Cordova Pkwy.	8. US 50 EB Ramps/Rancho Cordova Pkwy.	9. White Rock Rd./Sunrise Blvd.
10. White Rock Rd./Rancho Cordova Pkwy.	11. White Rock Rd./Grant Line Rd.	

Source: Fehr & Peers, April 13, 2011



Freeway Operations

**Table 2.1.8-10** compares freeway level of service and density in the eastbound direction for the project study area both under Existing conditions and Existing Plus Project conditions.

**Table 2.1.8-10  
Eastbound Freeway Operations  
for Existing and Existing Plus Project Conditions**

Location	Type	Existing		Existing Plus Alternative 3 (Proposed Project)	
		AM	PM	AM	PM
Zinfandel Drive to Sunrise Blvd.	Basic	D / 28	<b><u>F / 74</u></b>	D / 29	D / 32
Sunrise Blvd. off-ramp	Diverge	E / 35	<b><u>F / 92</u></b>	D / 35	E / 38
Sunrise Blvd. on-ramp	Merge	D / 34	<b><u>F / 68</u></b>	C / 24	C / 27
Sunrise Blvd. to Hazel Ave.	Basic	D / 32	<b><u>F / 64</u></b>	N/A <sup>1</sup>	
Sunrise Blvd. to Rancho Cordova Pkwy.	Basic	N/A <sup>2</sup>		D / 27	D / 31
Rancho Cordova Pkwy. off-ramp	Diverge			D / 34	E / 39
Rancho Cordova Pkwy. on-ramp	Merge			C / 25	D / 29
Rancho Cordova Pkwy. to Hazel Ave.	Basic			C / 25	D / 33
Hazel Ave. off-ramp	Diverge	D / 29	<b><u>F / 61</u></b>	C / 26	<b><u>F / 49</u></b>
Hazel Ave. to Aerojet Road	Weave	E (39)	<b><u>F (44)</u></b>	D (29)	D (31)

Source: Fehr & Peers, 2011

Notes: **Bold and underline font** indicate unacceptable level of service (LOS) F conditions. LOS and density (in vehicles per lane per mile) are reported.

- 1 N/A—not applicable—The study freeway segment does not exist under the scenarios indicated. This segment of Sunrise Boulevard to Hazel Avenue would be bisected by the construction of the proposed project, and becomes Sunrise Boulevard to Rancho Cordova Parkway and Rancho Cordova Parkway to Hazel Avenue under the Alternative 3 scenario.
- 2 N/A—not applicable—This study location does not exist under existing conditions, as the proposed project is not currently constructed and this segment remains as Sunrise Boulevard to Hazel Avenue.

Under the Existing Plus Project condition, freeway levels of service and density in the eastbound direction would remain the same or improve at all locations in both the AM and PM peak hour as compared to the Existing condition, with the exception of the Zinfandel Drive to Sunrise Boulevard freeway segment, where density would increase (worsen) slightly by one vehicle per lane per mile during the AM peak. This represents a negligible change from the Existing condition.

**Table 2.1.8-11** compares freeway level of service and density in the westbound direction for the project study area both under Existing conditions and Existing Plus Project conditions.

**Table 2.1.8-11  
Westbound Freeway Operations  
for Existing and Existing Plus Project Conditions**

Location	Type	Existing		Existing Plus Alternative 3 (Proposed Project)	
		AM	PM	AM	PM
Hazel Ave. off-ramp	Diverge	E / 39	<b>F / 53</b>	D / 28	C / 24
Hazel Ave. northbound on-ramp	Merge	E / 39	D / 30	D / 28	C / 25
Hazel Ave. southbound on-ramp	Merge	<b>F / 44</b>	C / 26	C / 23	B / 18
Hazel Ave. to Sunrise Blvd.	Basic	E / 38	C / 23	N/A <sup>1</sup>	
Hazel Ave. to Rancho Cordova Pkwy.	Basic	N/A <sup>2</sup>		D / 26	C / 21
Rancho Cordova Pkwy. off-ramp	Diverge			D / 28	C / 21
Rancho Cordova Pkwy. on-ramp	Merge			C / 24	B / 17
Rancho Cordova Pkwy. to Sunrise Blvd.	Basic			C / 23	C / 21
Sunrise Blvd. off-ramp	Diverge	E / 35	C / 27	D / 29	B / 19
Sunrise Blvd. on-ramp	Merge	E / 37	C / 25	D / 34	C / 26
Sunrise Blvd. to Zinfandel Drive	Basic	E / 35	C / 24	D / 32	C / 25

Source: Fehr & Peers, 2011

Notes: **Bold and underline font** indicate unacceptable level of service (LOS) F conditions. LOS and density (in vehicles per lane per mile) are reported.

- 1 N/A—not applicable—The study freeway segment does not exist under the scenarios indicated. This segment of Sunrise Boulevard to Hazel Avenue would be bisected by the construction of the proposed project, and becomes Sunrise Boulevard to Rancho Cordova Parkway and Rancho Cordova Parkway to Hazel Avenue under the Alternative 3 scenario.
- 2 N/A—not applicable—This study location does not exist under existing conditions, as the proposed project is not currently constructed and this segment remains as Sunrise Boulevard to Hazel Avenue.

Under the Existing Plus Project condition, freeway levels of service and density in the westbound direction would remain the same or improve at all locations in both the AM and PM peak hours compared to the Existing condition (except for the Sunrise Boulevard on-ramp, which has a negligible increase of one vehicle per lane per mile during the PM peak).

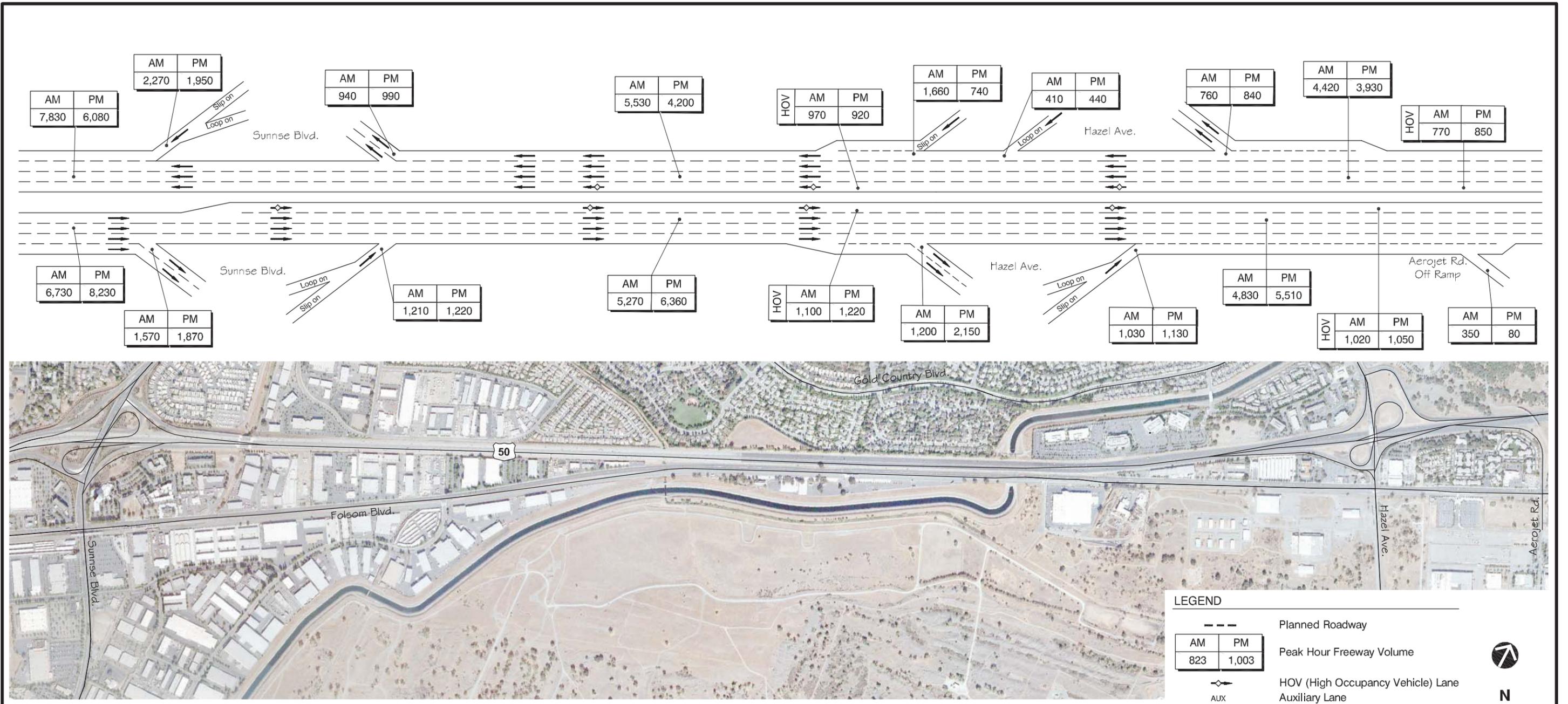
### *Traffic Operations—Construction Year (2016) Conditions*

#### Operational Improvements

Four operational improvements, as described above, were evaluated in conjunction with the 2016 Construction Year scenario, to assess the relative near-term benefits of these improvements on freeway mainline conditions with the proposed interchange. All of these improvements are planned for implementation prior to the Construction Year (2016) and are thus included in all the 2037 scenarios as well as factored in the 2016 analysis below.

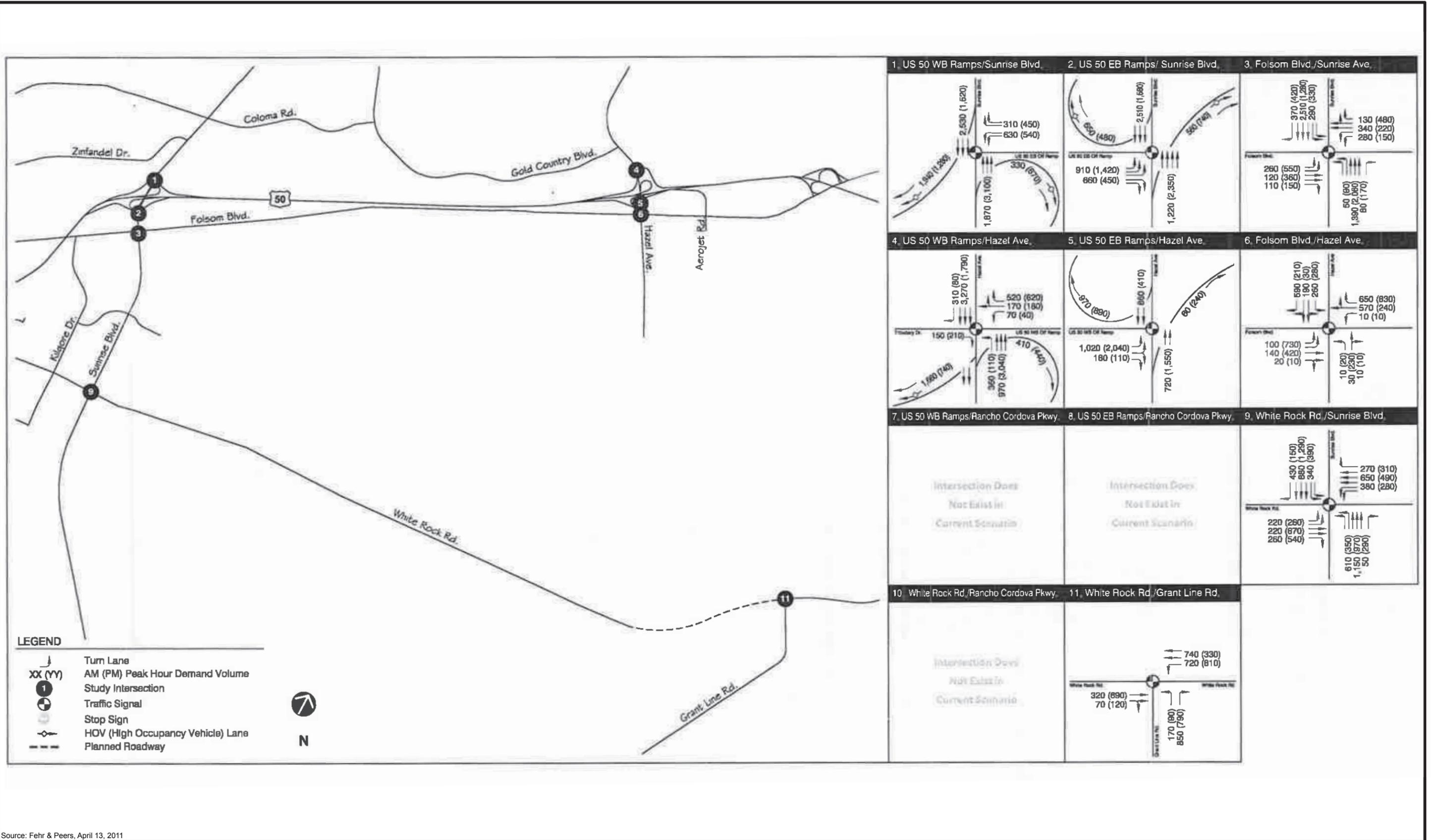
Year 2016 conditions (after construction of the project) for the study area transportation system, including the traffic analysis of freeway corridor system performance, study area travel times, critical queue lengths, freeway mainline segments, freeway ramp junctions, and intersections, are summarized in **Table 2.1.8-12** through **Table 2.1.8-15**. **Figure 2.1.8-7** through **Figure 2.1.8-10** show the traffic volumes and lane configurations under 2016 conditions without construction of the proposed project and with construction of the proposed project, respectively.

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Source: Fehr & Peers, April 13, 2011

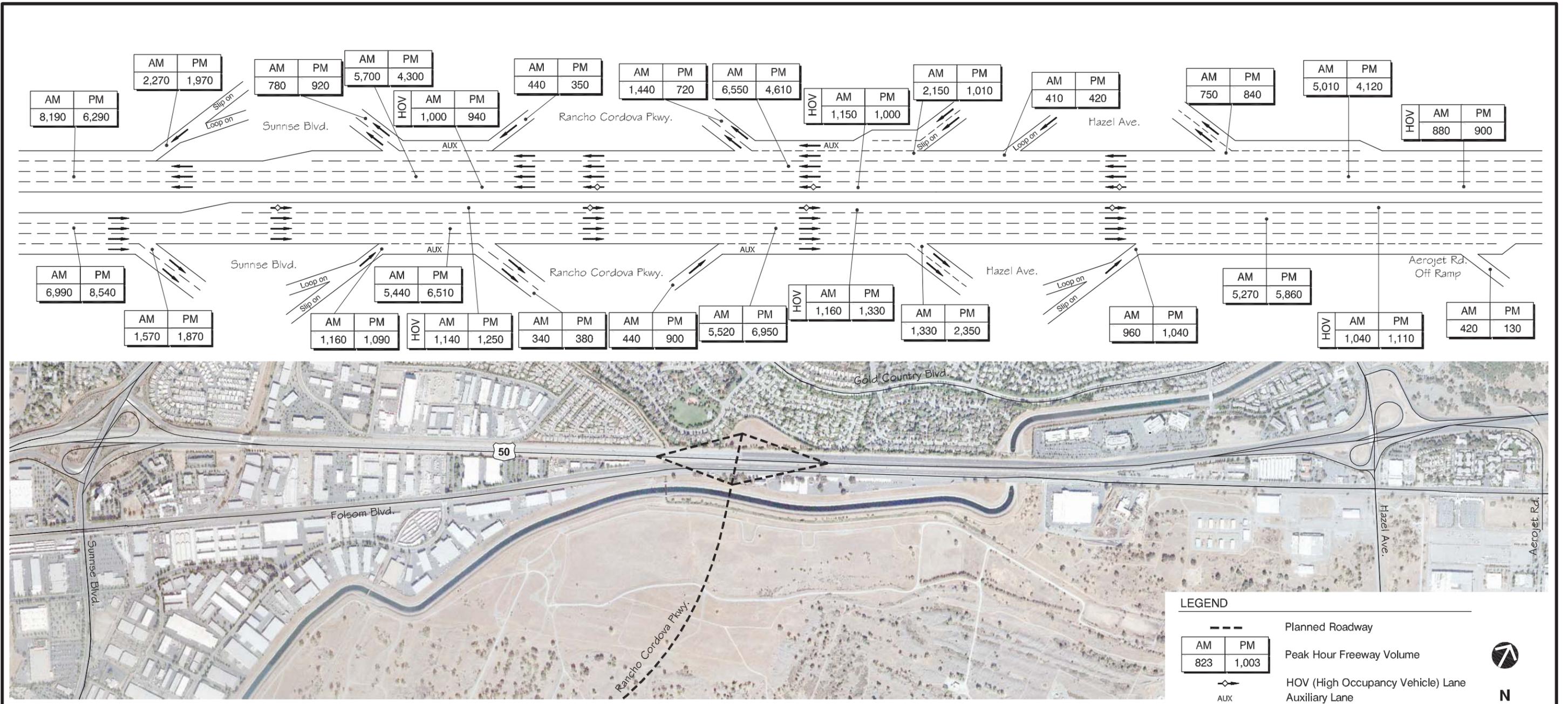




Source: Fehr & Peers, April 13, 2011

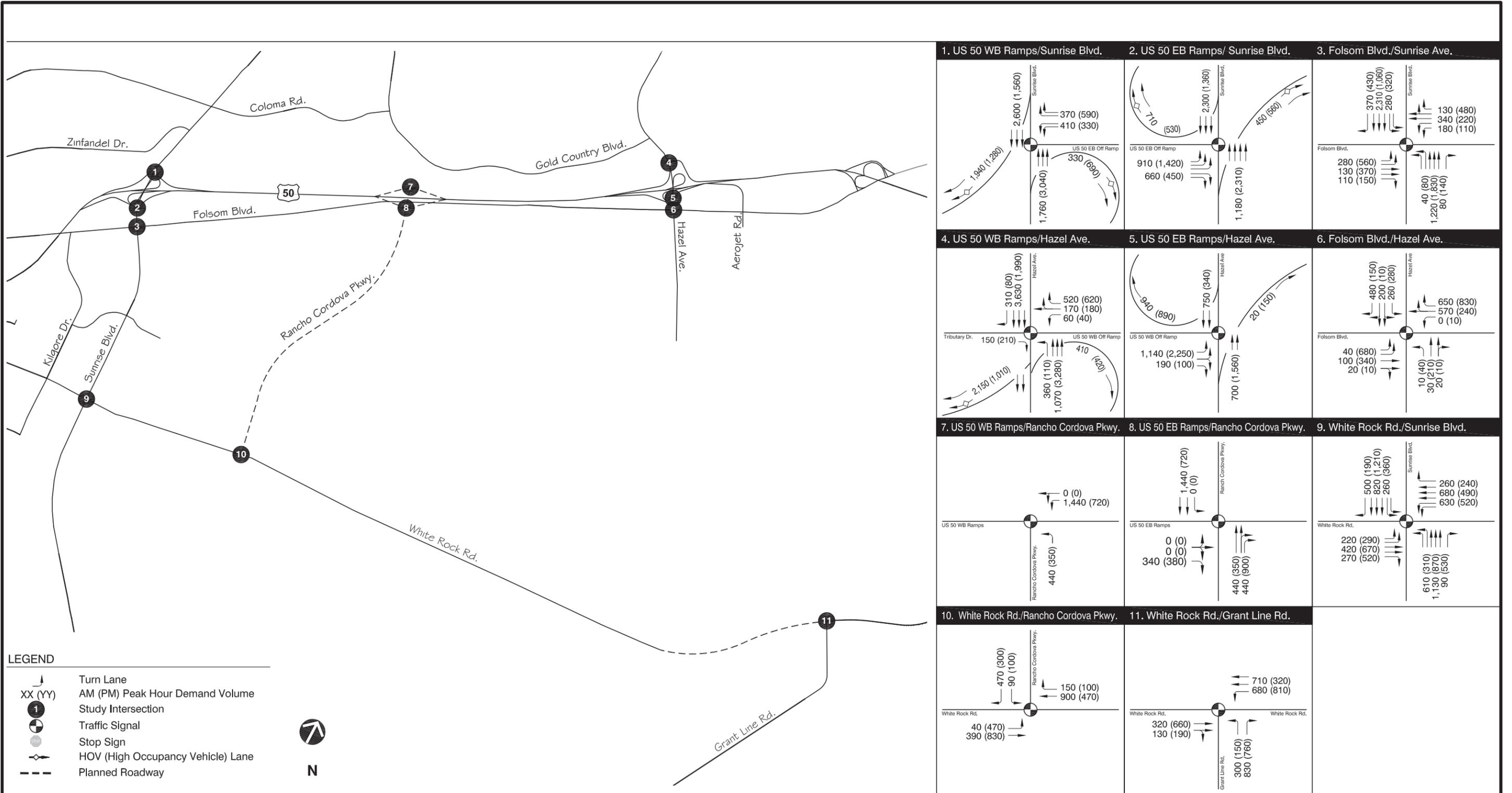
Figure 2.1.8-8  
 Construction Year (2016) No Project Conditions - Intersections





Source: Fehr & Peers, April 13, 2011





Source: Fehr & Peers, April 13, 2011



### *No Build Alternative*

The No Build alternative assumes the following roadway conditions within and surrounding the study area:

- The proposed Rancho Cordova Parkway Interchange on U.S. 50 and the new arterial connecting to U.S. 50 are not constructed.
- Tier 1 roadway improvements (i.e., those improvements that have reasonably expected revenues) contained in the 2035 MTP are assumed to be in place depending on their completion dates. Notable roadway improvements from the MTP include:
  - Widening of Hazel Avenue from four to six lanes between Madison Avenue and U.S. 50 in phases. Phase 1 was completed in 2011 and included improvements from U.S. 50 to Curragh Downs Drive. Phase 2 includes improvements from Curragh Drive to Sunset Avenue (by 2015/16) and Phase 3 includes improvements from Sunset Avenue to Madison Avenue (by 2016/17).
  - Extension of HOV lanes on U.S. 50 in each direction from Sunrise Boulevard to downtown Sacramento (by 2037).
  - Ramp metering of all eastbound and westbound on-ramps at the U.S. 50 interchanges of Zinfandel Drive, Sunrise Boulevard, Hazel Avenue, and Folsom Boulevard interchanges during both AM and PM peak hours (i.e., ramp metering during both peak hours in both directions by 2037).
  - Sac RT light rail service with 30-minute intervals between trains (assumed under 2016 conditions) and 15-minute intervals between trains (assumed under 2037 conditions).

In addition, the existing Aerojet Road off-ramp (just east of the Hazel Avenue interchange) was assumed to continue to be in operation under 2016 and 2037 conditions (both without and with the proposed Rancho Cordova Parkway Interchange project).

The project identified in the 2035 MTP and in Table 2.1.3-1 as “Hazel Avenue Extension—New Road: 4-lane limited access road through Aerojet’s property (between Easton Valley Parkway and Grant Line Road/White Rock Road)” is not assumed to be constructed under the No Build alternative. Based on communications with the property owners, Aerojet, this improvement is believed to be infeasible to implement before 2035.

In the updated List of Projects in February 2012 within the Draft Final Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) that SACOG released in November 2011, this project's status was changed and is no longer included in the list of projects that are funded by 2035.

While the above-identified improvements anticipated under the No Build scenario would improve traffic congestion in specific instances, these improvements would not provide the overall benefits to area circulation associated with the proposed project. As demonstrated in **Tables 2.1.8-12** through **2.1.8-19** below, under the No Build alternative, travel times through the project site and surrounding area would continue to increase, due to the expected increase in the number of vehicle trips resulting from planned and approved growth in the area. Additionally, lines at critical queue areas would worsen, and intersection levels of service would also worsen. Traffic levels of service on nearby Sunrise Boulevard, south of U.S. 50, would continue to degrade as vehicle trips resulting from planned and approved growth in the area continue to increase. Sunrise Boulevard from U.S. 50 to White Rock Road is already constructed to its ultimate width, and construction of additional capacity to serve planned and approved development south of U.S. 50 is not feasible.

### *Alternative 3 (Proposed Project)*

#### Freeway Corridor System Performance Under Construction Year (2016)

##### Conditions

**Table 2.1.8-12** shows the average freeway speeds on the U.S. 50 freeway mainline from Zinfandel Drive to Folsom Boulevard (approximately 7 miles). The speeds shown are an average of all vehicles, including those entering and exiting the corridor, between Zinfandel Drive and Folsom Boulevard.

**Table 2.1.8-12  
Freeway Corridor Average Peak Hour Speed in  
Construction Year (2016) Conditions**

Route	Eastbound		Westbound	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
No Project	60	46	59	60
Alternative 3 (Proposed Project)	61	58	59	60
Alternative 3 (Proposed Project) Plus Operational Improvements	62	61	59	61

Source: Fehr & Peers, August 2010

Notes: The freeway speeds cited in this table are calculated based on a compilation of speeds for all vehicles using the 7-mile segment of U.S. 50 between the Zinfandel Drive interchange and the Folsom Boulevard interchange.

As shown in **Table 2.1.8-12**, the average freeway speeds would remain the same or improve between the 2016 No Project and 2016 With Project conditions in both directions, and would improve slightly more or remain unchanged under the 2016 With Project and Operational Improvements scenario.

**Freeway Mainline and Ramp Junctions Under Construction Year (2016) Conditions**

**Table 2.1.8-13** illustrates projected operating conditions for the individual freeway segments on U.S. 50.

**Table 2.1.8-13** indicates that all freeway mainline segments would operate acceptably under 2016 conditions with Alternative 3 (Proposed Project). The segment of eastbound U.S. 50, from Zinfandel Drive to Sunrise Boulevard, would operate at LOS F conditions under 2016 No Build conditions in the PM peak hour, but improve to acceptable conditions with the proposed project.

**Table 2.1.8-13**  
**Freeway Mainline Operations—Construction Year (2016) Conditions**

Location	Level of Service (LOS)/Density					
	No Build		Alternative 3 (Proposed Project)		Alternative 3 plus Operational Improvements	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Eastbound—Sunrise Boulevard to Hazel Avenue	D / 34	D / 35	N/A <sup>1</sup>		N/A <sup>1</sup>	
Westbound—Hazel Avenue to Sunrise Boulevard	D / 33	D / 26				
Eastbound—Sunrise Boulevard to Rancho Cordova Parkway	N/A <sup>2</sup>		D / 30	D / 34	D / 30	D / 35
Eastbound—Rancho Cordova Parkway to Hazel Avenue			D / 28	D / 33	D / 29	D / 35
Westbound—Hazel Avenue to Rancho Cordova Parkway			D / 29	C / 23	D / 28	C / 23
Westbound—Rancho Cordova Parkway to Sunrise Boulevard			D / 27	C / 22	D / 27	C / 22
Eastbound—Zinfandel Drive to Sunrise Boulevard	D / 30	<b>F / 106</b>	D / 32	E / 41	D / 31	E / 37
Westbound—Sunrise Boulevard to Zinfandel Drive	D / 30	D / 33	E / 42	D / 34	E / 43	D / 34

Source: Fehr & Peers, August 2010

Notes: **Bold and underline font** indicates unacceptable LOS F conditions LOS and density (in vehicles per lane per mile) are reported.

- 1 N/A—not applicable—This study location does not exist under the scenarios indicated. This segment of Sunrise Boulevard to Hazel Avenue would be bisected by the construction of the proposed project, and becomes Sunrise Boulevard to Rancho Cordova Parkway and Rancho Cordova Parkway to Hazel Avenue under the Alternative 3 scenario.
- 2 N/A—not applicable—This study location does not exist under the scenarios indicated. Under the No Build scenario, the proposed project would not be built, and this segment would remain as Sunrise Boulevard to Hazel Avenue.

**Table 2.1.8-14** illustrates the levels of service at various ramp junctions with and without construction of the proposed project.

**Table 2.1.8-14  
Freeway Ramp Junction Operations—  
Construction Year (2016) Conditions**

Ramp Junction	Level of Service/Density					
	No Build		Alternative 3 (Proposed Project)		Alternative 3 (Proposed Project) Plus Operational Improvements	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Eastbound Sunrise Boulevard on-ramp	<b><u>F / 50</u></b>	<b><u>F / 78</u></b>	C / 26	D / 30	C / 26	D / 30
Westbound Sunrise Boulevard on-ramp	<b><u>F / 67</u></b>	E / 43	<b><u>F / 70</u></b>	<b><u>F / 45</u></b>	<b><u>F / 72</u></b>	<b><u>F / 45</u></b>
Eastbound Sunrise Boulevard off-ramp	E / 35	<b><u>F / 102</u></b>	E / 38	<b><u>F / 48</u></b>	E / 37	<b><u>F / 49</u></b>
Westbound Sunrise Boulevard off-ramp	E / 37	D / 29	C / 26	C / 21	C / 27	C / 22
Eastbound Hazel Avenue to Aerojet Road weave section	C / 25	C / 24	C / 28	<b><u>F / 52</u></b>	C / 26	D / 28
Westbound Hazel Avenue southbound on-ramp	D / 34	C / 26	C / 27	C / 21	C / 27	C / 21
Westbound Hazel Avenue northbound on-ramp	C / 24	C / 21	D/29	C / 23	C / 27	C / 21
Eastbound Hazel Avenue off-ramp	D / 30	D / 32	D / 29	E / 37	E / 38	E / 40
Westbound Hazel Avenue off-ramp	C / 24	C / 22	C / 27	C / 23	C / 27	C / 24
Eastbound Rancho Cordova Parkway on-ramp	N/A		C / 27	D / 32	C / 27	D / 31
Westbound Rancho Cordova Parkway on-ramp			C / 22	B / 19	C / 23	B / 19
Eastbound Rancho Cordova Parkway Off-ramp			E / 35	E / 41	D / 35	E / 42
Westbound Rancho Cordova Parkway Off-ramp			D / 32	C / 26	D / 32	C / 26

Source: Fehr & Peer, August, 2010

Notes: **Bold and underline font** indicates unacceptable LOS F conditions. LOS and density (in vehicles per lane per mile) are reported.

The eastbound Sunrise Boulevard on-ramp would operate at LOS F during the AM and PM peak hours, and the westbound Sunrise Boulevard on-ramp would operate at LOS F during the AM peak hour under No Build conditions. With the proposed project, the

eastbound Sunrise Boulevard on-ramp would operate acceptably during both AM and PM peak hours. The westbound on-ramp would operate unacceptably under both AM and PM peak hours with the existing lanes on U.S. 50, but would operate at acceptable conditions upon completion of the HOV/carpool lanes that are currently under construction. This is demonstrated in the conclusions of the operation analysis for Design Year (2037) conditions identified in **Table 2.1.8-18**.

The eastbound Sunrise Boulevard off-ramp would operate unacceptably at LOS F during the PM peak hour under No Project conditions as well as with the proposed project; however, delay would be substantially improved with the proposed project compared to No Build conditions. Finally, the eastbound Hazel Avenue to Aerojet Road weave section would operate unacceptably under the proposed project in the PM peak hour, but would operate acceptably under the proposed project plus operational improvement in the PM peak hour.

*Intersection Levels of Service under Construction Year (2016) Conditions*

Construction of the Rancho Cordova Parkway Interchange at U.S. 50 would serve as an additional access point to the planning areas south of U.S. 50 between Sunrise Boulevard and Hazel Avenue. **Table 2.1.8-15** illustrates the anticipated traffic levels of service at various intersections throughout the project [site and surrounding](#) area, with and without construction of the proposed project.

**Table 2.1.8-15  
Intersection Levels of Service—Construction Year (2016) Conditions**

Intersection	Level of Service/Delay					
	No Build		Alternative 3 (Proposed Project)		Alternative 3 (Proposed Project) Plus Operational Improvements	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Sunrise Boulevard/Westbound U.S. 50 ramps	D (50)	B (16)	D (45)	B (15)	D (45)	B (16)
Sunrise Boulevard/Eastbound U.S. 50 ramps	B (20)	C (22)	C (22)	B (16)	C (20)	B (15)
Sunrise Boulevard/Folsom Boulevard <sup>2</sup>	E (56)	E (64)	D (45)	E (71)	D (45)	E (76)
Hazel Avenue/Westbound U.S. 50 ramps	E (58)	C (21)	E (68)	C (21)	E (64)	C (22)
Hazel Avenue/Eastbound U.S. 50 ramps	C (27)	B (13)	C (31)	B (11)	E (58)	B (12)

Intersection	Level of Service/Delay					
	No Build		Alternative 3 (Proposed Project)		Alternative 3 (Proposed Project) Plus Operational Improvements	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Hazel Avenue/Folsom Boulevard	D (36)	<b>F (97)</b>	C (32)	D (49)	E (63)	E (67)
Rancho Cordova Parkway/Westbound U.S. 50 ramps	N/A <sup>1</sup>		B (14)	A (10)	E (60)	A (10)
Rancho Cordova Parkway/Eastbound U.S. 50 ramps			A (1)	A (1)	D (38)	A (1)
Sunrise Boulevard/White Rock Road	D (50)	E (67)	D (51)	E (57)	3	3
Rancho Cordova Parkway/White Rock Road	N/A <sup>1</sup>		C (21)	C (20)	3	3
Grant Line Road/White Rock Road	D (36)	<b>F (82)</b>	D (40)	<b>F (86)</b>	3	3

Source: Fehr & Peers, August 2010 and April 2011

Notes: **Bold and underline font** indicates unacceptable level of service (LOS) F conditions. LOS and delay (in seconds per vehicle) are reported.

- 1 N/A— not applicable—This study intersection does not exist under the scenarios indicated.
- 2 Alternative 3 would improve existing and 2016 No Build conditions. City General Plan Policies C.1.2 and C.1.3 allows for LOS D not to be met in some circumstances. This includes the provision of other transportation improvements as well as alternative forms of transportation that are accommodated by Alternative 3.
- 3 These intersections were not analyzed with the U.S. 50 operational improvements given their distance from U.S. 50.

The majority of the study intersections would operate at acceptable conditions under all Construction Year (2016) scenarios during both peak hours, with the exception of the Hazel Avenue/Folsom Boulevard intersection in the PM peak hour under No Project conditions and Grant Line Road/White Rock Road under the PM peak hour under both Construction Year (2016) scenarios. Alternative 3 (proposed project) would increase delay at the Grant Line Road/White Rock Road intersection by less than 5 seconds, which is not considered substantial.

### Summary of Construction Year (2016) Traffic Conditions

The following summarizes the key traffic operations results under Construction Year (2016) conditions:

- Between 2016 No Project and 2016 With Project conditions, the volumes at the Sunrise Boulevard westbound off-ramp and eastbound on-ramp decrease as travel patterns shift to the Rancho Cordova Parkway Interchange.
- The traffic volumes also decrease at the Hazel Avenue eastbound on-ramp between 2016 No Project and With Project conditions as traffic shifts to the

Rancho Cordova Parkway Interchange. However, an increase in volumes at the Hazel Avenue eastbound off-ramp occurs between these scenarios since more motorists travel from northbound Rancho Cordova Parkway to eastbound U.S. 50 to northbound Hazel Avenue.

### Traffic Operations—Design Year (2037) Conditions

The travel forecasts prepared for the Design Year (2037) conditions (i.e., for both the No Build and Alternative 3 [Build] scenarios) assume the buildout of several proposed development projects located along the U.S. 50 corridor. These projects include, but are not limited to, the Easton development project (Sacramento County), Westborough project (Rancho Cordova), Rio del Oro project (Rancho Cordova), and Folsom Sphere of Influence project (Sacramento County/City of Folsom). This amount of development exceeds the level assumed for the SACOG MTP for its 2035 horizon year. The projected volumes along U.S. 50 are thus higher than studies prepared using the MTP land use forecasts. New land use forecasts recently released by SACOG for its pending MTP update indicate the effect of the current economic downturn is that lower levels of growth will occur by 2035. As such, the forecasts prepared for this analysis are conservative and may not be reached until a point beyond the 2037 horizon year.

The following planned roadway network improvements were assumed under Design Year (2037) conditions for both the No Build and Alternative 3 scenarios:

- Ramp metering on each U.S. 50 on-ramp in both directions during both AM and PM peak periods at the Zinfandel Drive, Sunrise Boulevard, Rancho Cordova Parkway, Hazel Avenue, and Folsom Boulevard interchanges.
- Extension of the HOV lanes in each direction (constructed in the median) on U.S. 50 from Sunrise Boulevard to downtown Sacramento.
- Construction of Easton Valley Parkway (four- to six-lane arterial) between Rancho Cordova Parkway and Prairie City Road.
- Extension of Hazel Avenue (six lanes) from Folsom Boulevard to Easton Valley Parkway.
- Grade separation of the future Rancho Cordova Parkway/Easton Valley Parkway intersection.
- Grade separation of the light rail tracks and Hazel Avenue.

- Additional northbound and southbound through lanes at the Hazel Avenue/Folsom Boulevard intersection and reconfiguration of the westbound approach lanes.
- Reconfiguration of the westbound approach at the Sunrise Boulevard westbound ramp terminal intersection (i.e., conversion of the exclusive left-turn lane to a shared left/right-turn lane).

*No Build Alternative*

As identified in **Tables 2.1.8-16** through **2.1.8-19** below, under the No Build alternative, travel times through the project **site and surrounding** area would continue to increase, due to the expected increase in the number of vehicle trips resulting from planned and approved growth in the area. Additionally, lines at critical queue areas would worsen, and intersection levels of service would also worsen. Traffic levels of service on nearby Sunrise Boulevard, south of U.S. 50, would continue to degrade as vehicle trips resulting from planned and approved growth in the area continue to increase. Sunrise Boulevard from U.S. 50 to White Rock Road is already constructed to its ultimate width, and construction of additional capacity to serve planned and approved development south of U.S. 50 is not feasible.

*Alternative 3 (Proposed Project)*

**Freeway Corridor System Performance under Design Year (2037) Conditions**

**Table 2.1.8-16** shows the average freeway speeds on the U.S. 50 freeway mainline from Zinfandel Drive to Folsom Boulevard (approximately 7 miles). The speeds shown are an average of all vehicles, including those entering and exiting the corridor, between Zinfandel Drive and Folsom Boulevard.

**Table 2.1.8-16  
Freeway Corridor Average Peak Hour Speed in Design Year (2037)  
Conditions**

Route	Eastbound		Westbound	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
No Project	48	48	60	60
Alternative 3 (Proposed Project)	54	53	59	59
Alternative 3 (Proposed Project) plus Operational Improvements	52	55	60	59

Source: Fehr & Peers, August 2010

Notes: The freeway speeds cited in this table are calculated based on a compilation of speeds for all vehicles using the 7-mile segment of U.S. 50 between the Zinfandel Drive interchange and the Folsom Boulevard interchange.

As shown in **Table 2.1.8-16**, the average freeway speeds improve or remain virtually unchanged between the 2037 No Project and 2037 With Project conditions in both directions, and further improve or remain virtually unchanged under the 2037 With Project and Operational Improvements scenario.

### Freeway Mainline and Ramp Junctions under Design Year (2037) Conditions

**Table 2.1.8-17** shows the level of service and average density for the U.S. 50 freeway mainline sections through the project [site and surrounding](#) area.

**Table 2.1.8-17**  
**Freeway Mainline Operations for Design Year (2037) Conditions**

Freeway Mainline	No Build		Alternative 3 (Proposed Project)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Eastbound—Sunrise Boulevard to Hazel Avenue	E / 39	E / 39	N/A <sup>1</sup>	
Westbound—Hazel Avenue to Sunrise Boulevard	D / 29	D / 32		
Eastbound—Sunrise Boulevard to Rancho Cordova Parkway	N/A <sup>2</sup>		D / 35	E / 35
Eastbound—Rancho Cordova Parkway to Hazel Avenue			<b>F / 46</b>	<b>F / 53</b>
Westbound—Hazel Avenue to Rancho Cordova Parkway			C / 25	D / 30
Westbound—Rancho Cordova Parkway to Sunrise Boulevard			D / 26	D / 30
Eastbound—Zinfandel Drive to Sunrise Boulevard	<b>F / 103</b>	<b>F / 102</b>	<b>F / 92</b>	<b>F / 89</b>
Westbound—Sunrise Boulevard to Zinfandel Drive	E / 36	E / 37	D / 32	D / 33

Source: Fehr & Peers, August 2010

Notes: Bold font indicates unacceptable level of service (LOS) F conditions. LOS and density (in vehicles per lane per mile) are reported.

- 1 N/A—not applicable—This study location does not exist under the scenarios indicated. This segment of Sunrise Boulevard to Hazel Avenue would be bisected by the construction of the proposed project, and becomes Sunrise Boulevard to Rancho Cordova Parkway and Rancho Cordova Parkway to Hazel Avenue under the Alternative 3 scenario.
- 2 N/A—not applicable—This study location does not exist under the scenarios indicated. Under the No Build Scenario, the proposed project would not be built, and this segment would remain as Sunrise Boulevard to Hazel Avenue.

**Table 2.1.8-17** illustrates the predicted traffic levels of service on the U.S. 50 mainline under Design Year (2037) conditions, both with and without construction of the proposed project. As shown on **Table 2.1.8-17**, the U.S. 50 mainline under No Build conditions would operate at oversaturated LOS F conditions in the eastbound direction of Zinfandel Drive to Sunrise Boulevard under Design Year (2037) conditions, but the density and associated congestion would decrease (improve) under Alternative 3 conditions. The eastbound segment of U.S. 50, from Rancho Cordova Parkway to Hazel Avenue, would operate at LOS F under Alternative 3 conditions. This is the result of localized congestion along Hazel Avenue, which is the result of a shift in an existing bottleneck from the

Sunrise Boulevard on-ramp to the Sunrise Boulevard off-ramp resulting from the project. This would be due to the added capacity with the new auxiliary lane from Sunrise Boulevard to Rancho Cordova Parkway. The added capacity results in more cars reaching the Hazel Avenue off-ramp causing queuing on the off-ramp, which results in localized congestion on Hazel Avenue, and the resulting queues would extend from the Hazel Avenue off-ramp onto eastbound U.S. 50. However, the MTP planned improvements to the U.S. 50/Hazel Avenue interchange, including the grade separation of Hazel Avenue and Folsom Boulevard (estimated to be completed by 2017) are expected to address this impact. The U.S. 50/Hazel Avenue interchange improvement project is currently in the Project Study Report development stage.

**Table 2.1.8-18** illustrates the predicted traffic levels of service at various freeway ramp junctions within the project site and surrounding area both with and without the proposed project.

**Table 2.1.8-18  
Freeway Ramp Junction Levels of Service for Design Year (2037)  
Conditions**

Freeway Ramp Junction	No Build		Alternative 3 (Proposed Project)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Eastbound Sunrise Boulevard on-ramp	<b><u>F / 92</u></b>	<b><u>F / 88</u></b>	D / 29	D / 30
Westbound Sunrise Boulevard on-ramp	<b><u>F / 50</u></b>	<b><u>F / 50</u></b>	D / 33	<b><u>D / 34</u></b>
Eastbound Sunrise Boulevard off-ramp	<b><u>F / 88</u></b>	<b><u>F / 87</u></b>	<b><u>F / 51</u></b>	<b><u>F / 47</u></b>
Westbound Sunrise Boulevard off-ramp	D / 30	D / 33	D / 31	E / 38
Eastbound Hazel Avenue to Aerojet Road weave section	E / 36	D / 29	E / 35	D / 31
Westbound Hazel Avenue loop on-ramp	D / 29	D / 31	C / 24	C / 25
Eastbound Hazel Avenue off-ramp	E / 38	E / 40	<b><u>F / 50</u></b>	<b><u>F / 64</u></b>
Westbound Hazel Avenue off-ramp	C / 24	D / 30	C / 27	<b><u>F / 46</u></b>
Eastbound Rancho Cordova Parkway on-ramp	N/A <sup>1</sup>		D / 34	E / 42
Westbound Rancho Cordova Parkway on-ramp			C / 24	C / 27
Eastbound Rancho Cordova Parkway off-ramp			E / 41	E / 40
Westbound Rancho Cordova Parkway off-ramp			D / 29	D / 32

Source: Fehr & Peers, August 2010

Notes: **Bold and underline font** indicates unacceptable LOS F conditions. LOS (level of service) and density (in vehicles per lane per mile) are reported.

<sup>1</sup> For the No Build alternative, the southbound and northbound on-ramps combine before merging with eastbound U.S. 50.

**Table 2.1.8-18** shows the level of service and density for the ramp junctions and illustrates the following information:

- The proposed project would improve operations at the eastbound Sunrise Boulevard on-ramp from LOS F under No Build conditions during both peak hours to LOS D or better during both peak hours under Build conditions.
- The eastbound Sunrise Boulevard off-ramp would operate at LOS F conditions under both No Build and Build conditions during both peak hours, although the densities would decrease and improve with the project.
- The eastbound Hazel Avenue off-ramps would operate at LOS F conditions under Build conditions during both peak hours. However, the MTP planned improvements to the U.S. 50/Hazel Avenue interchange (estimated to be completed by 2017) are expected to improve this operation.
- The westbound Hazel Avenue off-ramp would operate at LOS F under Build conditions during the PM peak hour. However, the MTP planned improvements to the U.S. 50/Hazel Avenue interchange (estimated to be completed by 2017) are expected to improve this operation.
- All remaining ramp junctions would operate at acceptable levels of service under both Build and No Build conditions during both AM and PM peak hours.

*Intersection Levels of Service under Design Year (2037) Conditions*

**Figures 2.1.8-11** and **2.1.8-12** show the peak hour traffic volumes, lane configurations, and traffic control under Design Year (2037) No Build conditions, and **Figures 2.1.8-13** and **2.1.8-14** show Design Year (2037) Alternative 3 conditions.

**Table 2.1.8-19** illustrates the predicted traffic levels of services at various intersections in the project study area both with and without the project in the Design Year (2037).

**Table 2.1.8-19  
Intersection Operations for Design Year (2037) Conditions**

Intersection	No Project		Alternative 3 (Proposed Project)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Sunrise Boulevard/Westbound U.S. 50 ramps	D (45)	<b><u>F (101)</u></b>	D (37)	D (44)
Sunrise Boulevard/Eastbound U.S. 50 ramps	D (43)	E (58)	C (24)	D (43)
Sunrise Boulevard/Folsom Blvd <sup>2</sup>	<b><u>F (104)</u></b>	<b><u>F (175)</u></b>	<b><u>F (82)</u></b>	<b><u>F (178)</u></b>
Hazel Avenue/Westbound U.S. 50 ramps	E (71)	E (69)	E (78)	<b><u>F (102)</u></b>
Hazel Avenue/Eastbound U.S. 50 ramps	D (49)	D (52)	E (59)	E (57)
Hazel Avenue/Folsom Blvd.	<b><u>F (94)</u></b>	<b><u>F (234)</u></b>	<b><u>F (186)</u></b>	<b><u>F (254)</u></b>
Rancho Cordova Parkway/Westbound U.S. 50 ramps	N/A <sup>1</sup>		C (24)	C (25)
Rancho Cordova Parkway/Eastbound U.S. 50 ramps			<b><u>F (265)</u></b>	<b><u>F (99)</u></b>
Sunrise Boulevard/White Rock Road	<b><u>F (85)</u></b>	E (75)	E (76)	E(68)
Rancho Cordova Parkway/White Rock Road	E (59)	E (62)	E (59)	E (66)
Grant Line Road/White Rock Road	E (61)	<b><u>F (86)</u></b>	E (56)	<b><u>F (84)</u></b>

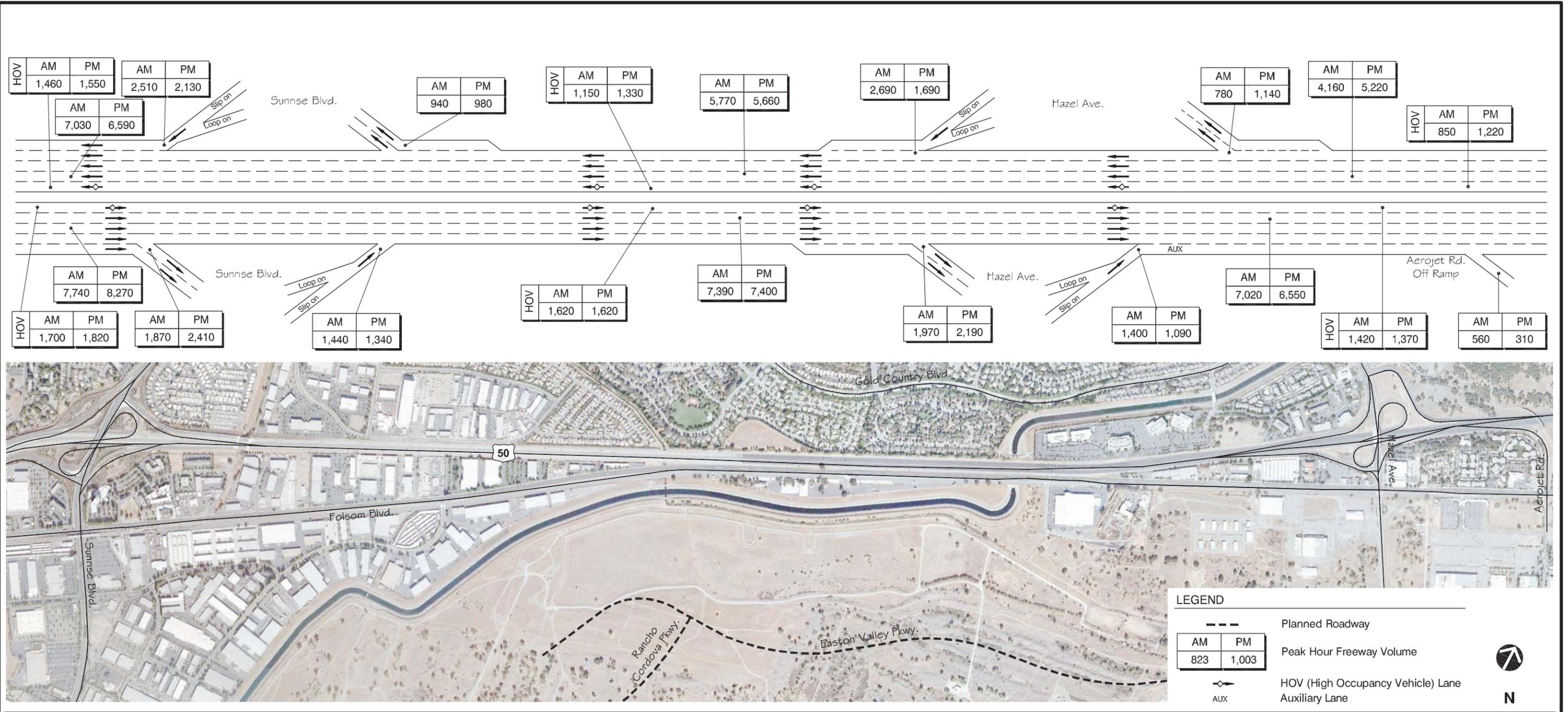
Source: Fehr & Peers, August 2010

Notes: **Bold and underline font** indicates unacceptable level of service (LOS) F conditions. LOS and delay (in seconds per vehicle) are reported.

1 N/A—not applicable—This study location does not exist under the scenarios indicated.

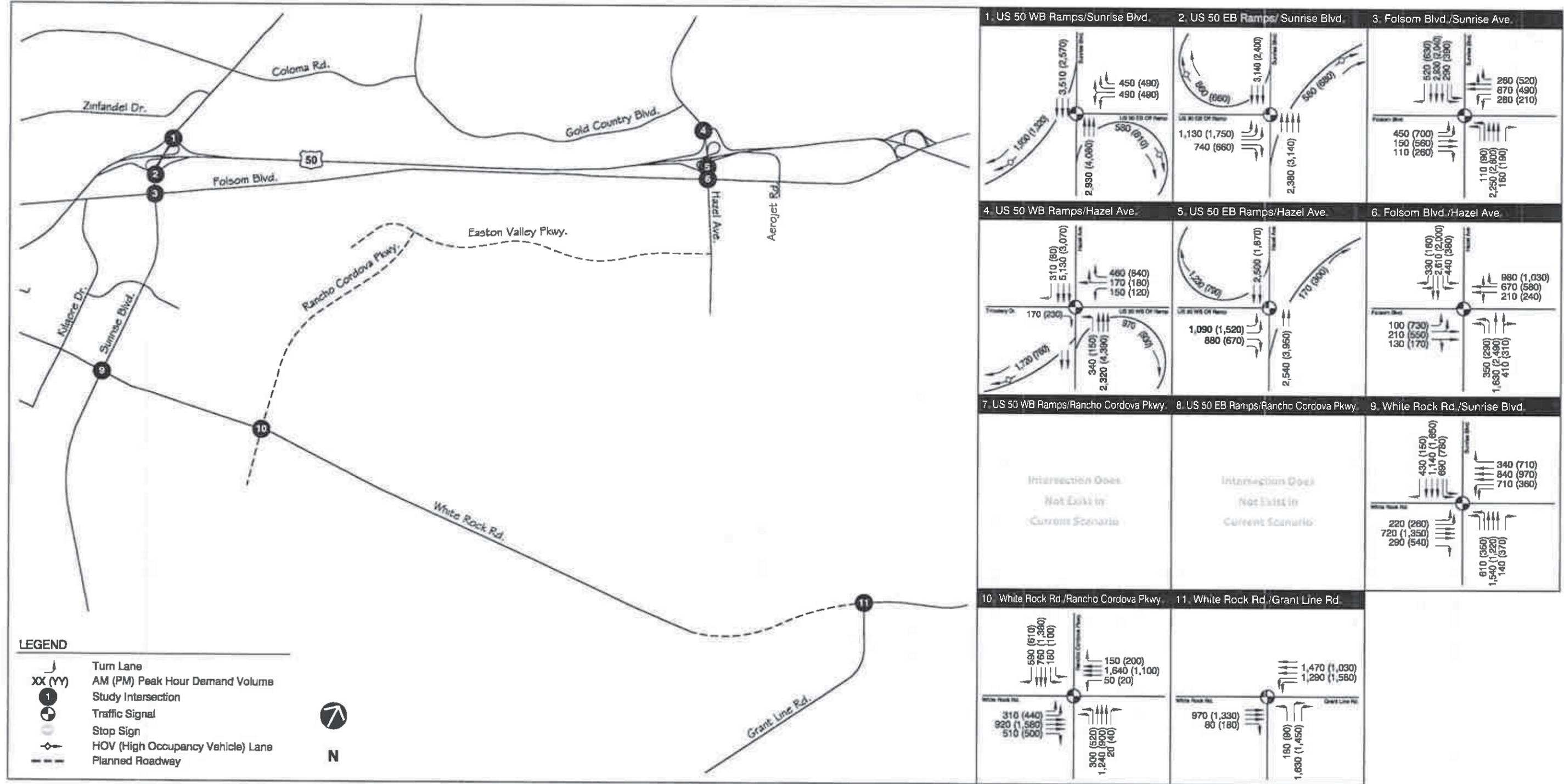
2 City General Plan Policies C.1.2 and C.1.3 allow for LOS D not to be met in some circumstances. This includes the provision of other transportation improvements as well as alternative forms of transportation that are accommodated by Alternative 3.

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Source: Fehr & Peers, April 13, 2011

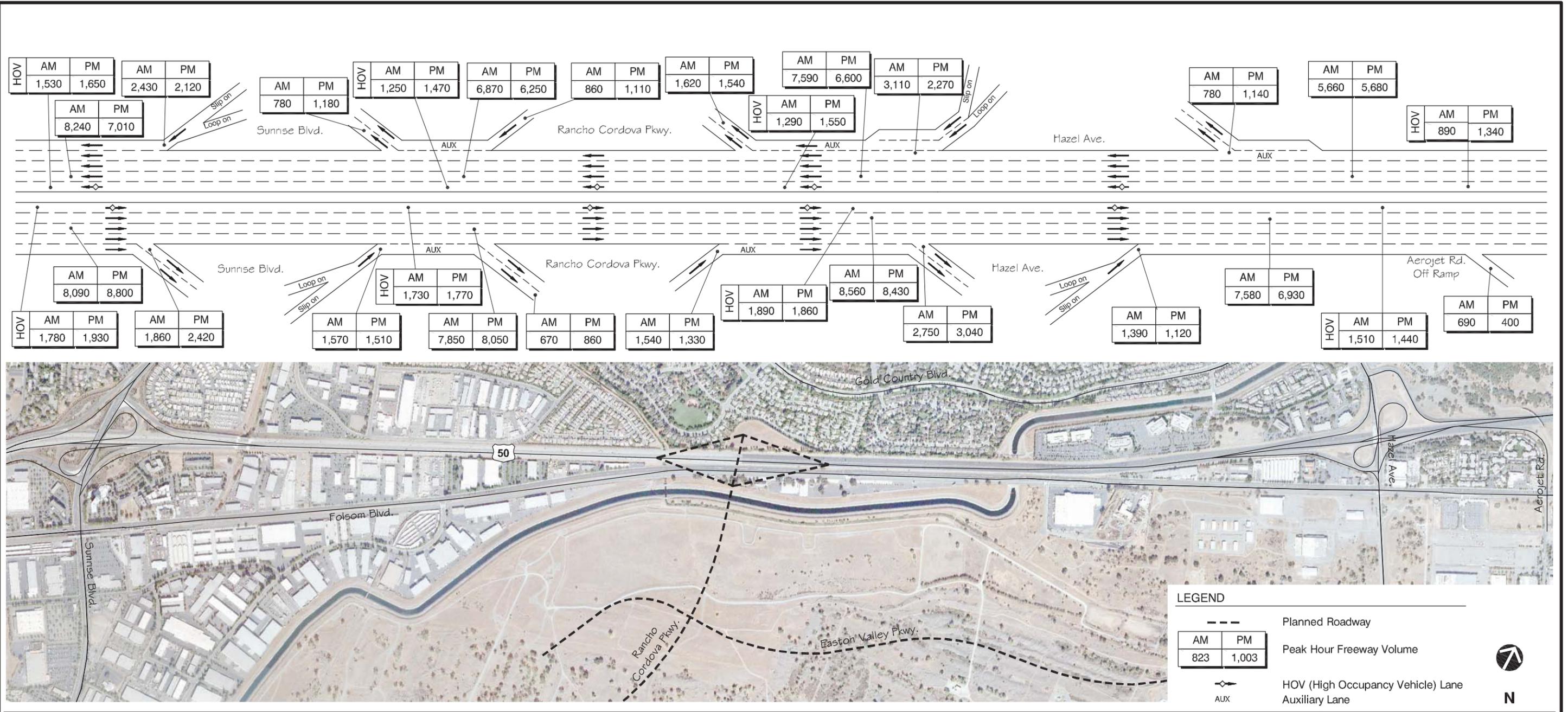




Source: Fehr & Peers, April 13, 2011

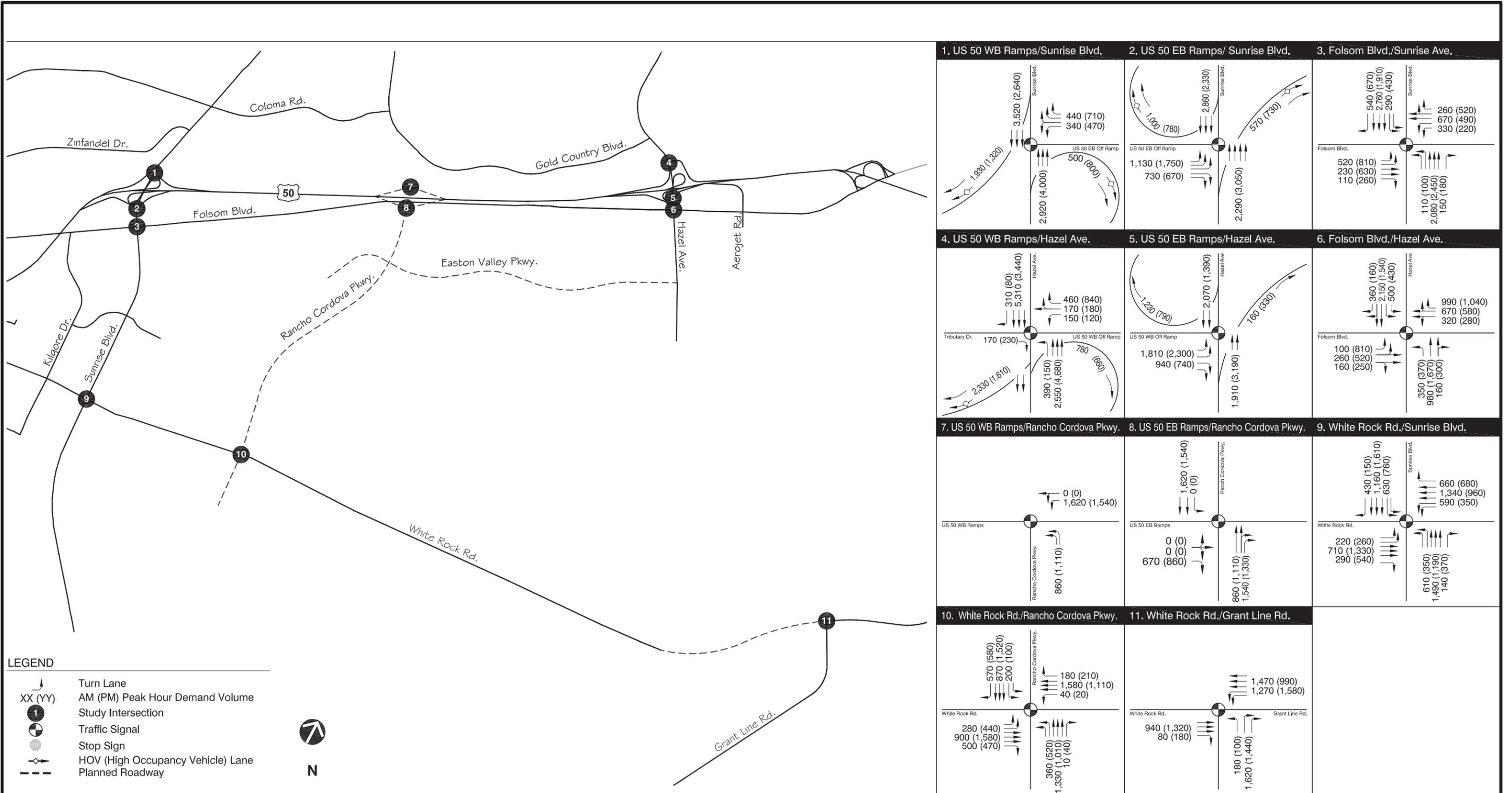






Source: Fehr & Peers, April 13, 2011





Source: Fehr & Peers, April 13, 2011

Figure 2.1.8-14  
 Design Year (2037) Plus Alternative 3 (Proposed Project) Conditions - Intersections



As shown in **Table 2.1.8-19**, many of the study intersections are projected to operate unacceptably at LOS F; however, the proposed project is expected to improve operations from LOS F to acceptable LOS D conditions during PM peak hour conditions at the Sunrise Boulevard/westbound U.S. 50 ramps.

In addition, the project would improve operations (i.e., decrease delays) at the Sunrise Boulevard/Folsom Boulevard intersection during the AM peak hour compared to No Project conditions, although it would continue to operate at LOS F. The delay at this intersection would remain virtually unchanged during PM peak hour conditions with the proposed project (less than 5 seconds).

The project would worsen operations at the Hazel Avenue/westbound ramps intersection during the PM peak hour and the Hazel Avenue/Folsom Boulevard intersection during both peak hours. However, the MTP planned improvements to the U.S. 50/Hazel Avenue interchange (estimated to be completed by 2017) are expected to improve this operation. The U.S. 50/Hazel Avenue interchange improvement project is currently in the Project Study Report development stage.

The LOS F operations at the Rancho Cordova Parkway/eastbound on-ramp intersection is a function of congestion on the northbound approach as vehicles waiting to make a right turn onto the eastbound on-ramp queue back due to the effect of metering planned for the on-ramp. This projected queue will not affect other southbound, eastbound, or northbound movements at the intersection because the project provides a dedicated northbound lane with storage for vehicles waiting to enter the eastbound on-ramp. The extent of the queue could be reduced by increasing the metering rate (i.e., number of vehicles allowed to enter the freeway per hour) for the on-ramp, but this may have an adverse impact on the eastbound section of U.S. 50 between Rancho Cordova Parkway and Hazel Avenue. No other feasible measures have been identified to address the LOS F conditions at the Rancho Cordova Parkway/eastbound off-ramps intersection because a two-lane off-ramp will already be provided with a full auxiliary lane on U.S. 50 between the Sunrise Boulevard and Hazel Avenue interchanges.

### *Freeway Corridor System Performance*

The evaluation of near-term and long-term freeway conditions provided below addresses the fourth of seven initial screening criteria in Design Information Bulletin (DIB) 77 for Alternative 3 (proposed project). The screening criterion requires that proposed interchanges not have a severe effect on highway safety and operation.

To assess whether the U.S. 50/Rancho Cordova Parkway Interchange would have an adverse effect on U.S. 50, an evaluation of average speed was conducted. The average speed was calculated based on a compilation of speeds for all vehicles using the 7-mile segment of U.S. 50 between the Zinfandel Drive and the Folsom Boulevard interchanges.

#### *Freeway Corridor System Performance—Construction Year (2016) Conditions*

**Table 2.1.8-12** identifies that implementation of Alternative 3 (proposed project) and operational improvements either maintains or improves the projected average freeway speed for the study corridor for the 2016 construction year.

#### AM Peak Hour—U.S. 50 Eastbound

The average speed for all eastbound traffic on U.S. 50 during the AM peak hour is projected to change slightly from 60 mph under the Construction Year (2016) No Project scenario, to 62 mph with the addition of Alternative 3 (proposed project) and operational improvements.

#### PM Peak Hour—U.S. 50 Eastbound

The average speed for all eastbound traffic on U.S. 50 during the PM peak hour is projected to improve from 46 mph, for the 2016 No Project scenario, to 61 mph with the addition of Alternative 3 (proposed project) and operational improvements.

The analysis indicates that the addition of the new interchange would increase the eastbound U.S. 50 freeway mainline speeds during the PM peak hour (from 46 to 58 mph) under the 2016 construction year. This is because under Construction Year (2016) No Project conditions, a congested freeway segment queues back from the Sunrise Boulevard eastbound on-ramp. This occurs due to an on-ramp demand of 1,220 vehicles per hour entering the four-lane freeway section (3 lanes+HOV) with a demand volume of 6,360 vehicles per hour, which is close to the section's capacity.

The Alternative 3 (proposed project) would add a continuous auxiliary lane on eastbound U.S. 50 between the eastbound on-ramp at Sunrise Boulevard and the eastbound off-ramp at the proposed interchange. The combination of the additional capacity provided by this auxiliary lane, and a slightly reduced on-ramp volume (1,090 vehicles per hour) caused by the shift of traffic volumes to the new interchange, results in a substantial improvement in freeway conditions.

### AM Peak Hour—U.S. 50 Westbound

The average speed for all westbound traffic on U.S. 50 during the AM peak hour is projected to remain unchanged at 59 mph with the addition of Alternative 3 (proposed project) and operational improvements.

### PM Peak Hour—U.S. 50 Westbound

The average speed for all westbound traffic on U.S. 50 during the PM peak hour is projected to change slightly from 60 mph under the 2016 No Project scenario, to 61 mph with the addition of Alternative 3 (proposed project) and operational improvements.

### *Freeway Corridor System Performance—Design Year (2037) Conditions*

**Table 2.1.8-16** provides a summary of the freeway average speed for the Design Year (2037). As shown below, a ramp metering management strategy was included to determine the benefits of constraining the total ramp metering flow rates for interchange ramps along the corridor to the No Project ramp metering total for the Design Year (2037). The analysis indicates that implementation of Alternative 3 (proposed project) and operational improvements either maintains or improves the projected average freeway speed for the study corridor for the Design Year (2037).

### AM Peak Hour—U.S. 50 Eastbound

The average speed for all eastbound traffic on U.S. 50 during the AM peak hour is projected to improve from 48 mph, for the Design Year (2037) No Project scenario, to 54 mph with the addition of Alternative 3 (proposed project). Implementation of the ramp metering management strategy is projected to decrease average speeds slightly from 54 to 52 mph.

### PM Peak Hour—U.S. 50 Eastbound

The average speed for all eastbound traffic on U.S. 50 during the PM peak hour is projected to improve from 48 mph, for the Design Year (2037) No Project scenario, to 53 mph with the addition of Alternative 3 (proposed project). Implementation of the ramp metering management strategy is projected to further improve average speeds from 53 to 55 mph.

### AM Peak Hour—U.S. 50 Westbound

The average speed for all westbound traffic on U.S. 50 during the AM peak hour is projected to decline from 60 to 59 mph with the addition of Alternative 3 (proposed project). Implementation of the ramp metering management strategy is projected to improve average speeds from 59 to 60 mph.

### PM Peak Hour—U.S. 50 Westbound

The average speed for all westbound traffic on U.S. 50 during the PM peak hour is projected to decline from 60 to 59 mph with the addition of the Alternative 3 (proposed project). Implementation of the ramp metering management strategy is projected to maintain this average speed at 59 mph.

### *Corridor System Management Plan Consistency*

Corridor System Management Plans (CSMP) are foundation documents supporting the partnership-based, integrated management of all travel modes in a corridor so that mobility along the corridor is provided in the most efficient and effective manner possible. The objective is to improve performance on highly congested travel corridors. CSMPs were developed in the Sacramento region for corridors that received Corridor Mobility Improvement Account and Highway 99 Bond Program funding, as required by the California Transportation Commission. The CSMPs were not only a requirement set forth by the California Transportation Commission, but represent a strategic shift in the way Caltrans conducts business to focus on the operations of an entire transportation network on and off the state highway system. They were developed with a wide variety of stakeholders and completed in May 2009.

The U.S. 50 CSMP is consistent with SACOG's MTP, the El Dorado County Transportation Commission Regional Transportation Plan, city and county general plans, and regional blueprint planning. The U.S. 50 CSMP-managed network includes the state highway system from the U.S. 50/Interstate 80 interchange in West Sacramento to the U.S. 50/Cedar Grove exit in the El Dorado County community of Camino, select parallel roads, transit services, and bike routes. The CSMP identifies management strategies to be applied on a network-wide basis and key capital projects, which are projects that have been identified as the most critical to corridor mobility. CSMP success is based on the premise of managing the U.S. 50 transportation network as a system rather than as independent units.

Alternative 3 (proposed project) is consistent with the U.S. 50 CSMP. It creates substantial off-system benefits that relieve congestion, improve travel times, reduce the number of daily vehicle hours of delay, improve connectivity to the state highway system, provide viable transportation options, and have been identified in the CSMP as a key capital project. The construction of Alternative 3 (proposed project) and auxiliary lanes on U.S. 50 allows approximately 20 percent more daily traffic to be served on U.S. 50 in the immediate study area, based on a comparison of the Design Year (2037) Project and No Project scenarios. This results in a reduction in through traffic on the adjacent

local roadway system. These improvements would improve traffic operations and reduce the chance for traffic conflicts, potentially reducing traffic accidents.

The greatest reduction would occur along Folsom Boulevard between Hazel Avenue and Sunrise Boulevard. Parallel local roadways such as Easton Valley Parkway and White Rock Road would also experience reduced vehicular demand. Measurable reductions in vehicle traffic would also occur on Sunrise Boulevard and adjacent streets located south of the U.S. 50/Sunrise Boulevard interchange. The net result is a substantial benefit to vehicles, buses, bicycles, and pedestrians on the adjacent local roadway system.

### *Bicycle and Pedestrian Facilities*

Alternative 3 (proposed project) would provide bicycle and pedestrian facilities along Rancho Cordova Parkway associated with Class II bicycle lanes and sidewalks. No permanent conflicts or impacts with bicycle or pedestrian facilities or uses are expected from operation of the project.

Temporary, short-term closures of sections of the Folsom South Canal maintenance road, which is used as a bike trail, and of the bicycle path along the Citrus Road undercrossing could occur during project construction. These impacts and proposed avoidance, minimization and mitigation measures are fully described above in Section 2.1.2, “Parks and Recreational Facilities.” No temporary or permanent impacts to the Class II bike lane on Folsom Boulevard are expected.

### *Americans with Disabilities Act Facilities*

Alternative 3 (proposed project) would build facilities meeting the requirements of the Americans with Disabilities Act. Improvements would include installation of Americans with Disabilities Act–compliant ramps at curb returns, and may include sound alerts on pedestrian crossing signals.

Please see Section 3.2.4 for additional information on traffic, transportation, pedestrian, and bicycle facility impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Construction Activities***

The following minimization measures would be implemented to reduce traffic impacts resulting from construction activities:

- A Traffic Management Plan will be prepared and submitted to Caltrans and the City for review and approval before starting construction work. This plan will include such elements as public information/public awareness, the designation of haul routes for construction-related trucks, the location of access to the construction site, any driveway turn restrictions, temporary traffic control devices or flagmen, and designated parking and staging areas for workers and equipment. The Traffic Management Plan will also include measures to prohibit lane closures on U.S. 50 during peak and daytime hours and on holidays. During construction, at least one high-occupancy vehicle lane and three general purpose lanes will remain in operation on U.S. 50 in both directions at peak periods. Full closure of U.S. 50 may be allowed during late evening to early morning hours to construct crossover lanes. Lane closure locations and approval will be coordinated with Caltrans District 3 Traffic Manager prior to performing any lane closures. Construction traffic involving heavy haulers (defined as vehicles with three or more axles) moving fill to and leaving the project site shall operate outside of AM and PM peak traffic hours (defined as between the hours of 7:00 a.m. and 10:00 a.m. and 3:00 p.m. and 6:00 p.m. Monday through Friday). This requirement shall be included in the construction contract. The Traffic Management Plan Data Sheet (April 2010) recommendations are consistent with the above list of measures.
- A Construction Zone Enhanced Enforcement Program may be appropriate during portions of this project. The program involves the presence at all times of the California Highway Patrol in construction zones to remind motorists to slow down and use caution when traveling through work areas. The Caltrans North Region Construction Division would be consulted to decide whether the program is warranted for this project.

#### 2.1.9. **Visual/Aesthetics**

##### **Regulatory Setting**

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

Likewise, CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities.” (CA Public Resources Code Section 21001[b]).

### **Affected Environment**

- Information contained in this section is based on the report *Visual Impact Assessment for the Rancho Cordova Parkway Interchange Project* (City of Rancho Cordova 2007).

The visual characteristics of the Rancho Cordova area include urban developed areas, agricultural lands, several river and creek corridors, and tree-covered areas. Rancho Cordova is located in a relatively flat area; however, on clear days the foothills and the Sierra Nevada range can be seen to the east.

### **Project Setting**

The project [site area](#) is located partially in the northeastern portion of Rancho Cordova and partially within unincorporated Sacramento County. Views in the project [vicinity area](#) include the U.S. 50 corridor and the mountains beyond (east-facing view), residential land uses to the north, open space and industrial uses to the south (Aerojet property), and a variety of commercial uses along the Folsom Boulevard corridor.

### **Landscape Units**

A landscape unit is a portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character. Four landscape units were identified within the project [vicinity area](#): the U.S. 50/Folsom Boulevard corridors, the residential neighborhood located north of U.S. 50, the Folsom South Canal recreational trail corridor, and the open space area within the Aerojet property.

#### **Landscape Unit 1 (LU1): U.S. 50/Folsom Boulevard Corridors**

This landscape unit consists of views from the U.S. 50 or Folsom Boulevard corridors, as one travels either east or west on these roadways through the project [site and surrounding](#) area (see **Figure 2.1.9-1**, **Figure 2.1.9-2**, **Figure 2.1.9-3**, and **Figure 2.1.9-4**). The primary landscape features along these corridors consist of the roadway in the foreground, framed by a variation of weedy vegetation, trees, overhead utility lines/poles, railroad tracks, sound walls, advertisement signs, and commercial businesses. In the eastbound direction, the foothills and Sierra Nevada range are visible in the background, with background views in the westbound direction being primarily of urban landscapes, including the Sunrise Boulevard overcrossing.

### Landscape Unit 2 (LU2): Residential Neighborhood (Tenderfoot Drive Corridor)

This landscape unit consists of views from Tenderfoot Drive or from residences along Tenderfoot Drive (see **Figure 2.1.9-5**, **Figure 2.1.9-6**, and **Figure 2.1.9-7**). This street was identified to represent the residential neighborhood landscape unit located adjacent to the proposed interchange site. The primary landscape features along the Tenderfoot Drive corridor consist of the roadway in the foreground, framed by sidewalks, residential landscaping, houses, and a row of large redwood trees on the south side of the roadway. A small fence runs behind the redwood trees, and light poles are placed intermittently along the roadway. In the background, additional residential uses can be viewed.

### Landscape Unit 3 (LU3): Folsom South Canal Recreation Trail Corridor

This landscape unit consists of views from the Folsom South Canal recreational trail (see **Figure 2.1.9-8** and **Figure 2.1.9-9**). The primary landscape features within the Folsom South Canal recreational trail corridor consist of the trail and Folsom South Canal in the foreground framed by a concrete bike path on one side of the canal, weedy vegetated slopes on both sides of the corridor, and a chain-link fence with barbed wire on both sides of the right-of-way. There is also a utility road on the south side of the canal and overhead utility lines on the south side of the corridor. Several large oak trees and other medium-sized trees are located on either side of the corridor, with the foothills and the Sierra Nevada range in the background (east-facing view).



1

View of Westbound US-50 Looking West (LU1)



2

View of Eastbound US-50 Looking Southeast (LU1)



3

View of Railroad, Folsom Blvd, and US-50 Corridors (LU1)



4

View from Eastbound US-50 Looking East (LU1)

Source: Environmental Vision



City of Rancho Cordova  
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Figures 2.1.9-1  
Figures 2.1.9-2  
Figures 2.1.9-3  
Figures 2.1.9-4





5

View of Tenderfoot Drive from Gold Coin Street Looking Southwest (LU2)



6

View of Tenderfoot Drive at Gold Claims Court Looking Southwest (LU2)



7

View of Tenderfoot Drive Looking Southeast (LU2)



8

View of Recreational Trail Looking East (LU3)

Source: Environmental Vision



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Planning Department

Figures 2.1.9-5  
Figures 2.1.9-6  
Figures 2.1.9-7  
Figures 2.1.9-8





9

View of Recreational Trail Looking East from Creek Crossing (LU3)



10

View of Furniture Store Looking North from Open Space Area (LU4)



11

View of Vegetation Looking Northeast in Open Space Area (LU4)

Source: Environmental Vision



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Figures 2.1.9-9  
Figures 2.1.9-10  
Figures 2.1.9-11



## Landscape Unit 4 (LU4): Open Space Area (Aerojet Property)

This landscape unit consists of views from the vacant portion of the Aerojet property within the project [vicinityarea](#) (see **Figure 2.1.9-10** and **Figure 2.1.9-11**). The primary landscape features within the open space area consist of sparse to dense vegetation in the foreground, framed by trees and some views of U.S. 50 and other urban development. Depending on the vantage point, portions of the Aerojet [testing and manufacturing](#) facility, a commercial structure (north-facing view), and the Sierra Nevada range (east-facing view) are also visible in the background. It should be noted that although this area is currently undeveloped, the City's General Plan identifies this area as the Westborough Planning Area, which is planned to be developed as a mixed-use area.

### ***Project Viewshed***

A viewshed is a subset of a landscape unit and comprises all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views located from the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by project features. The following four landscape components describe the landform and land cover within the project [vicinityarea](#) that contribute to the existing viewshed.

### ***Landform***

The project site is located within a valley and is relatively flat excepting several minor variations in topography. Within the U.S. 50/Folsom Boulevard corridors (LU1), the land is almost entirely flat, with no natural variation in topography. The roadway corridors are slightly lower in elevation than the surrounding vegetation and commercial/residential developments, except for the Sunrise Boulevard and Hazel Avenue overcrossings at either end of the project limits.

The residential neighborhood (LU2) is flat, with only minimal variations in topography created by landscape grading. A portion of the Folsom South Canal recreational trail (LU3) is at the same level as the adjacent roadways; however, the majority of the trail within the project [vicinityarea](#) is at a lower elevation than the surrounding land, with fairly steep slopes lining either side of the corridor. Within the open space area (LU4), mine tailings create intermittent variations in landform; however, the remaining area is flat.

### ***Land Cover: Water***

There are several water features within the project [vicinityarea](#), including the Folsom South Canal, Buffalo Creek, and several seasonal wetland features. There are no major

water features within the U.S. 50/Folsom Boulevard corridors (LU1). Both roadways cross over Buffalo Creek and the Folsom South Canal within the project [vicinityarea](#); however, views of these waterways are minimal. There are no natural waterways within the residential neighborhood (LU2), although storm gutters line both sides of the street.

Within the Folsom South Canal recreational trail corridor (LU3), the Folsom South Canal is a major feature. The canal is a man-made, concrete-lined channel bordered by a concrete bike path and slopes on either side. Buffalo Creek also crosses the western part of the corridor through an overchute over the canal. Both the Folsom South Canal and Buffalo Creek pass through a portion of the open space area (LU4) and can be viewed from this landscape unit depending on the vantage point. A portion of Buffalo Creek within this area is unlined and remains in a mostly natural condition.

### **Land Cover: Vegetation**

Vegetation within the project [vicinityarea](#) is varied. The U.S. 50/Folsom Boulevard corridors (LU1) are lined by a mix of landscape trees, bushes, groundcover, and grasses along the edges of the roadway right-of-way. There are several large oaks within these corridors, as well as other native and nonnative trees. Within the residential neighborhood (LU2), vegetation consists primarily of landscape grasses, trees, and shrubs typical of a residential neighborhood. Of note is a row of redwood trees along the south side of Tenderfoot Drive, which serves as a partial visual barrier to the proposed interchange site. A second row of smaller redwood trees has been planted recently to fill the spaces between the existing trees.

The Folsom South Canal recreational trail corridor (LU3) is vegetated mainly with weedy grasses along the channel, pathway, and slopes, with a few oaks and other trees located along the right-of-way line at the top of slope. Additional vegetation is visible in the background from certain vantage points. Within the open space area (LU4), vegetation varies from open grassy areas to fairly dense native and nonnative trees and shrubs.

### **Land Cover: Built Environment**

The land cover within the project [vicinityarea](#) is primarily urban development, including transportation, commercial, industrial, and residential structures. Within the U.S. 50/Folsom Boulevard corridors (LU1), land cover is a mix of transportation facilities, including the roadways themselves and the railroad corridor. The Folsom Boulevard corridor is bordered by a number of commercial buildings, and the U.S. 50 corridor is bordered by a mix of commercial and residential buildings. There are also a number of

advertising signs (billboards), overhead utility lines and poles, and parked vehicles along these corridors.

The Folsom South Canal recreational trail corridor (LU3) is primarily undeveloped, except for one commercial structure (furniture store) located just north of the corridor adjacent to the location of the proposed overcrossing, which can be seen from the trail. Overhead utility lines also run along the south side of the corridor, and fencing runs through the corridor between the trail and the canal. The open space area (LU4) is almost completely undeveloped, although adjacent land uses are visible from this area, including the furniture store, the Aerojet [testing and manufacturing](#) facility, and other urban development in the background.

### ***Existing Visual Resources***

#### *Existing Visual Character*

Visual character is descriptive and nonevaluative, which means it is based on defined attributes that are neither good nor bad in themselves. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character, then changes in the visual character can be evaluated.

#### **LU1: U.S. 50/Folsom Boulevard Corridors**

Within the project [vicinity area](#), the U.S. 50/Folsom Boulevard corridors are primarily developed with commercial, residential, transportation (rail), and industrial uses. The residential development is mainly to the north of U.S. 50, while the commercial and industrial areas are south of U.S. 50 and on either side of Folsom Boulevard. There is some mixed vegetation along these corridors, including several large oak trees. Placement of the commercial and industrial buildings is not in any uniform manner, and there is no apparent organization of land uses. Overall, the visual character is urban and developed.

#### **LU2: Residential Neighborhood (Tenderfoot Drive Corridor)**

The appearance of the residential neighborhood (Tenderfoot Drive) is that of a typical residential neighborhood. Tenderfoot Drive is bordered on both sides by midsize residential structures with well-maintained landscaped properties. One parcel on the south side of Tenderfoot Drive, where the interchange structure is proposed, is undeveloped. The property is currently vacant and lined with landscaped redwood trees along the roadway. There is a sound wall between the homes adjacent to U.S. 50 and the freeway, which also provides a visual barrier between these homes and the highway.

Overall, the visual character is that of a suburban development, with the sound wall and landscaping elements serving to partially separate the neighborhood from the adjacent urban developments.

### LU3: Folsom South Canal Recreation Trail Corridor

Within the Folsom South Canal corridor, the canal and recreational trail constitute the majority of the development. Within the project vicinity area, the corridor is unlandscaped and the slopes of the corridor are vegetated primarily with weedy grass. Chain-link fences run between the path and the canal and also at the tops of the slopes. From certain vantage points at higher elevations, some of the surrounding urban development is visible; however, much of this segment of the path is at a lower elevation than the surrounding areas, and only the canal and corridor slopes are visible. Overall, the character of the corridor is mixed urban/rural, since the canal is concrete-lined but no other urban development is visible.

### LU4: Open Space Area (Aerojet Property)

The open space area is part of the buffer area used for ~~the~~ Aerojet testing and manufacturing facility operations, and this land has not been developed or used since the area was mined for gold in the early 20th century. The vegetation ranges from grassy to dense vegetated areas covered by large trees, and the only sign of development is several dirt access roads that cross through the area and a railroad track that passes through near White Rock Road. From some vantage points, surrounding urban development is visible, as well as the Aerojet testing and manufacturing facility; however, the overall character of the site is rural.

### *Identification of Key Views*

Because it is not feasible to analyze all the viewpoints from which the proposed project would be seen, it is necessary to select a number of key viewpoints that would most clearly display the visual effects of the project. Key views also represent the primary viewer groups that would potentially be affected by the project. Four key viewpoints were identified for analysis to illustrate potential impacts.

### Initial Viewpoint Identification

Preliminary determinations on key viewpoints for the interchange project were made based on field observations, agency coordination, and information gathered during the public scoping period, including a public open house and comments received during circulation of the NOP for the project EIR.

The key viewpoints for this project were determined to be the views of the motorists along U.S. 50 and Folsom Boulevard as they approach the interchange (LU1), views of residents to the north of the proposed interchange looking at the overcrossing structure (LU2), and views of bicyclists/pedestrians traveling along the Folsom South Canal Recreational Trail looking as they approach the interchange structure (LU3) (see **Figure 2.1.9-12**). The eastbound and westbound views from U.S. 50 were chosen to represent both the U.S. 50 and Folsom Boulevard corridors (LU1). Because there are no regular viewers from the open space area on Aerojet property (LU4), this was not identified as a key viewpoint that would be affected by the project. Photos have been included to illustrate the existing views (see **Figure 2.1.9-13**, **Figure 2.1.9-14**, **Figure 2.1.9-15**, and **Figure 2.1.9-16**).

### Field Evaluation and Final Viewpoint Photo Locations

On August 17, 2006, a site visit was conducted to choose specific viewpoint photo locations. Photos were taken from points that best represented existing viewpoints while also allowing for simulations to be created that would best illustrate the proposed project design. It should be noted that at the time of this site visit, the City was considering three alternative options; therefore, specific viewpoint photos were chosen to best accommodate simulations of all three alternatives. An additional site visit was conducted on August 1, 2007, to choose a photo location for Viewpoint 2.

#### Viewpoint 1

Photos were taken from the shoulder of U.S. 50, facing east to capture the existing views of the foothills and mountains. Photos were taken to show both the highway and the surrounding corridor. The final photo location for this viewpoint was chosen because it is close enough to show a reasonable amount of design detail, without being too close as to be underneath the structure (see **Figure 2.1.9-13**).

#### Viewpoint 2

Photos were taken from the median of U.S. 50, facing west, to capture the existing views of the U.S. 50 corridor and the existing urban background views. Photos were taken from the median to show both the highway and the surrounding corridor. The final photo location for this viewpoint was chosen because it is close enough to show a reasonable amount of design detail, particularly of the westbound off-ramp, without being so close as to be underneath the structure (see **Figure 2.1.9-14**).

### Viewpoint 3

Photos were taken along Tenderfoot Drive because this street is directly adjacent to the parcel on which the interchange structure is proposed, and it was therefore the most representative of where the highest visual impacts would be in the neighborhood adjacent to the proposed interchange. The view from the roadway was also chosen because it represents a number of viewers, rather than just one property. Candidate photos were taken from different vantage points along this roadway: at the corner of Gold Coin Street, Gold Claims Court, and near to Gold Claims Court looking at a diagonal. The final photo location for the residential neighborhood is intended to show the most visible points of the structure while also including the roadway corridor in the view (see **Figure 2.1.9-15**).

### Viewpoint 4

Photos were taken from the recreational trail facing east, again to capture the existing views of the foothills and mountains. Candidate photos were taken from the top of a slight rise, as well as from a lower spot in the corridor. The final photo location for the Folsom South Canal recreation trail was chosen because the location is at a slightly higher elevation so that both the trail corridor and surrounding landscapes are visible, which gives a better impression of the existing viewshed (see **Figure 2.1.9-16**).



Source: Environmental Vision



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0 180 360  
Scale in Feet

1 ● → Photo Viewpoint

Figure 2.1.9-12  
Viewpoint Map





Source: Environmental Vision



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Figure 2.1.9-13  
Viewpoint 1 — East-facing View of Interchange Site  
from US-50 Corridor





Source: Environmental Vision



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Figure 2.1.9-14  
Viewpoint 2 — West-facing View of Interchange Site from US-50 Corridor





Source: Environmental Vision



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Figure 2.1.9-15  
Viewpoint 3 — South-Facing View of Interchange Site  
from Residential Neighborhood





Source: Environmental Vision



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Figure 2.1.9-16  
Viewpoint 4 — East Facing View of Interchange Site  
from Folsom South Canal Recreation Trail



### *Description of Viewpoints*

#### Viewpoint 1 (VP1)—East-Facing View of Interchange from U.S. 50

VP1 is the east-facing view of the proposed interchange from the U.S. 50 corridor. The viewshed from VP1 consists primarily of the highway, framed by urban development on the south side of the highway and residential development and sound walls along the north side of the highway (see **Figure 2.1.9-13**). To the left, a large number of landscaped trees on the north side of the highway act as a visual barrier to the development beyond. Looking straight ahead, the foothills are visible in the distant background. On clear days, the Sierra Nevada range may be viewed in the distance.

#### Viewpoint 2 (VP2)—West-Facing View of Interchange from U.S. 50 Corridor

VP2 is the west-facing view of the proposed interchange from the U.S. 50 corridor. Similar to VP1, the viewshed from VP2 consists primarily of the highway, framed by urban development on the south side of the highway and residential development and sound walls along the north side of the highway (see **Figure 2.1.9-14**). To the right, a large number of landscaped trees on the north side of the highway act as a visual barrier to the development beyond. Looking straight ahead, additional urban development is visible in the distant background.

#### Viewpoint 3 (VP3)—South-Facing View of Interchange Site from Residential Neighborhood

VP3 is the view of the proposed interchange site from the residential neighborhood, represented by a view from Tenderfoot Drive. The viewshed from VP3 includes the roadway in the foreground, framed by residential homes, landscaping, and a row of landscaped redwood trees to the right side of the roadway (see **Figure 2.1.9-15**). Several street lights are also placed along the roadway corridor. Looking straight ahead, the viewer sees the roadway disappear beyond a bend in the road into dense vegetation (landscape trees). Beyond the redwoods are intermittent views of a vacant parcel, covered with weedy grasses.

#### Viewpoint 4 (VP4)—East-Facing View of Interchange Site from Folsom South Canal Recreational Trail

VP4 is the east-facing view of the proposed interchange from the Folsom South Canal recreational trail. The viewshed from VP4 includes the recreational trail and Folsom South Canal in the foreground, framed by grassy slopes on both sides and a maintenance road on the south side of the canal (see **Figure 2.1.9-16**). The recreational trail is separated from the canal by a chain-link fence topped with barbed wire. To the left of the

trail corridor at the top of the slope, oak trees and partial views of the furniture store property are visible. To the right side at the top of the slope, utility lines, several trees, and other vegetated areas are visible. Looking straight ahead, the foothills are visible in the distance behind a line of vegetation. On clear days, the Sierra Nevada range may also be visible beyond the foothills. (The Sierra Nevada is not visible in the photo shown on **Figure 2.1.9-16.**)

### *Existing Visual Quality*

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the viewshed. The FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach is particularly useful in highway planning because it does not presume that a highway project is necessarily an eyesore. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of the project. The three criteria for evaluating visual quality can be defined as follows:

***Vividness:*** Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

***Intactness:*** Intactness is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

***Unity:*** Unity is visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual man-made components in the landscape.

These three criteria are assigned a number from the Visual Quality Evaluation scale ranging from 1 (very low) to 7 (very high) following guidelines contained in the *Visual Impact Assessment for Highway Projects* (FHWA 1988) by the qualified preparer of the Visual Impact Assessment.

### Viewpoint 1 (VP1)—East-Facing View of Interchange from U.S. 50 Corridor

***Vividness:*** Existing roadside vegetation and distant views of the foothills and mountains soften the highway corridor for viewers and create pleasant views. On clear days, particularly in winter, views of the snow-covered Sierra Nevada range can be dramatic. Several large oak trees on the south side of Folsom Boulevard, in particular a single large oak tree located between U.S. 50 and Folsom Boulevard, are also visually striking.

**Intactness:** Man-made components such as power lines, roadway signs, commercial properties, and other urban development disrupt the integrity of the viewshed. Power lines running along Folsom Boulevard are highly visible to viewers, and detract from the views of trees south of Folsom Boulevard. Roadway signs and fencing, also south of the highway, also distract the viewer from the overall landscape.

**Unity:** The overall composition of the landscape, centered on the roadway corridor and framed by vegetation with the foothills and mountains in the background, is well structured. However, the composition is disrupted by various man-made components visible to the viewer such as fencing, overhead utilities, and commercial properties.

Overall, the visual quality of the VP1 U.S. 50 corridor within the project vicinity area is considered low to moderate (see **Table 2.1.9-1**) based on the numerical values and visual quality evaluation guidelines contained in FHWA’s *Visual Impact Assessment for Highway Projects*.

**Table 2.1.9-1  
Visual Impact Analysis**

Visual Quality Analysis					Evaluation Scale 1-7 1 = Very Low, 7 = Very High	
View-point	Vividness (V)		Intactness (I)		Unity (U)	
VP1	Man-made Development	2	Absence of Encroachment	2	Man-made/Natural	2
	Vegetation	6	Overall Intactness	2	Overall Unity	2
	Water	N/A	Average Intactness	2	Average Unity	2
	Landform	6	View Ranking (1-3) in Order of Importance			U, I, V
	Average Vividness	4.6	Visual Quality = (V+I+U) ÷ 3			2.8
VP2	Man-made Development	2	Absence of Encroachment	2	Man-made/Natural	2
	Vegetation	6	Overall Intactness	2	Overall Unity	2
	Water	N/A	Average Intactness	2	Average Unity	2
	Landform	N/A	View Ranking (1-3) in Order of Importance			U, I, V
	Average Vividness	3	Visual Quality = (V+I+U) ÷ 3			2.3
VP3	Man-made Development	4	Absence of Encroachment	5	Man-made/Natural	6
	Vegetation	4	Overall Intactness	6	Overall Unity	6
	Water	N/A	Average Intactness	5.5	Average Unity	6
	Landform	N/A	View Ranking (1-3) in Order of Importance			I, U,

Visual Quality Analysis					Evaluation Scale 1-7 1 = Very Low, 7 = Very High	
View-point	Vividness (V)		Intactness (I)		Unity (U)	
						V
	Average Vividness	4	Visual Quality = (V+I+U) ÷ 3			5.2
VP4	Man-made Development	2	Absence of Encroachment	4	Man-made/Natural	5
	Vegetation	4	Overall Intactness	5	Overall Unity	5
	Water	3	Average Intactness	4.5	Average Unity	5
	Landform	6	View Ranking (1-3) in Order of Importance			U,I,V
	Average Vividness	3.75	Visual Quality = (V+I+U) ÷ 3			4.4

Source: City of Rancho Cordova, Visual Impact Assessment, 2007

### Viewpoint 2 (VP2)—West-Facing View of Interchange from U.S. 50 Corridor

**Vividness:** Similar to VP1, existing roadside vegetation softens the highway corridor for viewers, and several large oak trees on the south side of Folsom Boulevard, in particular a single large oak tree located between U.S. 50 and Folsom Boulevard, are also visually striking.

**Intactness:** Similar to the east-facing view, man-made components such as power lines, roadway signs, commercial properties, and other urban development disrupt the integrity of the viewshed. Power lines running along Folsom Boulevard are highly visible to viewers, and detract from the views of trees south of Folsom Boulevard. Roadway signs and fencing, also south of the highway, also distract the viewer from the overall landscape.

**Unity:** The overall composition of the landscape, centered on the roadway corridor and framed by vegetation with the foothills and mountains in the background, is well structured. However, the composition is disrupted by various man-made components visible to the viewer such as fencing, overhead utilities, and commercial properties.

Overall, the visual quality of VP2 is considered low to moderate (see **Table 2.1.9-1**).

### Viewpoint 3 (VP3)— South-Facing View of Interchange Site from Residential Neighborhood

**Vividness:** The curve of the roadway, framed by residential landscaping on both sides of the roadway, presents a pleasant color palette and an attractive visual effect. In particular, the row of redwood trees lining the south side of the roadway creates a distinctive pattern that is agreeable for viewers.

**Intactness:** The landscape of the existing neighborhood remains fairly untouched by the adjacent urban elements. Partially obstructed views of the highway sound wall can be seen between the redwoods; however, this wall also creates an additional visual barrier that maintains the visual integrity of this corridor. The sound wall would provide some measures of reduction in headlight glare caused by vehicles.

**Unity:** The composition of the neighborhood residences, streets, and landscaping forms a visually pleasing picture. Man-made components that are present are appropriate to the residential landscape and are well designed so as to blend into the surrounding elements; therefore, they do not detract from the appearance of this area.

Overall, the visual quality of VP3 is considered moderately high (see **Table 2.1.9-1**).

### Viewpoint 4 (VP4)—East-Facing View of Interchange from Folsom South Canal Recreational Trail

**Vividness:** The views of the canal, surrounding vegetation, and distant mountains create an appealing viewshed. Several large oak trees are located to the north of the corridor, and the panoramic vista of the surrounding area is impressive.

**Intactness:** The canal itself is concrete-lined, and there is some intrusion by man-made elements such as power lines and adjacent commercial structures. In addition, a fence runs between the trail and the canal, the top of which is lined with barbed wire. These elements are disruptive to the overall view.

**Unity:** The composition of the landscape features is fairly harmonious, and the man-made components are combined with the natural features in a manner that does not distract the viewer from the overall picture. The curve of the canal and trail, along with the natural and man-made slopes, combine to create a pleasing scene.

Overall, the visual quality of VP4 is considered moderate to moderately high (see **Table 2.1.9-1**).

## **Environmental Consequences**

### ***Method for Predicting Viewer Response***

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a highway project.

#### *Viewer Sensitivity*

Viewer sensitivity is defined both as the viewer's concern for scenic quality and the viewer's response to change in the visual resources that make up a view. Local values and goals may confer visual importance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals.

#### *Viewer Exposure*

Viewer exposure is assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. High viewer exposure heightens the importance of early consideration of design, art, and architecture and their roles in managing the visual resource effects of a project.

#### *Existing Viewer Groups, Viewer Exposure, and Viewer Awareness*

Three viewer groups were considered for the evaluation of viewer response: those having views of the interchange while traveling eastbound or westbound on U.S. 50 or Folsom Boulevard, those having views of the new interchange from residences north of U.S. 50, and those having views of the interchange structure while traveling east or west along the Folsom South Canal recreational trail.

#### Viewers on U.S. 50 and Folsom Boulevard

Drivers traveling along U.S. 50 (VP1 and VP2) or Folsom Boulevard would have views of the new interchange, but exposure to these views would be relatively short in duration as they approach and pass the interchange structure. Driver focus would be expected to remain primarily on the roadway itself, rather than on the surrounding views. Passengers would have a higher awareness of the surrounding views. Tourists or other nonlocal drivers traveling through in the area would be expected to have a somewhat higher awareness of the visual characteristics of the area, but would not be as sensitive to changes in the visual setting. Local residents and business owners/employees using this

route for commuting purposes would be expected to have a higher sensitivity to changes in the visual appearance of the area, due to their familiarity with the area.

### Residential Viewers North of U.S. 50

Residences located adjacent to the proposed interchange site would have high exposure to the proposed interchange structure, including the ramps, since the structure would be visible, though to varying degrees, from a number of properties. Residents who live directly adjacent to the interchange, particularly those with multiple storied homes, would have higher exposure to the appearance and lighting impacts from the interchange. Residents who live farther from the interchange, but within the neighborhood, would also have brief visual exposure to the interchange as they travel along Tenderfoot Drive. Viewer awareness would be considered high for all of these viewers. Residents in the area have expressed concern over the visual appearance of the bridge, in particular the exposure to lighting and visibility of light poles and other signs that would be constructed above the level of the interchange overcrossing.

### Viewers on Recreation Trail

Bicyclists and pedestrians traveling along the Folsom South Canal recreational trail would have views of the new interchange. Exposure to these views would be relatively short in duration as they approach and pass the overcrossing structure; however, exposure would be longer in duration for any pedestrians walking through this area. Both types of viewers would be expected to have a high awareness of the surrounding views. Recreational bicyclists and pedestrians traveling through the area would be expected to have a somewhat higher awareness of the visual characteristics of the area, but would not be as sensitive to changes in the visual setting. Local residents and business owners/employees using this route for commuting purposes would be expected to have a higher sensitivity to changes in the visual appearance of the area, due to their familiarity with the area.

### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, the proposed interchange and roadway would not be constructed and visual impacts associated with the construction of the project would not occur.

### **Alternative 3 (Proposed Project)**

#### *Temporary Construction Impacts*

During construction of the project, there would be temporary visual impacts associated with on-site storage of construction materials and debris, removal of vegetation, and other construction activities that would be visible to viewers in the area. These activities would be visible from all viewpoints, though to varying degrees depending on the phase of construction.

Some nighttime work would occur for work within the U.S. 50 corridor, and construction lighting would be required for these activities. This lighting could result in “spillover” lighting, which is defined as artificial lighting that spills over onto adjacent properties. Spillover lighting from the interchange could interrupt sleeping patterns or cause other nuisances to neighboring residents. In addition, lighting could be disturbing to drivers passing by these construction activities.

Some nighttime work may occur outside of the U.S. 50 corridor, along the proposed alignment of the new Rancho Cordova Parkway roadway. However, this area is open land with no visual receptors in or near it. As such, there would be no effects from any nighttime lighting associated with these activities.

#### *Tree and Vegetation Removal*

The project would require the removal of trees and other mature vegetation within the project footprint and along the U.S. 50 corridor. Several large oak trees would be removed for construction of the overcrossing structure and the eastbound on-ramp, including one very large oak tree that is considered to be an important visual resource by local agencies and area residents. In addition, natural vegetation existing within the Rancho Cordova Parkway footprint would be permanently affected. The row of redwood trees along Tenderfoot Drive (see **Figure 2.1.9-15**) would remain in place.

#### *Interchange Structure Profile*

The proposed overcrossing structure would begin just north of U.S. 50 and would span across U.S. 50, Sac RT light rail tracks, Folsom Boulevard, Buffalo Creek, and Folsom South Canal before sloping down to meet with Rancho Cordova Parkway approximately 1,148 feet south of U.S. 50. At its highest point, the overcrossing structure would be approximately 39 feet in height, and lighting poles would be installed on the overcrossing structure. In addition, on- and off-ramps would be constructed that would slope from ground level to the height of the overcrossing structure. Sound walls measuring 8 feet in height would be constructed along the westbound on- and off-ramps.

The proposed interchange structure would create a new visually dominant feature within the U.S. 50/Folsom Boulevard corridor. The structure would be highly visible from VP1, VP2, and VP4 as viewers approach the interchange structure (see **Figure 2.1.9-17**, **Figure 2.1.9-18**, and **Figure 2.1.9-20**), although exposure would be brief. Eastbound views of the foothills and Sierra Nevada range would be blocked for brief periods of time as viewers approach and pass under the overcrossing.

The westbound on- and off-ramps would be constructed adjacent and parallel to the highway (see **Figure 1.2.5-2**), which would result in some separation between the interchange structure and most of the residences along Tenderfoot Drive (VP3, **Figure 2.1.9-19**). This, along with the row of existing redwood trees lining this roadway, would reduce the visibility of the interchange from this viewpoint, although the structure would still be partially visible through holes in the vegetation and from several residences adjacent to the highway. Additionally, residences with second-story windows may have greater visibility due to the higher elevation.

Although the new interchange would be highly visible from VP1, VP2, and VP4, viewer response from these viewpoints is anticipated to be low to moderate due to the short duration of exposure. Views of the interchange from VP3 would be partially obstructed; however, viewer response would be considered high, particularly if views are from residences.

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Source: Environmental Vision



City of Rancho Cordova  
Planning Department

Figure 2.1.9-17  
Simulation of Viewpoint 1 Following Project Construction





Source: Environmental Vision



City of Rancho Cordova  
Planning Department

Figure 2.1.9-18  
Visual Simulation of Viewpoint 2 Following Project Construction





Source: Environmental Vision



City of Rancho Cordova  
Planning Department

Figure 2.1.9-19  
Visual Simulation of Viewpoint 3 Following Project Construction





Source: Environmental Vision



City of Rancho Cordova  
Planning Department

Figure 2.1.9-20  
Visual Simulation of Viewpoint 4 Following Project Construction



## **Lighting and Glare**

The main sources of daytime glare in the area are from sunlight reflecting from structures with reflective surfaces such as windows. Building materials (i.e., reflective glass and polished surfaces) are the most substantial sources of glare, but automobiles may also act as sources of glare. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and sunset because the angle of the sun is lower during these times.

A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include, but are not limited to, new residential developments, lighting from nonresidential uses, lights associated with vehicular travel (i.e., car headlights), street lighting, parking lot lights, and security-related lighting for nonresidential uses. Implementation of the project would introduce new sources of nighttime lighting and illumination levels in the project vicinity area.

Lighting poles would be installed on the interchange structure. During the daytime, reflection off of these poles could add to daytime glare in the area. In addition, vehicles using the interchange structure could act as reflective surfaces that could cause some daytime glare. At night, because the lighting would be higher than the structure itself, this lighting could result in “spillover” lighting, which is defined as artificial lighting that spills over onto adjacent properties. Spillover lighting from the interchange could interrupt sleeping patterns or cause other nuisances to neighboring residents. The sound wall included in the project design would shield adjacent properties from vehicles headlights; however, headlights could add to the overall nighttime glare, particularly due to the higher elevation of the ramps and overcrossing. Daytime and nighttime glare from interchange lighting would be highest for VP3, where spillover lighting could result in a nuisance to adjacent residential properties.

Please see Section 3.2.5 for additional information on visual and aesthetic impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Temporary Construction Impacts***

Wherever feasible, construction materials and debris shall be stored away from highly visible areas. Highly visible areas include, but are not limited to, the U.S. 50 corridor, the Folsom South Canal corridor, and the vacant parcel located north of U.S. 50 adjacent to Tenderfoot Drive. Storage areas shall be fenced and/or covered so as to minimize visibility of these areas to potential viewers.

Construction lighting shall be designed to face downward and away from adjacent properties to the extent feasible. In addition, lighting shall be directed away from traffic lanes and areas where lighting could disturb passing drivers and/or pedestrians. Adjacent residents shall be provided with a City contact number to call in case nighttime lighting becomes disruptive.

### *Tree and Vegetation Removal*

The project shall be designed to incorporate tree protection during construction as provided in City, County, and other applicable tree protection ordinances. Where feasible, existing trees shall be preserved in place, and protection measures shall be incorporated to minimize disturbance around preserved trees during construction.

Where removal is unavoidable, oak and other protected trees shall be relocated or replaced according to City, County, and other applicable tree protection ordinances.

Replacement trees shall be planted within the project [site area](#) where feasible to maintain visual quality. Planting of trees within Caltrans right-of-way shall be conducted in coordination with Caltrans biologists and landscape architects.

Where vegetation removal is unavoidable, this vegetation shall be replaced in accordance with City, County, and Caltrans landscaping requirements. In addition, sensitive habitats, such as wetland and riparian habitat, shall be replaced in accordance with applicable regulatory requirements.

### *Interchange Structure Profile*

Design features shall be incorporated, where feasible, to soften the visual appearance of the interchange structure and to blend into the surrounding visual setting. This shall be accomplished using landscaping techniques and aesthetic treatments on the hardscape elements of the project, including the overcrossing structure, ramps, retaining walls, and sound walls. Where feasible, the following options shall be studied and implemented:

- Incorporating planting as a component of noise barrier design.
- Using stamped concrete or other aesthetic treatments on sound walls.
- Replacing concrete sound walls with earthen noise berms.

During consideration and design of potential aesthetic treatments, public outreach efforts shall be conducted with affected viewer groups and other stakeholders. In addition, design options for the remaining right-of-way north of the interchange shall incorporate

features, where feasible, to shield the surrounding land uses from views of the interchange and enhance the aesthetics of the area.

The railing and lighting design for the project shall incorporate features that are consistent with City, County, and Caltrans policies and that meet the desired visual character of the area. To the extent feasible, an unobtrusive railing design should be chosen that minimizes obstruction of existing views. During consideration and design of potential aesthetic treatments, public outreach efforts shall be conducted with affected viewer groups and other stakeholders.

During project design, the City shall coordinate with Caltrans landscape architects and the project development team to ensure that chosen aesthetic treatments and landscaping components are incorporated into the plans, specifications, and estimates. This should include making final decisions on:

- Type, treatment, and color for barriers and walls.
- Architectural styles for bridge structures and miscellaneous hardware.
- Contour grading plans that incorporate slope rounding.
- Landscape treatment (e.g., planting for screening, revegetation).

During identification of final design details, public outreach efforts shall be conducted with affected viewer groups and other stakeholders.

### *Lighting and Glare*

Lighting poles and signs shall be designed to minimize reflection to the extent feasible. All surfaces shall be painted with an antireflective coating or otherwise treated to reduce light reflection.

The City shall conduct a photometric study to identify the potential for the lightshed of the project to affect adjacent residential properties. Because it is difficult to measure the lightshed of the project until specific lighting types and measurements have been identified, the study shall be conducted during final project design. Based on the results of the study, lighting types and shading methods shall be incorporated into the project to ensure that lighting impacts are reduced. Methods shall include focusing lighting away from residential properties, using hooded lighting, and reducing the height of the lighting to the extent feasible, in addition to other feasible methods.

The City shall also include landscape features that will shield adjacent residential properties from “spillover” lighting and overall nighttime glare from vehicles using the overcrossing structure to the greatest extent feasible. Shielding landscaping may include additional tall tree or vegetation planting in areas between the overcrossing structure and adjacent residential properties. During identification of final design details, the City shall conduct public outreach efforts with affected residents and stakeholders to obtain input on desired shielding landscaping materials and techniques.

#### 2.1.10. **Cultural Resources**

##### **Regulatory Setting**

“Cultural resources” as used in this EIR/EA refers to all “built environment” resources (e.g., structures, bridges, railroads, water conveyance systems), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources are described below.

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places (NRHP). Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the “use” of land from historic properties. See Appendix B for specific information regarding Section 4(f).

Historical resources are considered under CEQA, as well as California Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources (CRHR). PRC Section 5024 requires state agencies to identify and protect

state-owned resources that meet NRHP listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way.

### **Affected Environment**

Pursuant to Caltrans requirements for federally funded projects, City of Rancho Cordova cultural resources staff completed a Historic Property Survey Report (HPSR) for the Rancho Cordova Parkway Interchange project, dated November 2, 2007. Attachment C of the HPSR contains the Archeological Survey and Evaluation Report for the Rancho Cordova Parkway Interchange.

The Area of Potential Effects (APE) for the project was established in consultation with Erick Wulf, Caltrans Professionally Qualified Staff in Archaeology, Joan Fine, Professionally Qualified Staff in Architectural History, and Steven R. Hetland, Project Manager, on October 17, 2006. The APE map is shown as **Figure 2.1.10-1**.

The APE was established as the area that might be affected by the proposed undertaking pursuant to Stipulation VIII.A and Attachment 3 of the PA. The APE for archaeological studies was delineated to include any areas that might be subjected to ground-disturbing activities and any construction staging areas. The APE for architectural resources was delineated to include properties within the archaeological APE and any other properties that would likely be affected by any project-related activities. Both the archaeological and architectural APE were delineated to encompass the broadest extent of the project's area of disturbance.

Archaeological investigations (i.e., prehistoric and historic research) for the Rancho Cordova Parkway Interchange were conducted during November and December 2005 and April and May 2006. These investigations included record searches conducted on November 8, 2005, and April 11, 2006, at the North Central Information Center, California State University, Sacramento, for an area within a 0.5-mile radius of the project APE; a sacred lands search conducted by the Native American Heritage Commission on January 25, 2005; and pedestrian survey of the project area conducted in May 2006. In addition, the following historic references were reviewed:

- NRHP and updates to January 2006.
- Office of Historic Preservation Database of Determinations of Eligibility and updates to January 2006.
- CRHR and updates to 2005.
- California Historical Landmarks 1996 and updates.

- California Inventory of Historic Resources 1976.
- California Points of Historical Interest 1992 and updates.
- Survey of Surveys 1989.
- Historic Spots in California 1966 and 1990.
- Site records for CA-Sac-308-H, CA-Sac-428-H, and EC-06-10.

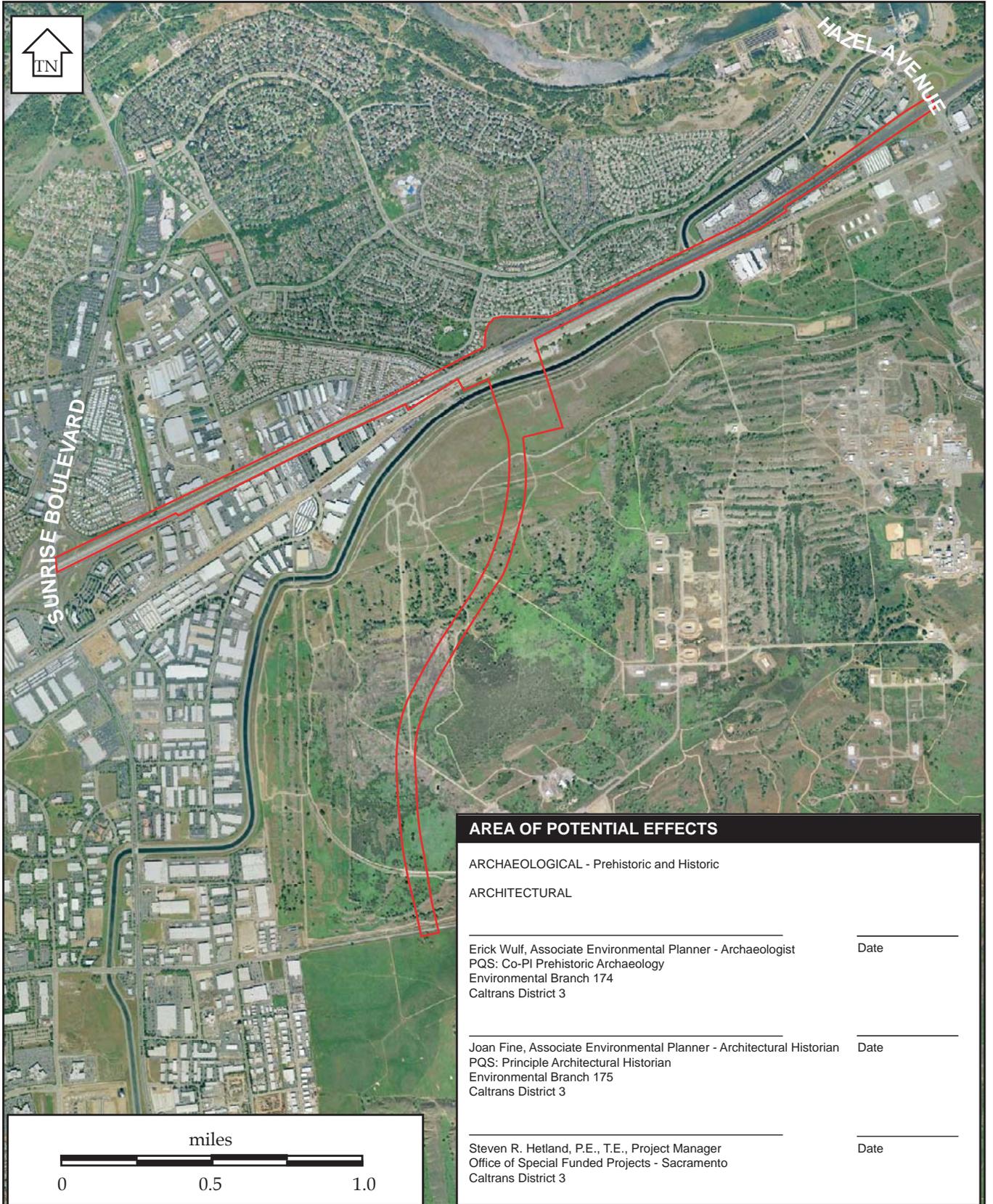
The records search identified that the project APE was previously surveyed (cf., Lindström 1989; JRP Historical Consulting Services and Far Western Anthropological Research Group, Inc. 1999; and PAR Environmental Services, Inc. 2000). The following features were identified within the project APE:

1. Site CA-Sac-308-H, which consists of dredge mining tailings piles.
2. Site CA-Sac-428-H, which is the alignment of the Sacramento Valley Railroad (determined to be outside the vertical APE, thus no further discussion required).
3. A small segment of White Rock Road that may have been part of the Placerville Road.

Archival research also identified that the project APE was surveyed by ECORP in 2006 as part of a larger project for GenCorp Real Estate. The investigations conducted by ECORP identified site EC-06-10, a trash scatter, within the project APE.

A sacred lands search was requested from the Native American Heritage Commission on January 10, 2005, and received on January 21, 2005. The sacred lands search did not identify any Native American cultural resources either within or near the currently proposed project APE. City cultural resources staff contacted all groups and/or individuals on the list provided by the Native American Heritage Commission regarding the Rancho Cordova Parkway Interchange project in January 2005 and again in April 2006. To date, no comments have been received regarding the project from the Native American community.

Letters were also sent to the Sacramento Historical Society, the Folsom Historical Society, and the California Chapter of the Lincoln Highway Association requesting any additional information regarding the history of the project area (Attachment C of the HPSR, “Native American and Other Consultation”). To date, no comments have been received regarding the project from these groups.



**AREA OF POTENTIAL EFFECTS**

ARCHAEOLOGICAL - Prehistoric and Historic

ARCHITECTURAL

_____	_____
Erick Wulf, Associate Environmental Planner - Archaeologist	Date
PQS: Co-PI Prehistoric Archaeology	
Environmental Branch 174	
Caltrans District 3	
_____	_____
Joan Fine, Associate Environmental Planner - Architectural Historian	Date
PQS: Principle Architectural Historian	
Environmental Branch 175	
Caltrans District 3	
_____	_____
Steven R. Hetland, P.E., T.E., Project Manager	Date
Office of Special Funded Projects - Sacramento	
Caltrans District 3	

Source: California Department of Transportation, 2006



City of Rancho Cordova  
Planning Department

Figure 2.1.10-1  
Area of Potential Effects



A City archeologist contacted the Sacramento County Assessor's office to check on the age of construction of the one commercial building that may be demolished under Alternative 3: the former Your Home Store, located at 2300 Mineshaft Lane. This building is not more than 50 years old and, hence, does not meet the eligibility criteria for listing on the NRHP or the CRHR.

Archaeological and historical investigations conducted for the Rancho Cordova Parkway Interchange identified the following resources:

1. A segment of White Rock Road.
2. Tailings piles associated with CA-Sac-308-H.
3. An abandoned railroad spur.
4. EC-06-10, which consists of trash scatter and five metal silos.

Pedestrian surface surveys also identified that the project APE is disturbed by dredge mining, road construction, and general use of the area by GenCorp/Aerojet ~~GenCorp~~ (e.g., areas within and near the project APE appear to have been graded or subjected to other types of mechanical modification of the landscape).

#### White Rock Road

White Rock Road may have been part of the Placerville Road. Regardless, White Rock Road is currently a working roadway that handles large volumes of traffic. The road has undergone previous realignments and episodes of reconstruction. There are no remnants of historic road alignments or features associated with the segment of White Rock Road within the project APE. Therefore, White Rock Road meets the criteria presented in Attachment 4, "Properties Exempt from Evaluation," in the Section 106 PA for Property Type 1. As an exempt property, the site does not require further study or protection during project implementation.

#### Site CA-Sac-308-H

Site CA-Sac-308-H is identified as the American River Gold Mining District by the North Central Information Center. The area encompassed by the American River Gold Mining District consists of dredge mining tailings that represent mining operations from 1894 to 1962. The dredge mining tailings south of U.S. 50 within and near the project APE have been disturbed by former activities conducted by GenCorp/Aerojet ~~GenCorp~~ and other companies that were formerly or are currently mining tailings piles for aggregate materials (e.g., an existing commercial operation near the project sitearea is

currently extracting and processing aggregate from tailings piles). The dredge mining tailings piles within the project APE lack connectivity to other areas of dredge mining in the area that represent initial dredge mining near the project [sitearea](#) (i.e., dredge tailings piles located on the north side of U.S. 50 in the Lake Natoma State Recreation Area); are poor examples of tailings that are the result of the large-scale dredge mining operations typical of the area (i.e., typical examples of evenly spaced linear patterns of dredge mining tailings piles are located in the Lake Natoma State Recreation Area); and generally lack integrity of setting, feeling, and association because of the roads, commercial, and residential developments that surround the project APE and aggregate mining of the tailings piles.

In addition, the tailings piles in the project [vicinityarea](#) are poor examples of typical large-scale dredge mining activities that occurred in the project [vicinityarea](#), such as areas of dredge mining tailings piles located north of U.S. 50 in the Lake Natoma State Recreation Area. Regardless, tailings piles in this area were also previously determined to be ineligible for inclusion in the CRHR primarily because of their integrity. Similarly, the dredge mining tailings piles in the project APE do not appear to meet the eligibility criteria for inclusion in the NRHP. The tailings piles in the project APE do not appear to be associated with individuals or events important in history (e.g., the tailings piles are not related to the development of dredge mining in the project [vicinityarea](#) or the establishment of dredge mining companies like the Natomas Company), are not the best examples of dredge mining, and do not appear to possess the potential to yield any additional information important in history.

The HPSR prepared for the project indicates that, on behalf of the FHWA, Caltrans has determined that the portion of the tailings for site CA-Sac-308-H within the project APE is not eligible for inclusion in the NRHP. The SHPO has concurred on this determination (letter dated December 21, 2007, in **Appendix E**).

### Railroad Spur

An abandoned standard gauge railroad spur extending from the existing UPRR tracks that parallel U.S. 50 to a former industrial area on GenCorp property passes through the project APE. There are no features associated with the railroad spur. Archival research did not identify a date of construction for the spur or its specific use. The railroad spur does not appear to be associated with individuals or events important in history, does not appear to represent any unique characteristics of design or construction, and does not appear to possess the potential to yield any information important in history. Therefore,

the railroad spur does not appear to be eligible for inclusion in the NRHP. The SHPO has concurred on this determination (letter dated December 21, 2007).

#### Site EC-06-10

Site EC-06-10 consists of a trash scatter and five metal silos. The trash scatter is close to a road, and GenCorp staff stated that the area was a convenient location for dumping trash. The trash scatter is not associated with any specific time period, event, or significant building/structure. Therefore, the trash scatter of EC-06-10 meets the criteria presented in Attachment 4, “Properties Exempt from Evaluation,” in the PA for an isolated refuse dump and scatters over 50 years old that lack specific association. As an exempt property, the trash scatter of EC-06-10 does not require further study or protection during project implementation.

The silos of EC-06-10 were evaluated and do not appear to meet any of the eligibility criteria for inclusion in the NRHP or CRHR. Historic investigation of the silos does not suggest that they are associated with any significant events in regional or local history, associated with any persons significant in history, or embody distinctive characteristics of type, period, or method of construction; nor is it likely that additional research regarding the silos would produce significant new information regarding the agricultural development of the area. Therefore, the silos of EC-06-10 do not appear to meet eligibility Criteria A, B, C, or D for inclusion in the NRHP or Criteria 1, 2, 3, or 4 for inclusion in the CRHR. The SHPO has concurred on this determination (letter dated December 21, 2007).

The HPSR prepared for the project indicates that Erick Wulf and Joan Fine, Caltrans staff, who meet the Professionally Qualified Staff Standards in Section 106 PA Attachment 1 as an archeologist and architectural historian, respectively, have determined that the other properties present within the APE meet the criteria for Section 106 PA Attachment 4, “Properties Exempt from Evaluation.”

The HPSR recommended Caltrans determine a Finding of No Historic Properties Affected, according to Section 106 PA Stipulation IX.A and 36 CFR 800.4(d)(1).

Caltrans District 3 initiated consultation with the SHPO in a letter dated November 19, 2007, transmitting the HPSR and its findings and recommendations.

Pursuant to Stipulation VIII.C.5 of the PA, Caltrans requested SHPO concurrence with the following eligibility determinations:

- The portions of the tailings within the APE for CA-SAC-308-H are not eligible for the NRHP.
- The abandoned railroad grade is not eligible for the NRHP.
- The silos are not eligible for the NRHP.

Caltrans has applied the Criteria of Adverse Effect pursuant to Stipulation IX of the PA and has reached a Finding of No Historic Properties Affected in accordance with Stipulation IX.A of the PA. The SHPO has concurred on this determination (letter dated December 21, 2007).

### **Buried Cultural Deposits**

The vertical APE will vary from deep excavations for the overcrossing supports to relatively shallow excavations for construction of roadways associated with the interchange project. The subsurface sediments in the area are primarily Holocene alluvial deposits. The project area does not appear to be sensitive for buried cultural deposits because the records search and the sacred lands search did not identify any Native American cultural resources in the area; ethnographic settlement patterns for the area and previously recorded prehistoric sites in the area suggest that preferred locations for Native American sites in the area are along the American River, which is located approximately 1.5 miles north of the project APE; the area south of U.S. 50 along the alignment of Rancho Cordova Parkway is disturbed by dredge mining; and there is no record of buried deposits of cultural material being uncovered during construction of any of the roads in the area or during the recent construction of the light rail and installation of a sewer interceptor along Folsom Boulevard.

### **Environmental Consequences**

#### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, no archeological or historical resources would be disturbed because the project would not be implemented.

#### ***Alternative 3 (Proposed Project)***

All archaeological and historical resources identified within the APE for the Rancho Cordova Parkway Interchange either were found to be Properties Exempt from Evaluation or were found to not be eligible for inclusion in the NRHP. Based on this, there would be no historic properties affected by the proposed project.

Due to the expected large amount of subsurface work involved with the project, however, there is the possibility of negative effects to undiscovered cultural resources. Implementation of avoidance, minimization, or mitigation measures would reduce any potential negative effects to undiscovered cultural resources.

Please see Section 3.2.6 for additional information on cultural resource impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area shall be discontinued and diverted until a qualified archaeologist can assess the nature and significance of the find. Caltrans shall be notified of any discoveries made within the Caltrans right-of-way.

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and that the County Coroner shall be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant. At this time, the person who discovered the remains will contact the City's Environmental Monitoring staff so that they and City cultural resources staff may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable. Caltrans will be notified if cultural materials or human remains are found within Caltrans' right-of-way.

## **2.2. Physical Environment**

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

#### **Regulatory Setting**

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

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.

- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

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

## **Affected Environment**

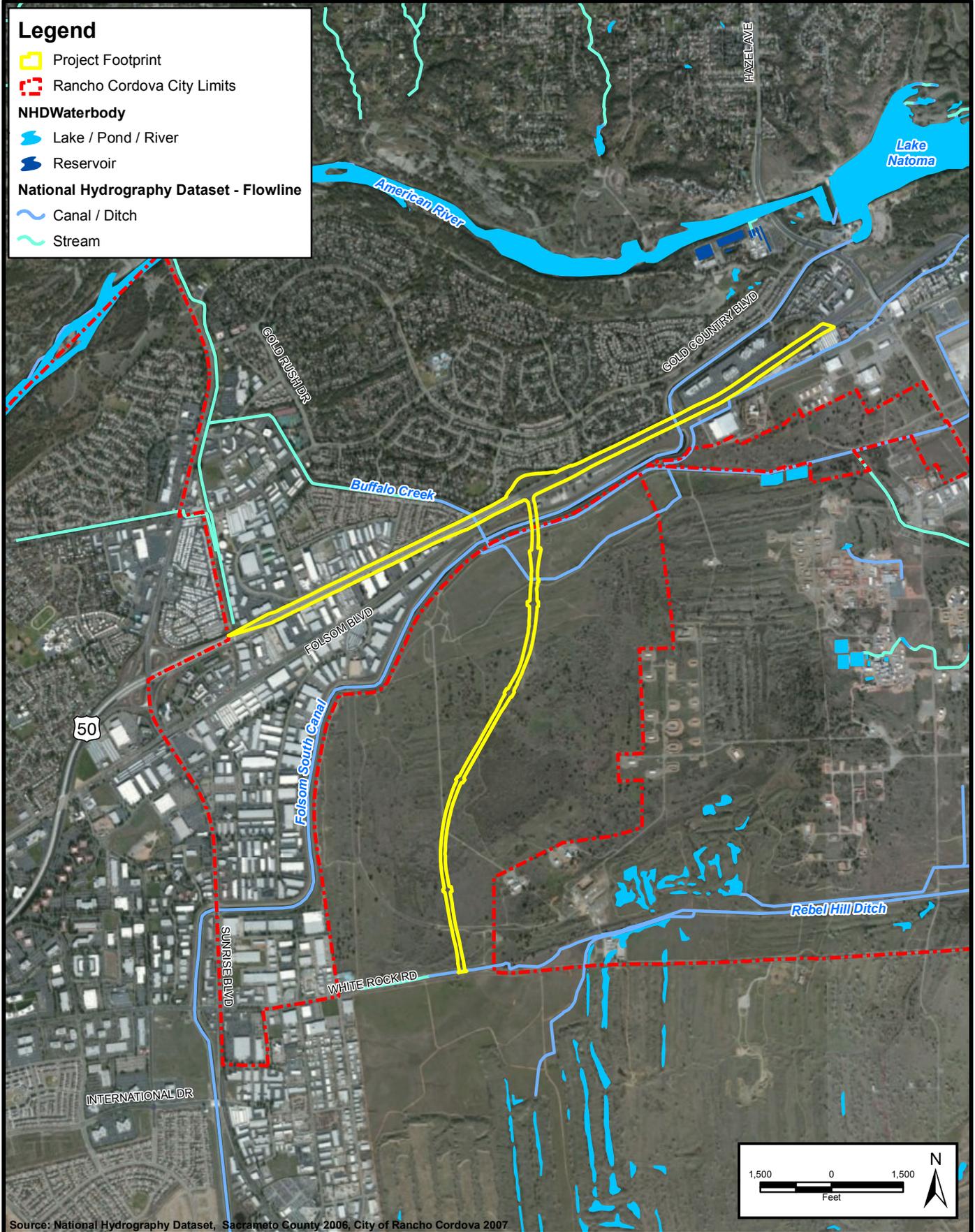
### ***Hydrology***

The information provided in this section is based on the City’s General Plan Draft EIR (State Clearinghouse No. 2005022137) Hydrology and Water Quality Element and a Preliminary Hydrology and Hydraulics Report prepared by AECOM for the project in April 2011.

The City of Rancho Cordova is within the Sacramento River drainage basin, which encompasses approximately 23,500 square miles and produces an average annual runoff of approximately 17,000,000 acre-feet (City of Rancho Cordova 2006). The basin includes all watersheds tributary to the Sacramento River located north of the Cosumnes River watershed with principal reservoirs and controlling flows including Lake Shasta, Trinity Lake, Lake Oroville, and Folsom Reservoir. The hydrologic area within the proposed Rancho Cordova Parkway/U.S. 50 interchange includes the American River, Lake Natoma, Buffalo Creek, Folsom South Canal, and the Rebel Hill Ditch. Caltrans District 3 flood records and project history files do not identify historical flooding within the project limits. Additionally, Sacramento County Public Works does not have any records of flooding near the proposed interchange.

Rancho Cordova contains both natural waterways and constructed features (e.g., channels, siphons, over chutes, detention basins) that convey drainage. Flows in the area primarily drain in a southwest direction into existing natural waterways. Major drainage/flood control features in the city include detention basins, channels, and levees along the American River and Folsom Dam. Surface features in the project vicinity ~~and within the project area~~ include the American River, Folsom South Canal, and Buffalo Creek. **Figure 2.2.1-1** depicts the hydrological features of the proposed project ~~vicinity area~~.

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Source: National Hydrography Dataset, Sacramento County 2006, City of Rancho Cordova 2007



City of Rancho Cordova  
 Planning Department

Figure 2.2.1-1  
 Surface Water Resources



### *American River*

The American River, located on the northern edge of Rancho Cordova, represents one of the major hydrological surface features in Rancho Cordova. The American River drainage basin encompasses 1,900 square miles. Nimbus Dam impounds Lake Natoma downstream of Folsom Dam and regulates releases from Folsom Reservoir to the lower American River. Folsom Reservoir is the principal reservoir in the basin. The entrance facilities to the Folsom South Canal are located along the south shore of Lake Natoma immediately upstream of Nimbus Dam. Mean annual flow in the lower American River is 3,300 cubic feet per second; the design capacity of the channel for flood flows is 115,000 cubic feet per second. The project [sitearea](#) is approximately 0.75 mile south of the American River.

### *Folsom South Canal*

The Folsom South Canal, which runs through the project area just south of Folsom Boulevard, is owned and maintained by the USBR. The canal was originally designed to convey industrial, municipal, and irrigation water from Lake Natoma to San Joaquin Valley counties and customers in the East Bay. However, the original plan for the canal was never completed. The portion of the canal that has been completed originates at the Nimbus Dam just northeast of the project [sitearea](#) and extends southward for approximately 27 miles past the community of Wilton near the City of Elk Grove. The partially completed Folsom South Canal supplies water for irrigation and municipal and industrial use in Sacramento and San Joaquin counties. Water from the canal is also used by the Rancho Seco Nuclear Generating Station. The concrete-lined canal has a capacity of 3,500 cubic feet per second for the first two reaches and a bottom width of 34 feet, and the maximum water depth is 17.8 feet.

### *Buffalo Creek*

Buffalo Creek, which runs through the project area just south of the Folsom South Canal, is an ephemeral creek that flows from east to west through the Aerojet property, flowing through a flume over Folsom South Canal and a culvert beneath U.S. 50 to the American River. Buffalo Creek originates southeast of the [interchange portion of the proposed project site and east of the parkway portion of the proposed project sitearea](#) and runs through the northern portion of the project area. Buffalo Creek was modified historically to accommodate storm events on the Aerojet property and receives much of the effluent surface discharge from the Aerojet [testing and manufacturing](#) facility.

### *Topography and Soils*

In general, the topography in Rancho Cordova is characterized by flat to gently rolling terrain. Elevations within the vicinity range from approximately 30 feet near the American River and Cosumnes River to nearly 300 feet in the project [vicinityarea](#). Slopes within the Rancho Cordova area generally range from 0 percent to 8 percent. Higher slopes are associated with the Natomas-Xerorthents, Xerorthents, and dredge tailings that exist within the project [vicinityarea](#). Dredge tailings are the result of large-scale dredge gold mining operations undertaken from the late 1800s to the mid-1900s and are now characterized as long rows of 13- to 35-foot-tall cobble piles with linear, low-lying areas between the piles. Slopes in these areas range from 0 percent to 50 percent.

The project [sitearea](#) is generally flat, ranging in elevation from about 130 to 140 feet. The majority of the soils are Xerorthents, dredge tailings-urban land complex, 0 percent to 2 percent slopes. A small portion of the site to the north and northeast consists of Xerorthents, dredge tailings, 0 percent to 50 percent slopes. Most of the area has been mined for gold, leaving an irregular surface of dredge tailing piles of cobbles and rock.

The majority of the city consists of soils characterized by slight to moderate erosion potential and very low to medium runoff rates. The shrink-swell potential (refers to the potential of soils to expand during wet seasons and shrink during dry seasons) of the soils ranges from low to high, with the majority of the existing soils having high shrink-swell characteristics. According to the Soil Survey of Sacramento County, California (U.S. Department of Agriculture [USDA], Soil Conservation Service 2004), four soil types have been mapped in the project study area:

- Natomas loam, 0–2 percent slopes
- Natomas-Xerorthents dredge tailings complex, 0–50 percent slopes
- Xerorthents, dredge tailings, 2–50 percent slopes
- Xerorthents, dredge tailings–urban land complex, 0–2 percent slopes

### *Project Area Drainage and Hydrology*

The [area surrounding the](#) project [sitearea](#) is bisected by U.S. 50. Along U.S. 50, water is collected in shallow roadside ditches along the freeway corridor and conveyed away from the roadway. Water north of U.S. 50, [nearin](#) the northern limits of the project [sitearea](#), generally drains into stormwater ditches adjacent to the freeway, which outlet at Buffalo Creek. South of U.S. 50, the [area surrounding the](#) project [sitearea](#) is predominantly flat,

but includes some areas of gently rolling hills. Stormwater that moves through this ~~portion of the project~~ area south of U.S. 50 flows in a generally southwest direction in a generally undefined sheet flow pattern. A portion of the area immediately south of Buffalo Creek collects stormwater in shallow depressions, where it is then conveyed through shallow swales to outlet at Buffalo Creek. Farther south, water generally sheet flows in a southwest direction and collects in a depressed area east of the Folsom South Canal, where it percolates or evaporates.

According to Natural Resources Conservation Service records, soils in the project ~~vicinity~~ area generally consist of Xerorthents, dredge tailings, 2 to 50 percent slopes and Xerorthents, dredge tailings–urban land complex, 0 to 2 percent slopes. Xerorthents dredge tailings are classified in Hydrologic Soil Group A, which is characterized by a high infiltration rate (low runoff potential) when thoroughly wet. For this Group A soil in particular, an infiltration rate range of approximately 6–14 inches per hour is estimated.

The project watershed is approximately 68.06 acres and is primarily contained within the U.S. 50 right-of-way. In general, because the ~~project area~~ soils in the project vicinity have a very high infiltration rate, rainfall within the project ~~vicinity~~ area typically infiltrates within drainage ditches in the immediate area and does not run off to drainages outside the immediate U.S. 50 corridor (AECOM 2011).

The groundwater level in the project ~~vicinity~~ area fluctuates throughout the year. Based on the “Groundwater Elevations Fall 2003” and “Groundwater Elevations Spring 2003” published by Sacramento County, groundwater may be present at about 60–70 feet depth.

### Flooding

Currently, Rancho Cordova experiences localized flooding issues associated with undersized drainage facilities in existing developed and developing areas. This includes existing drainage issues along Sunrise Boulevard south of White Rock Road where surface water flows exceed the capacity of drainage facilities (siphons and over chutes) of the Folsom South Canal. Existing 100-year peak flows are exceeded in several of these facilities and result in localized flooding along Sunrise Boulevard, as well as discharge of drainage into the Folsom South Canal (City of Rancho Cordova 2006b).

The northern portion of the Rancho Cordova planning area (along U.S. 50 and north) is located within the predicted 500-year floodplain by the Federal Emergency Management Agency and USACE. This portion of the Rancho Cordova planning area could also flood as a result of complete failure of Folsom Dam. Failure of either the Cordova Meadows Levee or the Sunriver Levee along the American River could potentially result in the

inundation of properties within the northern portion of the city. However, such an event has an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

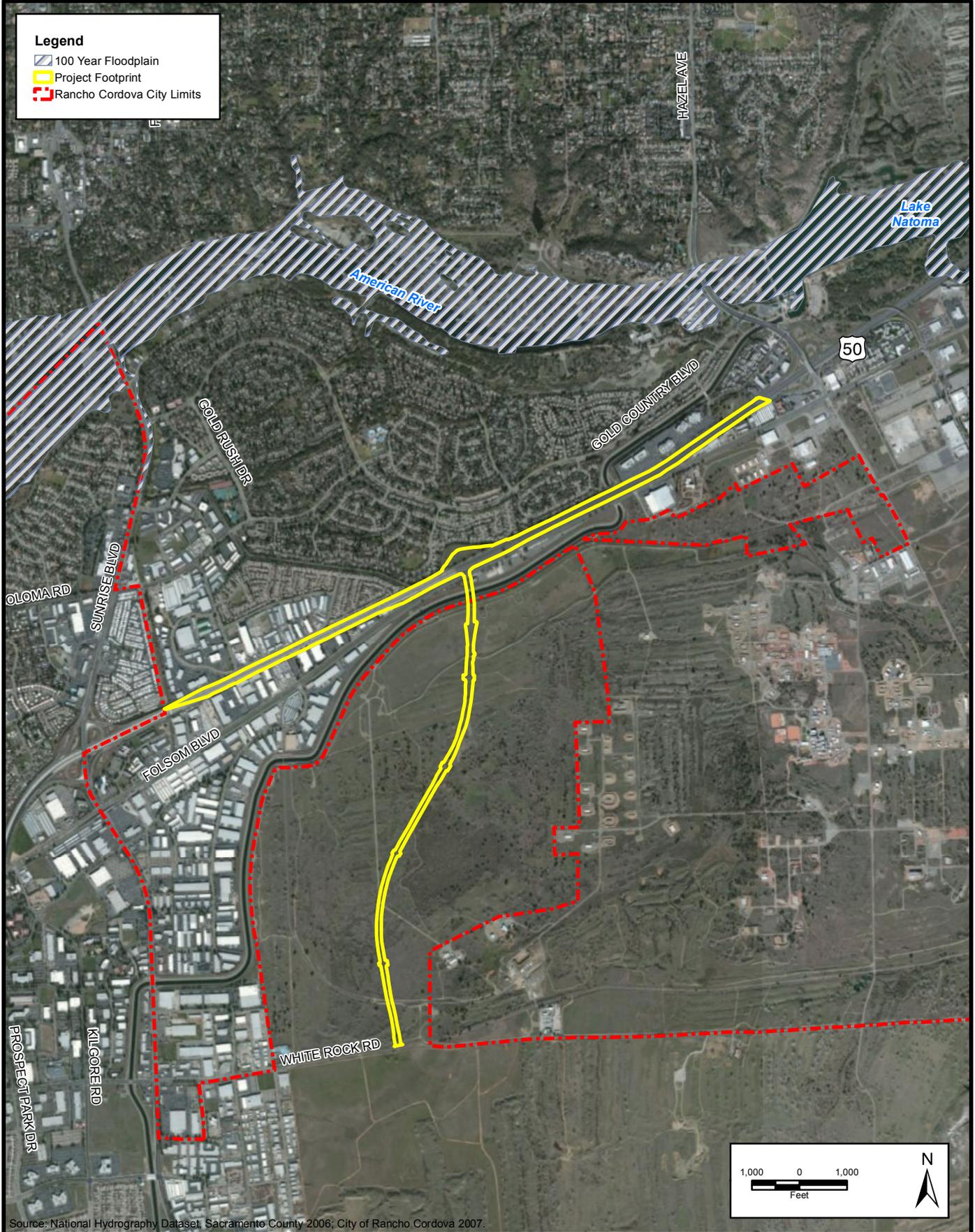
Currently, there are planning efforts by USACE to improve the flood capacity of Folsom Reservoir, and there have been improvements made to security at Folsom Dam to minimize the threat of an intentional act of sabotage. The project [sitearea](#) is not located within a 100-year flood hazard area, as mapped by Flood Insurance Rate Map, Community Panel #060262 0250 C (revised map dated September 30, 1988). **Figure 2.2.1-2** illustrates the flood zones near the project [sitearea](#), which are located primarily along the American River corridor. The Federal Emergency Management Agency Flood Insurance Rate Maps (Map Numbers 0602620210E, July 1998; 0602620115E, July 1998; 0602620250C, September 1988) show the project [sitearea](#) lies in Zone X, which is outside the 500-year floodplain.

Inquiries and consultation with Caltrans, Sacramento County, and the City of Rancho Cordova Public Works Department indicate that there have been no drainage problems or complaints associated with U.S. 50 within the project [site or surrounding](#) area.

### Precipitation

Precipitation is the principal source of runoff from the site. Mean annual precipitation is approximately 19.9 inches per year. Most annual rainfall arrives during the winter storm season from October through April, with the heavier rainfall occurring between December and February.

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City of Rancho Cordova  
Planning Department

Figure 2.2.1-2  
100 Year Floodplain



## Environmental Consequences

### Hydrology

#### Surface Hydrology

##### No Build Alternative (2037 Conditions without the Project)

Under the No Build alternative, changes to the hydrology of the project [site and surrounding](#) area would not occur because the project would not be implemented.

##### Alternative 3 (Proposed Project)

The overall drainage strategy for the Rancho Cordova Parkway Interchange project is to convey the roadway runoff into surrounding areas where drainage facilities would be installed to remove excess stormwater runoff from the site and allow it to infiltrate. Potential areas for stormwater storage for the interchange structure are present within the proposed ramps and U.S. 50. These areas would be utilized to treat and detain stormwater from the interchange structure, if needed.

In the portions of the project [vicinity area](#) south of Buffalo Creek, water generally sheet flows in a southwesterly direction. The proposed roadway extension would bisect this drainage pattern. To preserve the historic drainage of the area and to minimize disruption to larger area hydrology, the project would include culverts periodically along the roadway corridor to convey water from the east side of the roadway to the west side. After water is conveyed under the roadway, it would be released to resume historic drainage patterns. Runoff from the roadway would be collected from the pavement surface into small roadside ditches and/or basins, where it would receive water quality treatment, through bio swales or other appropriate operational best management practices (BMPs), before it is outlet on the west side of the roadway to join sheet flows that move through the area.

The project would result in minor changes in the hydrology of the immediate project area as documented by the U.S. Highway 50 Sunrise Boulevard to Hazel Avenue Preliminary Hydrology and Hydraulics Report. The project would not result in effects to the larger hydrologic patterns of the American River or the Folsom South Canal. The project would not contribute additional flows to Buffalo Creek, due to project BMP facilities that would infiltrate stormwater.

## *Groundwater Hydrology*

### No Build Alternative (2037 Conditions without the Project)

Under the No Build alternative, changes to the hydrology of the project site and surrounding area would not occur because the project would not be implemented.

### Alternative 3 (Proposed Project)

#### **Temporary Construction Activities**

Because the depth to groundwater is estimated at 60–70 feet below the surface, and the project would require installation of bridge support piles to a depth of up to 90 feet below the surface, the project may encounter groundwater during pile installation activities and dewatering may be required during construction; however, this would not be expected to substantially affect groundwater supplies or groundwater recharge. In addition, groundwater beneath the project site is contaminated and is not used for domestic supply or other beneficial uses.

#### **Long-term Operational Activities**

The project would not create a long-term need for water supply, other than for minor landscaping needs, which would not be expected to substantially affect groundwater supplies in the area. The new interchange facility would result in increased impervious surfaces on-site, which may reduce water absorption within the interchange and roadway footprint; however, groundwater in the area is regularly extracted from beneath the project site, treated, and released into Buffalo Creek, and groundwater recharge is not considered to be of concern in the area.

## *Flooding*

### No Build Alternative (2037 Conditions without the Project)

Under the No Build alternative, there would be no changes to the flood potential for the project site and surrounding area because the project would not be implemented.

### Alternative 3 (Proposed Project)

#### **Temporary Construction Impacts**

No streambed diversion is anticipated; however, during construction, on-site drainage patterns could be temporarily altered by grading, excavation, soil stockpiling, and other activities. Temporary changes to drainage patterns, if not properly controlled, could result in ponding and/or flooding on- or off-site.

## Long-Term Operational Impacts

The project would increase impervious surfaces ~~at~~ the project ~~site~~ by approximately 9.51 acres through the addition of pavement and concrete. **Table 2.2.1-1** shows the increase in impervious surface area and the corresponding increases in surface runoff flows both with and without the proposed project. Runoff flows are calculated in cubic feet per second for 10-year and 25-year storm intensity scenarios.

**Table 2.2.1-1  
Existing vs. Post-Project Total Peak Flow Comparisons**

Condition	Total Area (acres)	Impervious Area (acres)	Pervious Area (acres)	10-year Storm Event (cubic feet per second)	25-year Storm Event (cubic feet per second)
Existing	68.06	45.21	22.85	33.65	42.13
Alternative 3 Post-Project	70.35	54.72	15.63	53.42	67.38

Source: AECOM 2011

The project would include a drainage system designed to collect runoff water from the interchange facility and allow it to infiltrate into existing drainage facilities surrounding the interchange and U.S. 50. The interchange drainage system would be designed to accommodate anticipated flows, and on- or off-site flooding is not anticipated. Existing drainage facilities are adequate to support post-project conditions. According to the preliminary hydrology and hydraulics report prepared for the project, existing ditch and culvert facilities are capable of containing runoff from the interchange project within the U.S. 50 right-of-way due to the high infiltration rates of the soils surrounding the project ~~site~~, and modification to these facilities would not be required to accommodate the project.

To provide stormwater drainage for the extension to the White Rock Road area of the proposed project, a roadside drainage system would be constructed within the project limits to convey all collected stormwater runoff. In an effort to maintain historical east–west drainage patterns through the roadway, the project would construct several small culverts under the roadway that would allow sheet flow stormwater originating from the east to be conveyed under the roadway and then continue to sheet flow to the west. Runoff from the roadway would be collected from the pavement surface into small roadside ditches and/or basins, where it would receive water quality treatment through bioswales or other appropriate operational BMPs, before being released on the west side of the roadway to join sheet flows that move through the area.

Based on the project's location outside of the 100-year floodplain, the proposed project would not affect the 100-year floodplain.

Please see Section 3.2.7 for additional information on hydrology and floodplain impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

Any dewatering activities during construction would be in compliance with applicable National Pollutant Discharge Elimination System (NPDES) permits and other water quality regulations.

Construction BMPs would be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved project Storm Water Pollution Prevention Plan (SWPPP); however, these measures would be designed to accommodate drainage requirements and avoid on- and off-site flooding. With implementation of BMPs required for NPDES Construction General Permit and other applicable water quality regulations (joint NPDES permit for Municipal Separate Storm Sewer Systems (MS4) in their municipal jurisdictions [NPDES No. CAS082597]), effects from short-term flooding during project construction would be negligible.

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

##### **Regulatory Setting**

##### ***Federal Requirements: Clean Water Act***

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

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act.

(Most frequently required in tandem with a Section 404 permit request. See below.)

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredged or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and MS4s.
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the U.S. This permit program is administered by USACE.

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

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

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide permit may be permitted under one of USACE’s Standard permits. For Standard permits, the USACE decision to approve is based on compliance with the U.S. Environmental Protection Agency’s (USEPA) Section 404 (b)(1) Guidelines (40 CFR Part 230), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the USEPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative that would have fewer adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative to the proposed discharge that would have a lesser effect on waters of the U.S. and not have any other significant adverse environmental consequences. Per the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the

USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4.

### **State Requirements: Porter-Cologne Water Quality Control Act**

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

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

### **State Water Resources Control Board and Regional Water Quality Control Boards**

The SWRCB administers water rights, water pollution control, and water quality functions throughout the state. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdictions using planning, permitting, and enforcement authorities to meet this responsibility.

- **National Pollutant Discharge Elimination System Program**

## Municipal Separate Storm Sewer Systems

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of stormwater dischargers, including MS4s. The USEPA defines an MS4 as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater that are designed or used for collecting or conveying stormwater. The SWRCB has identified Caltrans as an owner/operator of an MS4. This permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans' MS4 Permit, under revision at the time of this update, contains three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below).
2. Caltrans must implement a year-round program in all parts of the state to effectively control stormwater and nonstormwater discharges.
3. Caltrans stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) BMPs and other measures.

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

Part of and appended to the SWMP is the Storm Water Data Report (SWDR) and its associated checklists. The SWDR documents the relevant stormwater design decisions made regarding project compliance with the MS4 NPDES permit. The preliminary information in the SWDR prepared during the project initiation document phase will be reviewed, updated, confirmed, and, if required, revised in the SWDR prepared for the later phases of the project. The information contained in the SWDR may be used to make more informed decisions regarding the selection of BMPs and/or recommended avoidance, minimization, or mitigation measures to address water quality impacts.

#### Construction General Permit

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates stormwater discharges from construction sites which result in a Disturbed Soil Area of 1 acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop SWPPPs; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

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

## Section 401 Permitting

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

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

## Affected Environment

The information provided in this section is based on the City's General Plan EIR (State Clearinghouse No. 2005022137) Hydrology and Water Quality Element and a Preliminary Hydrology and Hydraulics Report prepared by AECOM for the project in April 2011.

### **Surface Water**

Rancho Cordova contains both natural waterways and constructed features (e.g., channel, siphons, over chutes, detention basins) that convey drainage. Flows in the area primarily drain in a southwest direction into existing natural waterways. Major drainage/flood control features in the city include detention basins, channels, and levees along the American River and Folsom Dam. Surface features in the project vicinity ~~and within the project area~~ include the American River, Folsom South Canal, and Buffalo Creek. Seasonal wetlands are present within the proposed right-of-way for Rancho Cordova Parkway, as well as historic Aerojet water discharge areas. A vernal pool is present within the project study area just south of Buffalo Creek. (Figure 2.2.1-1 depicts area surface hydrology.)

### *American River*

The American River, located on the northern edge of Rancho Cordova, represents one of the major hydrological surface features in Rancho Cordova. The American River drainage basin encompasses approximately 1,900 square miles. Folsom Reservoir is the principal reservoir in the basin. Nimbus Dam impounds Lake Natoma downstream of Folsom Dam and regulates releases from Folsom Reservoir to the lower American River. The project [sitearea](#) is approximately 0.75 mile south of the American River.

### *Folsom South Canal*

The Folsom South Canal is owned and maintained by the USBR. The Folsom South Canal was planned to be constructed in five reaches for a total length of 68.8 miles. Its intended termination was about 20 miles southeast of the City of Stockton. The canal was originally designed to convey industrial, municipal, and irrigation water from Lake Natoma to San Joaquin Valley counties and customers in the East Bay. However, the original plan for the canal was never completed. Only the first two reaches were built, its total length measuring 26.6 miles.

The portion of the canal that has been completed originates at the Nimbus Dam just northeast of the project [sitearea](#) and extends southward for approximately 27 miles past the community of Wilton near the City of Elk Grove. The right-of-way for the canal has been developed to provide trails for horseback riding, bicycling, and hiking. The partially completed Folsom South Canal supplies water for irrigation and municipal and industrial use in Sacramento and San Joaquin counties. Water from the canal is also used by the Rancho Seco Nuclear Generating Station in southeast Sacramento County. The concrete-lined canal has a capacity of 3,500 cubic feet per second for the first two reaches. The canal has a bottom width of 34 feet, and the maximum water depth is 17.8 feet.

### *Buffalo Creek*

Buffalo Creek is an ephemeral creek that flows from east to west through the Aerojet property, flowing through a flume over Folsom South Canal and a culvert beneath U.S. 50 to the American River. Buffalo Creek originates southeast of the [interchange portion of the proposed project site and east of the parkway portion of the proposed project sitearea](#) and runs through the northern portion of the project area. Buffalo Creek was modified historically to accommodate storm events on the Aerojet property, and the creek receives much of the effluent surface discharge from the Aerojet [testing and manufacturing](#) facility.

### *Local Contaminants*

Land uses within and surrounding the project site area impact the existing water quality, with both point-source and nonpoint-source discharges contributing contaminants to existing surface waters and groundwater. The project site is currently surrounded by urban, residential, and commercial land uses. Pollutant sources in urban areas typically include parking lots and streets, rooftops, disturbed soils at construction sites, and landscaped areas. Other contaminants in urban runoff include sediment, hydrocarbons, metals, pesticides, bacteria, and trash.

### *Surface Water Quality*

The City of Rancho Cordova is located entirely within the southern portion of Sacramento County, covering approximately 146 square miles (almost 15 percent of the land area for the entire county). The surface water quality of the American River watershed (from Nimbus Dam to the confluence with the Sacramento River) can be characterized by excessive sediment inflow from development in local runoff, mercury bioaccumulation in fish from abandoned mining tailings, bacterial contamination of waters heavily frequented by waterfowl, and occasional sewage spills in the water from wastewater treatment plants. The American River is listed as an impaired waterway under Section 303(d) of the CWA for mercury and an unknown toxicity along an estimated affected area of approximately 27 miles; however, the SWRCB has identified the river as having a low priority for identifications of TMDLs. TMDLs are regulations established by the SWRCB designed to improve water quality by controlling the amount of a pollutant entering a water body. Neither Buffalo Creek nor Folsom South Canal is listed as impaired under Section 303(d) of the CWA for any pollutants, although Folsom South Canal receives water from the American River via Lake Natoma.

The City of Rancho Cordova, Sacramento County, and the cities of Citrus Heights, Folsom, Galt, and Sacramento are co-permittees under the NDPES permit No. CAS082597 covering the Sacramento County Area-Wide MS4. Under its NPDES permit, the City of Rancho Cordova has discharge and monitoring requirements for stormwater and a target pollutant reduction strategy for diazinon, chlorpyrifos, copper, lead, mercury, and coliform/pathogens.

It is also noted that both copper and lead are Caltrans' Targeted Design Constituents, which have been proven empirically to come off Caltrans' roadways and will have a bearing when considering the stormwater treatment strategy for the proposed project.

## **Groundwater**

The Central Valley contains the largest basin-fill aquifer system in the state. The valley is in a structural trough about 400 miles long and from 20 to 70 miles wide and extends over more than 20,000 square miles. The trough is filled to great depths by marine and continental sediments, which are a result of millions of years of inundation by the ocean and erosion of rocks that form the surrounding mountains. Sand and gravel beds in this great thickness of basin-fill material form an important aquifer system.

From north to south, the aquifer system is divided into the Sacramento Valley, the Sacramento–San Joaquin Delta, and the San Joaquin Valley groundwater basins, based on the various characteristics of the corresponding surface water basins. These groundwater basins are further divided into subbasins. The project [sitearea](#) is located within the South American subbasin aquifer system, which comprises continental deposits of Late Tertiary to Quaternary age. These deposits include younger alluvium (consisting of flood basin deposits, dredge tailings, and Holocene stream channel deposits), older alluvium, and Miocene/Pliocene volcanics.

The South American subbasin is bounded on the east by the Sierra Nevada, on the west by the Sacramento River, on the north by the American River, and on the south by the Cosumnes and Mokelumne rivers. As part of the South American subbasin, the Rancho Cordova area covers a shallow unconfined aquifer system, known as the water table aquifer, approximately 200 feet or less below ground surface, and a deeper confined groundwater aquifer system ranging from a few hundred feet to over 2,000 feet below ground surface. The deeper aquifer system that becomes confined with depth is separated from the shallow aquifer by a discontinuous clay layer, not completely impermeable.

Groundwater recharge in the area occurs from a combination of three main sources: (1) stream recharge (primarily from the Cosumnes and American rivers within their channels and floodplains); (2) subsurface inflows from adjacent areas; and (3) percolation of rainfall and applied water. However, due to soil characteristics in the area, groundwater recharge capabilities are considered low.

## **Groundwater Quality**

Since 1953, Aerojet and its subsidiaries have manufactured liquid and solid propellant rocket engines for military and commercial applications and have formulated a number of chemicals, including rocket propellant agents and agricultural, pharmaceutical, and other industrial chemicals. In addition, the Cordova Chemical Company operated chemical manufacturing facilities on the Aerojet [propertycomplex](#) from 1974 to 1979 (City of

Rancho Cordova 2006a). Both companies disposed of unknown quantities of hazardous waste chemicals, including trichloroethylene (TCE) and other chemicals associated with rocket propellants, as well as various chemical processing wastes.

The parkwayA portion of the project sitearea is situated within the Aerojet property. Aerojet has historically used the land within the study area as a buffer zone. The buffer zone, which consists of vacant land, provides a safe zone between the adjacent residential areas and the bunkers used to store explosives at the Aerojet property. The USEPA, California Department of Toxic Substances Control (DTSC), and RWQCB have found no evidence of impacts to the surficial portion of the land within the buffer zone. In 2002, the buffer zone was “carved out” from the Superfund boundaries and removed from the National Priority List.

Groundwater beneath the project site-area is impacted by perchlorate, TCE, and nitrosodimethylamine (NDMA). The impacted groundwater, which originated at the off-site Aerojet testing and manufacturing facility, has migrated beneath the project sitearea. The depth to groundwater is generally greater than 100 feet below ground surface. Groundwater extraction wells are located throughout the Aerojet property. Aerojet extracts and discharges groundwater under requirements set forth in an NPDES permit (Order No. R5-2006-0013, NPDES No. CA0083861).

### *Beneficial Water Uses*

Beneficial uses are defined as the uses of water necessary for the survival or well-being of humans, plants, and wildlife. State waters that promote tangible and intangible economic, social, and environmental goals (beneficial uses) include, but are not limited to, water used for domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

### *Surface Waters*

The beneficial uses for surface waters in the project vicinityarea are categorized in the Basin Plan. The surface waters in the project vicinity include the American River between the Folsom Dam and the Sacramento River and its tributaries (Buffalo Creek). Folsom South Canal is used to divert water from Lake Natoma for downstream uses. Designated beneficial uses for surface waters in and adjacent to the project vicinityarea include municipal domestic uses, agricultural uses, industrial uses, recreation, freshwater habitat, fish migration and spawning, and wildlife habitat.

## Groundwater

Unless otherwise designated by the RWQCB, the Basin Plan states that all groundwater within the San Joaquin River and Sacramento River watersheds is considered as suitable or potentially suitable for municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply. In making exceptions to these designations, the RWQCB must consider the following criteria (where applicable):

- The total dissolved solids exceed 3,000 milligrams per liter (3,000 parts per million [ppm]) and it is not reasonably expected by the RWQCB for the groundwater to supply a public water system.
- There is contamination, either by natural processes or by human activity (unrelated to a specific pollution incident), that cannot reasonably be treated for domestic use using either BMPs or best economically achievable treatment practices.
- The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.
- The aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, Section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 CFR Section 26.3.

Because groundwater under the project site area and in the project vicinity ~~of the project area~~ is contaminated from previous activities at the Aerojet testing and manufacturing facility, standard beneficial uses generally identified for groundwater in the region would not be considered applicable to the project site.

## Water Quality Objectives

### Surface Water Quality Objectives

The Basin Plan designates surface water quality objectives for the Sacramento River Basin and San Joaquin River Basin, including the American River and its tributaries. These objectives are based on the designated beneficial uses identified for a water body and ensure that the water bodies can continue to support these uses. Surface water quality objectives exist for the American River in the vicinity of the project for bacteria levels, biostimulatory substances, chemical constituents, color, dissolved oxygen, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors,

temperature, toxicity, and turbidity. TMDLs have not been established for the American River, Buffalo Creek, or the Folsom South Canal.

### Groundwater Quality Objectives

The Basin Plan designates groundwater quality objectives for the Sacramento River Basin and San Joaquin River Basin, including the American River and its tributaries. These objectives are based on the designated beneficial uses identified for a water body and ensure that the water bodies can continue to support these uses. Groundwater quality objectives exist in the vicinity of the project for bacteria, chemical constituents, radioactivity, tastes and odors, and toxicity. In the case of groundwater contaminated from the Aerojet testing and manufacturing facility, ~~the GenCorp/Aerojet-General Corporation~~ operates extraction wells and treatment systems that extract and discharge treated water that must meet water quality objectives set forth in their NPDES permit (Order No. R5-2006-0013, NPDES No. CA0083861).

### **Environmental Consequences**

#### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, there would be no impacts to water quality above those under the existing conditions because the project would not be implemented.

#### ***Alternative 3 (Proposed Project)***

Potential Alternative 3 effects to water quality were identified and evaluated based on the physical characteristics of the project site and surrounding area and the anticipated nature, scope, intensity, and duration of proposed activities. Project soil disturbances would include the construction of two auxiliary lanes along U.S. 50 between Sunrise Boulevard and Hazel Avenue, the construction of Rancho Cordova Parkway, the potential widening of the north end of the Buffalo Creek culvert, the creation of six earthen ramps, roadway embankments at the ramps, interchange side slopes, structural excavations for the cast-in-drilled-hole (CIDH) bridge support piles, wall foundations, fill for the required retaining walls/sound walls and the unpaved property acquired for the use as a lay-down area for the contractor.

### *Water Quality Standards and Waste Discharge Requirements*

#### Temporary Construction Impacts

Construction of the proposed project would include vegetation removal, grading, and excavation activities within the project site area, which could result in increased sedimentation and erosion. If not properly controlled, these pollutants could reach waterways such as Buffalo Creek or the Folsom South Canal, which could result in impacts to water quality. Because water in the Folsom South Canal is used for

downstream water supply, impacts to water quality within this waterway would be of particular concern. Construction of the interchange structure and ramps would require work to occur over Folsom South Canal and Buffalo Creek. If not properly contained, these activities could result in the accidental release of soil, petroleum products, or other material debris into these waterways, which could also impact water quality. Potential widening of the north end of the Buffalo Creek culvert under U.S. 50 could also result in release of soil and construction materials into Buffalo Creek.

Dewatering may be required during construction of the CIDH piles. Pile-driving activities may reach sufficient depth as to encounter groundwater beneath the project [sitearea](#), which may be contaminated with perchlorate, TCE, and NDMA, and considered hazardous. Accidental contact with contaminated groundwater during dewatering activities could pose a risk to construction personnel and adjacent waterways.

Additionally, construction activities for the proposed interchange could temporarily disrupt operation of Aerojet's existing extraction wells and monitoring wells required for sampling and monitoring of contaminated groundwater, which could affect Aerojet's ability to monitor water quality.

### Long-Term Operational Impacts

Although minimized to the extent feasible, construction of the new interchange would increase the amount of impervious surfaces within the project [sitearea](#) by approximately 9.53 acres, which would increase the amount of stormwater runoff from the site.

The project would also introduce motor vehicles traveling from U.S. 50 to White Rock Road, which is an area that does not currently have motor vehicles traveling through it. This may introduce highway stormwater runoff to areas that currently do not have any. Highway stormwater runoff contains pollutants associated with vehicle use and highway landscaping, as well as natural sources. These pollutants include suspended solids, nutrients, pesticides, metals, pathogens, litter, dissolved solids, etc., which if allowed to reach area waterways in high concentrations could affect water quality in those waterways or in downstream waters.

A drainage system would be designed as part of the project that would collect all stormwater runoff and infiltrate the runoff with no discharge to Buffalo Creek. Therefore, the proposed project would not introduce additional stormwater runoff or additional stormwater pollutants to area waterways. Additionally, the drainage system for the proposed project would not direct any stormwater runoff to the Folsom South Canal; therefore, no polluted stormwater would affect the Folsom South Canal.

Depending on the final alignment of the interchange structure and Rancho Cordova Parkway, construction activities could require the relocation of Aerojet's existing extraction wells and monitoring wells required for sampling and monitoring of contaminated groundwater, which could affect Aerojet's ability to monitor water quality.

### *Erosion and Siltation*

#### Temporary Construction Impacts

The need for streambed diversion during construction is not anticipated; however, the potential widening of the north end of the Buffalo Creek culvert under U.S. 50 would temporarily disturb the bed and bank of Buffalo Creek, which could lead to erosion or siltation, which could impact water quality in Buffalo Creek. Additionally, on-site drainage patterns could be temporarily altered by grading, excavation, soil stockpiling, and other activities. These changes could result in increased erosion and siltation on- and off-site site, which could impact water quality in adjacent waterways.

#### Long-Term Operational Impacts

Construction of the new interchange would introduce new slopes required for ramps and embankments in what is currently a primarily flat area. Retaining walls would be constructed for some areas, while side slopes would be used in other areas. Although minimized to the extent feasible, the interchange and roadways would also increase the area of impervious surfaces by approximately 9.53 acres, which could result in increased erosion and sedimentation from slope runoff.

### *Materials Discharge*

#### Temporary Construction Impacts

Various materials would be stored on-site during construction, including vehicles, equipment, and other construction materials. In addition, equipment fueling and vehicle maintenance (including washing) would occur in equipment staging areas. Accidental spills or stormwater runoff from these areas could result in polluted runoff or other contaminants entering adjacent waterways, including Buffalo Creek and the Folsom South Canal. Because water in the Folsom South Canal is used for downstream water supply, impacts to water quality within this waterway from project-related construction materials would be of particular concern.

#### Long-Term Operational Impacts

The project would not result in the long-term storage of materials on-site; however, additional pollutants associated with increased vehicle use in the area and roadway

landscaping may be created. Stormwater runoff could carry these pollutants to adjacent waterways, impacting water quality. Because water in the Folsom South Canal is used for downstream water supply, impacts to water quality within this waterway would be of particular concern. However, the drainage system would be designed to collect all runoff water and infiltrate it to the ground; therefore, no runoff into the Folsom South Canal or other area waterways affected by project-related materials is anticipated.

### *Beneficial Water Uses*

Designated beneficial uses for surface waters in and adjacent to the project vicinity area include municipal domestic uses, agricultural uses, industrial uses, recreation, freshwater habitat, fish migration and spawning, and wildlife habitat. Buffalo Creek flows to the American River, and Folsom South Canal is redirected from the American River via Lake Natoma where it is used for downstream uses; therefore, impacts to water quality standards could affect the beneficial uses of these waterways.

### Temporary Construction Impacts

During construction, temporary water quality impacts could result from erosion, sedimentation, polluted stormwater runoff, and other construction debris entering into adjacent Buffalo Creek and the Folsom South Canal. Because the Folsom South Canal is used for water supply, impacts to water quality within this waterway would be of particular concern.

### Long-Term Operational Impacts

Construction of the new interchange would result in increased volume of stormwater runoff from the site and would introduce motor vehicles into the area between U.S. 50 and White Rock Road, which is an area that does not currently have any public roadways. If additional pollutants reach Buffalo Creek and Folsom South Canal, this could affect beneficial uses of these waterways. Because water in the Folsom South Canal is used for downstream water supply, impacts to water quality within this waterway would be of particular concern. However, the project's drainage system would be designed to collect all runoff from the site and infiltrate it to the ground; therefore, polluted runoff would not reach area waterways or affect their beneficial uses.

### *Drainage Capacity and Polluted Runoff*

### Temporary Construction Impacts

No streambed diversion is anticipated; however, during construction, on-site drainage patterns could be temporarily altered. This could result in increased erosion and siltation

on- and off-site site during wind or storm events. In addition, various materials would be stored on-site during construction, including vehicles, equipment, and other construction materials. Equipment fueling and vehicle and maintenance (including washing) would occur in equipment staging areas. Stormwater runoff from the site could potentially result in polluted runoff or other contaminants entering adjacent waterways.

### Long-Term Operational Impacts

While minimized to the extent feasible, the project would increase the area of impervious surfaces by approximately 9.53 acres, and would include new slopes in an area that is now relatively flat. These changes could result in increased site runoff and increased erosion and sedimentation from water running off of the slopes. To accommodate this additional runoff potential, the project would include a new drainage system that would collect runoff water along the elevated overcrossing, ramps, gutters, inlets, and drainage pipes, and infiltrate it into the ground. The new drainage system would be designed to accommodate all collected runoff and would ensure that highway runoff would not enter the Folsom South Canal.

To provide stormwater drainage for the extension to the White Rock Road area of the proposed project, a roadside drainage system would be constructed within the project limits to convey all collected stormwater runoff. In an effort to maintain historical east–west drainage patterns through the roadway, the project would construct several small culverts under the roadway that would allow sheet flow stormwater originating from the east to be conveyed under the roadway and then continue to sheet flow to the west. Runoff from the roadway would be collected from the pavement surface into small roadside ditches and/or basins, where it would receive water quality treatment through bioswales or other appropriate operational BMPs, before being released on the west side of the roadway to join sheet flows that move through the area.

Please see Section 3.2.8 for additional information on water quality and stormwater runoff impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Water Quality Standards and Waste Discharge Requirements***

#### Temporary Construction Impacts

BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and are finalized within the approved project SWPPP based on the Risk Level

determined under the NPDES General Construction Permit guidelines; however, temporary concrete washouts, stabilized construction entrance/exits, silt fencing, sand bag barriers, gravel bag berms, and fiber rolls have been identified as potential construction site BMPs to control increased erosion and sedimentation and to prevent construction site runoff from entering adjacent waterways. The General Construction Permit lists the following requirements for Risk Level 2, the most likely risk level for this project, for minimizing sediment, erosion, and water quality impacts:

- Good Site “Housekeeping”
- Sediment Controls
- Run-on and Run-off Controls
- Inspection, Maintenance, and Repair of BMPs
- Numeric Action Levels
  - Turbidity: 250 nephelometric turbidity units
  - pH: 6.5–8.5
- Rain Event Action Plan
- Effluent Monitoring

As part of the NPDES requirements, the contractor will be required to identify and implement BMPs that would ensure no debris or other pollutants from the construction of the overhead structures and potential culvert widening enter Buffalo Creek or the Folsom South Canal. Appropriate BMPs would also be incorporated into project plans to protect worker safety, and applicable hazardous materials regulations pertaining to collection, testing, and disposal of contaminated groundwater would be followed.

A geotechnical analysis shall be completed to identify the existing depth to groundwater in locations where CIDH piles would be required or where other activities with the potential to contact groundwater would occur. If encounters with groundwater are anticipated, measures shall be incorporated into the construction specifications in compliance with applicable regulations that shall ensure worker safety and ensure that groundwater contact with adjacent waterways is avoided.

Prior to project construction, the City shall coordinate with Aerojet and applicable regulatory agencies to identify any effects to groundwater extraction wells or monitoring

wells that would occur during construction. If it is found that project construction would disrupt groundwater monitoring or extraction activities, the City and Aerojet shall identify and implement measures in the construction plans and specifications that will ensure that necessary extraction and monitoring activities can be maintained at all times during project construction.

### Long-Term Operational Impacts

Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and would be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required by NPDES permits, and with adherence to other applicable water quality regulations, pollutant levels in stormwater runoff would not be expected to exceed applicable water quality standards.

If any existing extraction or monitoring wells must be permanently relocated as a result of the project, the City shall coordinate with Aerojet and applicable regulatory agencies to design and install these wells in a manner that ensures that required extraction and monitoring activities are maintained at all times.

The proposed project would implement low impact development (LID) methods and features where possible. Emphasis to date on BMP selection has been focused on the siting of BMPs at specific locations to provide direct source control or end-of-pipe treatment. Trends in sustainability have shown that an integrated system of decentralized, small-scale control measures that encourages infiltration, filtration, storage, evaporation and detention of runoff to mimic natural hydrology can be more efficient in reducing the volume and rate of stormwater runoff. Some potential LID methods include grassy swales along U.S. 50 adjacent to the freeway and bioretention cells along the overcrossing structure where trees are located. A portion of the pavement runoff could also be directed to tree boxes to provide irrigation and filtration. Permeable pavers could also be used for sidewalks and bike paths on embankment fills to allow water infiltration. The design team will continue to look at other LID opportunities during the design process.

### *Erosion and Siltation*

### Temporary Construction Impacts

BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality.

Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved project SWPPP based on the Risk Level determined under the NPDES General Construction Permit guidelines; however, temporary concrete washouts, stabilized construction entrance/exits, silt fencing, sand bag barriers, gravel bag berms, and fiber rolls have been identified as potential construction site BMPs to control increased erosion and sedimentation and to prevent construction site runoff from entering adjacent waterways. In addition, ground disturbance within Buffalo Creek Channel associated with the culvert extension would occur during the dry season to minimize siltation impacts to flowing water. With implementation of BMPs required for NPDES permits and other applicable water quality regulations, short-term erosion and siltation impacts will be adequately controlled.

### Long-Term Operational Impacts

To accommodate the additional runoff, the project would include a new drainage system that will collect runoff water from the interchange facility and infiltrate it into the ground. The new drainage system will be designed to accommodate all collected runoff and would ensure that the runoff would not enter the Folsom South Canal. Design measures will be incorporated into slopes, benching, rounding, and terraces to minimize concentrated flows. Where feasible, 4:1 slopes will be included in the project design to minimize the potential for concentrated flows. Revegetation and landscaping would also be incorporated into design to reduce water flow and erosion potential.

In addition to design BMPs, treatment BMPs will be implemented as required by NPDES permits to further remove pollutants from runoff water. Specific BMPs will be identified as project design advances and would be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With incorporation of design and treatment BMPs and adherence to other applicable water quality regulations, scour and erosion within Buffalo Creek would be avoided.

### *Materials Discharge*

### Temporary Construction Impacts

Construction BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. The project SWPPP will require the contractor to identify the location of designated staging areas, would include specific requirements for equipment fueling, maintenance, and storage processes, and will include stormwater BMPs to prevent the release of polluted stormwater into adjacent waterways. With adherence to the NPDES

requirements and implementation of applicable BMPs, short-term impacts to water quality related to materials discharge will be adequately controlled during construction.

### Long-Term Operational Impacts

Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and will be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required by NPDES permits and adherence to other applicable water quality regulations, pollutant level in stormwater runoff will not be expected to exceed applicable water quality standards.

### *Beneficial Water Uses*

### Temporary Construction Impacts

Construction site BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction will be identified as project design advances and finalized within the approved project SWPPP; however, temporary concrete washouts, stabilized construction entrance/exits, silt fencing, sand bag barriers, gravel bag berms, and fiber rolls have been identified as potential construction site BMPs to control increased erosion and sedimentation and to prevent construction site runoff from entering adjacent waterways. With implementation of BMPs required for NPDES permits and other applicable water quality regulations, no violation of applicable water quality standards or waste discharge requirements will be expected to occur, and no impacts to beneficial uses of these waterways will be anticipated.

### Long-Term Operational Impacts

Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and will be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required for NPDES permits and other applicable water quality regulations to remove pollutants from runoff water, impacts to beneficial uses of receiving waters would not be anticipated.

## *Drainage Capacity and Polluted Runoff*

### Temporary Construction Impacts

Construction site BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction will be identified as project design advances and finalized within the approved project SWPPP; however, temporary concrete washouts, stabilized construction entrance/exits, silt fencing, sand bag barriers, gravel bag berms, and fiber rolls have been identified as potential construction site BMPs to control increased erosion and sedimentation and to prevent construction site runoff from entering adjacent waterways. The project SWPPP will also require the contractor to identify the location of designated staging areas and will include specific requirements for equipment fueling, maintenance, and storage processes.

With implementation of BMPs required for NPDES permits and other applicable water quality regulations, short-term impacts related to drainage capacity and polluted runoff will be adequately controlled during construction.

### Long-Term Operational Impacts

Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and will be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required by NPDES permits and with adherence to other applicable water quality regulations, pollutant level in stormwater runoff will not be expected to exceed applicable water quality standards.

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

### **Regulatory Setting**

For geologic and topographic features, the key federal law is the Historic Site Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans’ Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated

Maximum Credible Earthquake from young faults in and near California. The Maximum Credible Earthquake is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

## **Affected Environment**

### ***Local Geology and Project Site Topography***

#### *Regional Setting*

The majority of Sacramento County, as well as the entire City of Rancho Cordova and the project site, lay within the Great Valley geomorphic province.<sup>17</sup> The Great Valley geomorphic province is generally described as a relatively flat alluvial plain, about 50 miles wide and 400 miles long, with thick sequences of sedimentary deposits of Jurassic through Holocene age. The ground surface elevation in the project vicinity ~~of the project area~~, as shown on a collection of U.S. Geological Survey (USGS) topographic map quadrangles, ranges from approximately 10 to 150 feet above mean sea level.

#### *Project Site*

The project site is generally flat, ranging from about 130 to 140 feet in elevation throughout the site. There are no distinctive geological features, although it is evident that most of the area has been mined for gold in the past, leaving an irregular surface throughout the project site.

#### *Faults and Seismicity*

The project sitearea is located in an area of relatively low seismic potential. No earthquake faults are known to exist at or near the project site. Sacramento County is less affected by seismic events and other geologic hazards than other portions of the state. Nevertheless, some property damage has occurred in the past. The damage that was experienced has largely been the result of major seismic events occurring in adjacent areas, especially the San Francisco Bay area and, to a lesser extent, the foothills of the Sierra Nevada range. The areas of Sacramento County most vulnerable to seismic and geologic hazards are those areas subject to liquefaction, shaking, and subsidence. The Central Valley, like most of California, is a seismically active region.

#### Ground Shaking

Ground shaking is motion that occurs as a result of energy released during faulting. The damage or collapse of buildings and other structures caused by ground shaking is among

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<sup>17</sup> A “geomorphic province” is an area with similar geologic origin and erosional/depositional history.

the most serious seismic hazards. The intensity of shaking and its potential impact on buildings is determined by the physical characteristics of the underlying soil and rock, building materials and workmanship, earthquake magnitude and location of epicenter, and the character and duration of ground motion. Much of Sacramento County is located on alluvium, which increases the amplitude of the earthquake wave. Ground motion lasts longer and waves are amplified more on loose, water-saturated materials than on solid rock. As a result, structures located on alluvium typically suffer greater damage than those located on solid rock.

The California Division of Mines and Geology map shows the eastern and central portions of Sacramento County, which include the project site, in a relatively low intensity ground-shaking zone. The geologic literature indicates that no major active faults transect Sacramento County. While Sacramento County has experienced relatively little seismic activity, faulting in neighboring regions, especially the San Francisco Bay area and the Sierra Nevada, suggests that the county could be affected by future ground motion originating elsewhere. Because of this, the project is required to meet the seismic standards contained in the Uniform Building Code of Seismic Zone 3 in order to minimize impacts resulting from ground motion originating outside the region.

### Liquefaction

Liquefiable soils are low-density soils that, when saturated and concurrently subjected to high-intensity ground shaking, dilate due to excessive hydrostatic forces and behave as a liquid rather than a solid matrix. The evaluation of potential for liquefaction is complex, and factors that must be considered include soil type, soil density, groundwater tower, and the duration and intensity of shaking. Liquefaction is most likely to occur in deposits of water-saturated alluvium or similar deposits of artificial fill. Within Sacramento County, the Delta and downtown Sacramento are the two areas most susceptible to liquefaction in the event of an earthquake. However, given the relatively dense/stiff nature of the soils underlying the project site, combined with the lack of groundwater in the upper 50 feet of soil, the potential for liquefaction is considered to be low.

### *Soils*

According to the Soil Survey of Sacramento County, California, four soil types have been mapped in the project study area, including (USDA 1993):

- Natomas loam, 0–2 percent slopes.
- Natomas-Xerorthents dredge tailings complex, 0–50 percent slopes.

- Xerorthents, dredge tailings, 2–50 percent slopes.
- Xerorthents, dredge tailings–urban land complex, 0–2 percent slopes.

**Figure 2.2.3-1** illustrates the various soils identified within the project [vicinityarea](#).

The Natomas loam series contains moderately deep, well-drained soils. The surface layers generally consist of loam from 0 to 33 inches in depth followed by clay loam subsoil from approximately 33 to 78 inches deep. Permeability is moderately high with a high water capacity. The shrink-swell potential (potential of soil to shrink or expand with changing moisture conditions) for this soil series is moderate.

The Natomas-Xerorthents dredge tailings complex series slopes from 0 to 50 percent and consists of moderately deep and moderately to highly drained soils on low terraces. The surface layer is generally composed of loam from about 0 to 33 inches in depth followed by a clay loam subsoil from approximately 33 to 78 inches deep. The shrink-swell potential for this soil series is low to moderate.

The Xerorthents, dredge tailings series slopes ranging from 2 to 50 percent and consists of somewhat excessively drained soils. The permeability is very high with a very low water capacity. The shrink-swell potential for Xerorthents-dredge tailings is low.

The Xerorthents, dredge tailings–urban land complex series slopes from 0 to 2 percent and consists of somewhat excessively drained soils. The soil permeability is very high with very low water capacity. The shrink-swell potential for this soil series is low.

## **Environmental Consequences**

### ***Faults and Seismicity***

#### *No Build Alternative (2037 Conditions without the Project)*

Under the No Build alternative, there would be no increased risk of impact associated with faults and seismicity hazards to the existing roadways or freeway mainline because the project would not be implemented.

#### *Alternative 3 (Proposed Project)*

The project [sitearea](#) is located in an area of low seismic risk. The design and construction of the site facilities will incorporate protections against known seismic hazards pursuant to the most recent design standards and the California Building Code. Impacts associated with faults and seismicity hazards are subject to uniform site development and

construction standards relative to seismic and other geologic conditions that are prevalent within the region.

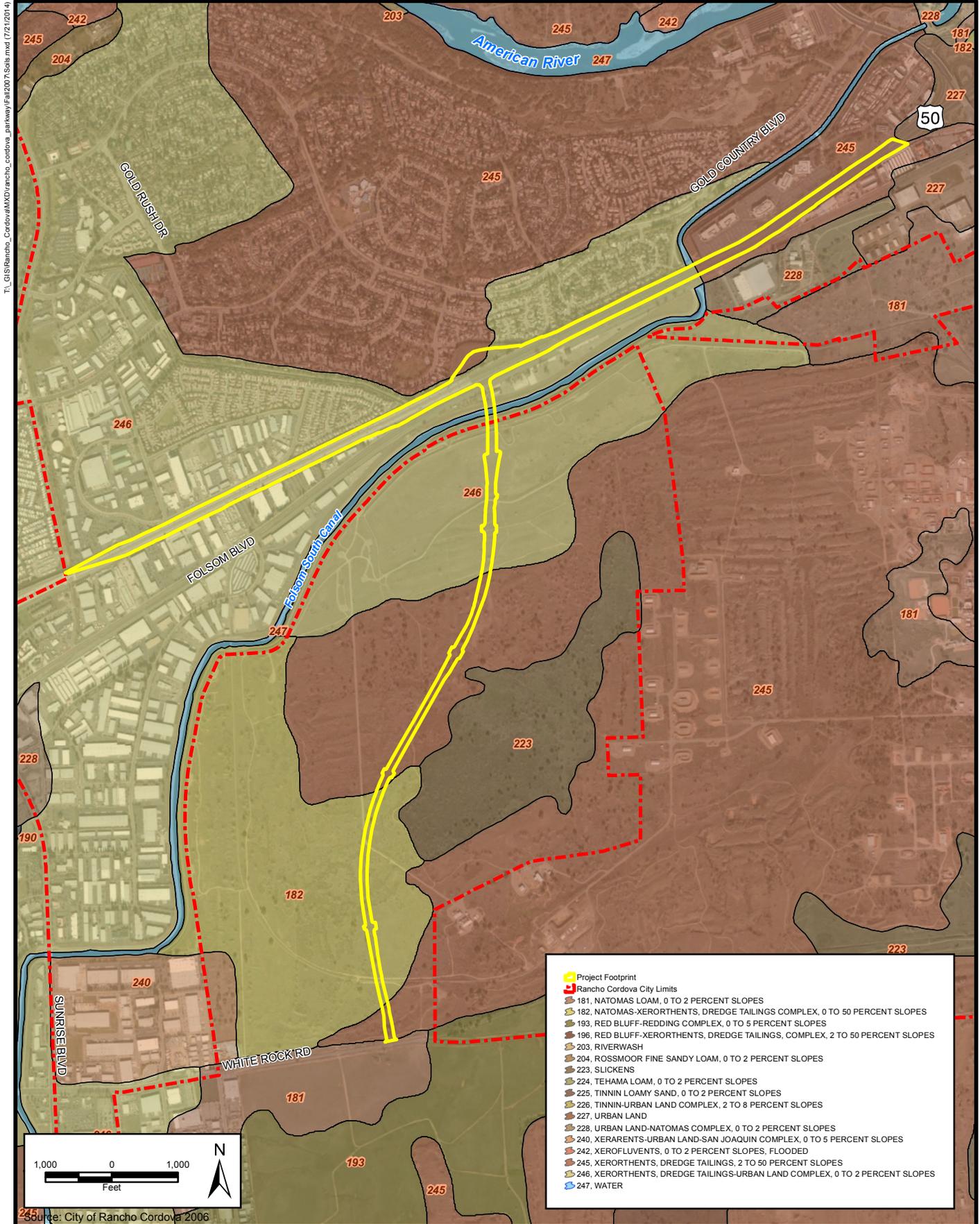
### **Soils**

#### *No Build Alternative (2037 Conditions without the Project)*

Under the No Build alternative, there would be no impact to the soils surrounding the existing roadway and freeway mainlines because the project would not be implemented.

#### *Alternative 3 (Proposed Project)*

Settlement caused by soils with a moderate shrink-swell potential could occur on the project site and affect proposed structures. Structures could be damaged by differential settlement due to soil expansion and contraction. When structures are located on expansive soils, foundations have the tendency to rise during the wet season and shrink during the dry season.



T:\GIS\Projects\_Cordova\Map\rancho\_cordova\_planning\2007\Soils.mxd (7/2/2014)



City of Rancho Cordova  
Planning Department

Figure 2.2.3-1  
Soils Map



Movements can vary under structures, which in turn create new stresses on various sections of the foundation and connected utilities. These variations in ground settlement can lead to structural failure and damage to infrastructure.

According to the USDA Soil Conservation Service, Soil Survey of Sacramento County, California, 1993, the project site is located in an area with a high shrink-swell potential. This could result in structure settlement and potential damage from differential settlement, and measures are needed to address the potential impact.

Please see Section 3.2.9 for additional information on geology, soils, seismic, and topography impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Faults and Seismicity***

No measures are required.

### ***Soils***

Prior to approval of grading or improvement plans, whichever occurs first, the City of Rancho Cordova shall conduct a soil sample and laboratory test to determine the expansion potential and stability of the soil for development of the project site. If it is determined that the area contains expansive soils, one or more of the following measures shall be employed to stabilize the area affected by expansive soils:

- Expansive soils shall be excavated and replaced with non-expansive materials. The required depth of excavation shall be specified by a registered civil engineer based on actual soil conditions.
- Expansive soils shall be treated in place by mixing them with lime. Lime treatment alters the chemical composition of the expansive clay minerals such that the soil becomes non-expansive.
- Other engineering practices for addressing expansive soil conditions considered appropriate by Caltrans and the City of Rancho Cordova Public Works Department shall be implemented.

#### 2.2.4. Hazardous Waste/Materials

##### Regulatory Setting

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

The main federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act of 1976 provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

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

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

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

### **Affected Environment**

A Phase I Initial Site Assessment (ISA) was conducted in March 2007. The Phase I ISA included a review of local, state, and federal environmental records resources; interviews with USEPA, DTSC, and Central Valley RWQCB; a review of historical sources, aerial photographs, fire insurance maps, and physical setting resources; a reconnaissance survey of the project area; interviews with the current property owners; and preparation of a report summarizing findings and conclusions.

### **Project Setting**

The project [sitearea](#) is situated approximately 130 feet above mean sea level. According to the Geologic Map of the Sacramento Quadrangle,<sup>18</sup> the study area is underlain by dredge tailings. The dredge materials consist of cobbles and silt excavated during historic mining activities. According to the Central Valley RWQCB, the depth to groundwater is generally greater than 100 feet below ground surface; however, shallower pockets of perched groundwater may be present near the southern portion of the study area due to the previous discharging of extracted groundwater to the ground surface.

Along the north side of U.S. 50, the study area is bordered by Pyrites Way, various office complexes, and residential areas. The south side of U.S. 50 is bordered by Folsom Boulevard and various retail buildings including furniture stores. The Aerojet [rocket engine](#) testing and manufacturing facility is located south and east of the project [sitearea](#).

### **Historical Uses of the Project Area and Adjacent Properties**

The project [sitearea](#) is located in an area known as the American River Gold Mining District, in which dredge mining was conducted between the 1800s and 1950s. Dredging became the preferred method of gold mining in California in the early 1900s, and it dramatically altered the landscape. Rivers and streams were dammed to create ponds to float dredges, areas were denuded of vegetation, and long lines of tailings reaching heights of 30–50 feet were created as the result of dredging activities. Historical aerial photographs dating back to 1952 indicate the project area and most of the adjoining properties originally consisted of dredge tailings.

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<sup>18</sup> D.L. Wagner et al. 1987

The Natomas Company began to sell lands exhausted by dredge mining in 1950 to GenCorp/Aerojet-~~General Corporation~~. Development of the Aerojet testing and manufacturing facility began around the 1950s. Since 1953, Aerojet and its subsidiaries have manufactured liquid and solid propellant rocket engines for military and commercial applications and have formulated a number of chemicals, including rocket propellant agents and agricultural, pharmaceutical, and other industrial chemicals. In addition, the Cordova Chemical Company operated chemical manufacturing facilities on the Aerojet property~~complex~~ from 1974 to 1979 (City of Rancho Cordova 2006a). Both companies disposed of unknown quantities of hazardous waste chemicals, including TCE and other chemicals associated with rocket propellants, as well as various chemical processing wastes.

Both the U.S. 50/Hazel Avenue interchange and U.S. 50/Sunrise Boulevard interchange were constructed in the late 1950s to 1960s, and large-scale commercial and residential development along U.S. 50 and Folsom Boulevard began in the 1970s. Residential communities north of U.S. 50 were constructed in the 1980s and 1990s.

### **Existing Conditions**

A records search of local, state, and federal databases was conducted for the project sitearea and a one-mile radius surrounding the project sitearea (see **Table 2.2.4-1**).

**Table 2.2.4-1  
Databases Reviewed for the Phase I ISA Study**

<b>Federal Databases</b>	<b>Search Distance</b>
National Priorities List (NPL)	1 Mile
Comprehensive Environmental Response Compensation Liability Information System (CERCLIS)	1 Mile
CERCLIS-NFRAP (No Further Remedial Action Planned)	1 Mile
Resource Conservation and Recovery Act (RCRA)	1 Mile
Environmental Response Notification System (ERNS)	1 Mile
<b>State Databases</b>	<b>Search Distance</b>
Leaking Underground Storage Tank (LUST)	1 Mile
The Facility Inventory Database (Ca FID)	1 Mile
Spills, Leaks, Incidents, Complaints (SLIC)	1 Mile
California Hazardous Materials Information System (CHMIRS)	1 Mile
Cortese Hazardous Waste and Substances Site List	1 Mile
Properties Needing Further Evaluation (NFE) – DTSC’s list of sites suspected of being contaminated	1 Mile

Source: ENGEO, March 2007

While the project site itself was not listed on the federal American Society for Testing and Materials Standard or supplemental databases, several properties within 1 mile of the project site are listed on these databases. These surrounding properties include the Aerojet ~~Corporation~~ property located at U.S. 50 and Aerojet Road, which is identified in the National Priority List database and is the origination site of contaminated groundwater that has migrated below the project site. Given the distance separating the study area from the listed properties, depth to groundwater, and available database information, none of the listed properties would be expected to affect the project ~~site~~ area, with the exception of existing groundwater contamination from the Aerojet property, described in more detail below (please also see the “Aerojet Facilities” discussion at the end of this section).

The project area was surveyed on June 12, 2006, for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that would be indicative of potential sources of soil contamination. The site was also reviewed for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or preexisting underground storage tanks. No indications of hazardous substances were observed on the ground surface during the survey.

#### *Transportation of Hazardous Materials*

U.S. 50 is an approved transportation route for explosives and poisonous inhalation hazards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is a loss of containment or a fire. There also is potential for hazardous materials to be transported along the UPRR tracks.

#### *Groundwater Contamination*

~~The parkway~~A portion of the proposed project site area is within the western portion of the Aerojet property. Aerojet has historically used the land within the study area as a buffer zone. The buffer zone, which consists of vacant land, provides a safe zone between the adjacent residential areas and the bunkers used to store explosives at the Aerojet property. The USEPA, DTSC, and the Central Valley RWQCB have found no evidence of impacts to the surficial portion (soils) of the land within the buffer zone. In 2002, the buffer zone was “carved-out” from the Superfund boundaries and removed from the National Priorities List.

Although soils have not been affected, groundwater beneath the project site area is impacted with perchlorate, TCE, and NDMA. The impacted groundwater, which originated at the off-site Aerojet testing and manufacturing facility, has migrated beneath

the project [sitearea](#). The depth to groundwater beneath the project [sitearea](#) is generally greater than 100 feet below ground surface, although there may be areas of shallower perched groundwater near the southern portion of the proposed Rancho Cordova Parkway alignment due to previous discharging of treated groundwater to the ground surface. Groundwater extraction wells are located throughout the Aerojet property. Aerojet extracts and discharges groundwater under requirements set forth in an NPDES permit (Order No. R5-2006-0013, NPDES No. CA0083861).

### *Lead-Containing Materials*

Lead is a highly toxic metal that was used for many years in products in and around homes, including paint and fuels. Lead-based paints were phased out of production in the early 1970s; however, older structures and facilities may still contain lead-based paints. During construction, workers can be exposed to airborne lead during renovation, maintenance, or removal activities. Lead has been linked to a wide range of health effects, from behavioral problems and learning disabilities to seizure and death. There are two structures within the project [vicinityarea](#) that could be demolished to accommodate the project; however, they were both constructed subsequent to 1990. Therefore, they would not have utilized lead-based paints.

### *Aerially Deposited Lead*

Aerially deposit lead (ADL) is lead that is deposited within unpaved areas or previously unpaved areas, primarily due to vehicle emissions. ADL is typically found within the top several feet of material in unpaved areas within heavily traveled roadway rights-of-way. Disturbance of soils contaminated with ADL can expose people in the area to airborne inorganic lead. The soils adjacent to U.S. 50 may contain concentrations of ADL.

### *Yellow Thermoplastic Striping*

Yellow thermoplastic highway striping may contain heavy metals such as lead and chromium, in concentrations that can be hazardous based on California hazardous waste regulations. Removal of these striping materials and older paint formulations from the pavement may create residues that exceed regulatory thresholds for lead. These striping materials may also emit toxic fumes when heated. No yellow thermoplastic striping was observed during the site reconnaissance; however, if any yellow plastic striping must be removed as part of the proposed project, sampling and testing the yellow traffic stripe to determine the concentration of lead chromate should be performed prior to removal. A Standard Special Provision 15-300 needs to be included in the contract special provisions. Appropriate disposal at a Class 1 facility may be required.

### *Polychlorinated Biphenyls*

The manufacturing of polychlorinated biphenyls (PCBs), commonly associated with fluorescent lights and electrical transformers, was banned by USEPA, as PCBs may pose a hazard to humans and the environment. Electrical facilities constructed after 1979 are unlikely to be associated with PCB-containing transformers; however, actual levels of PCBs can only be confirmed by sampling and analysis of equipment. During field surveys, five pole-mounted transformers were observed on the north side of U.S. 50, east of Sunrise Boulevard.

### *Asbestos*

Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos-containing materials. Asbestos is a general name for a group of naturally occurring minerals composed of small fibers and is common in many building materials. Various diseases have been associated with exposure to asbestos fibers, including risks of cancer and respiratory related illnesses and diseases. As long as asbestos-containing materials remain in good condition and are not disturbed or damaged, exposure is unlikely; therefore, during demolition activities, there is an increased potential risk of exposure to asbestos-containing materials.

Between 1978 and 1979, the federal government banned nearly all uses of friable asbestos in building materials. Therefore, existing structures built subsequent to 1979 are considerably less likely to contain asbestos in their building materials. There are two structures within the project [vicinityarea](#) that could be demolished to accommodate the project; however, they were both constructed subsequent to 1990. Therefore, they would not have been constructed with asbestos-containing materials.

Naturally occurring asbestiform minerals are found in many geologic settings worldwide, and adverse health effects are attributable to them in a wide variety of circumstances. Asbestiform minerals are generally associated with the metamorphism of ultramafic rocks, such as serpentine, but the various asbestiform minerals can be found in association with a wide variety of geological environments, including sedimentary and igneous. The geological formations underlying the proposed project [site and surrounding area](#) consist mostly of Cenozoic Quaternary gravelly alluvial and glacial deposits from the ancestral channel of the American River, which date back to the mid-Pleistocene age or approximately 600,000 years. None of the soil types identified in the proposed project [vicinityarea](#), as described in Section 2.3.2, “Wetlands and Other Waters,” are derived from serpentine or ultramafic rocks. According to the *Relative Likelihood for the Presence of Naturally-Occurring Asbestos in Eastern Sacramento County* (Department of

Conservation, California Geological Survey 2006), the proposed project [sitearea](#) is considered in the category “Areas Least Likely To Contain Naturally Occurring Asbestos.” The report concludes that the rock types underlying the proposed project [site and surrounding](#) area (unconsolidated alluvium and tailings from gold dredging) have a lower relative likelihood for the presence of naturally occurring asbestos (NOA) than the other rock types in eastern Sacramento County because of their chemical and/or physical characteristics. Thus, NOA is not expected to be an issue of concern.

## **Environmental Consequences**

### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, any hazardous materials that would otherwise be disturbed by construction activities would remain undisturbed. Additionally, any hazardous materials that may be used during project construction would not be used under the No Build alternative because project construction would not take place.

### ***Alternative 3 (Proposed Project)***

#### ***Contaminated Groundwater***

Dewatering may be required during construction of the CIDH piles, if pile-driving activities reach a sufficient depth as to encounter groundwater. Groundwater beneath the project [sitearea](#) is contaminated with perchlorate, TCE, and NDMA, and it is considered hazardous; therefore, accidental contact with contaminated groundwater during dewatering activities could pose a risk to construction personnel. If not handled properly, release of this water on-site or into adjacent waterways could impact water quality. In addition, depending on the final alignment of the interchange structure and Rancho Cordova Parkway, construction activities could temporarily impact Aerojet’s existing extraction wells and monitoring wells required for sampling and monitoring of contaminated groundwater, which could affect Aerojet’s ability to monitor water quality.

#### ***Lead-Containing Materials***

Soils adjacent to U.S. 50 may be contaminated with ADL. During demolition, removal, construction, and grading activities, construction within the project [sitearea](#) could result in the disturbance of lead-based materials and expose persons to airborne lead material. Removal of yellow thermoplastic striping during construction could expose workers to lead.

### *PCB Transformers*

Five pole-mounted transformers were observed on the north side of U.S. 50, east of Sunrise Boulevard. Removal or relocation of these poles during construction could result in exposure and disposal of PCBs.

### *Other Construction-Related Impacts*

The ISA completed for the project did not identify any evidence of ground surface contamination from hazardous substances within the project limits; however, there is potential that site grading and construction activities within the project [sitearea](#) could result in disturbance of unidentified contaminated soils. If unknown contaminated soil is disturbed by construction activities, it could pose a health threat to construction workers, the public, and the environment. In addition, construction activities associated with the project would include refueling and minor maintenance of construction equipment on location, which could lead to minor fuel and oil spills.

### *Schools*

There are no existing schools within one-quarter mile of the proposed project [sitearea](#). South of U.S. 50, the currently vacant land is planned for development that may include the construction of schools. Section 17213 of the California State Education Code mandates that a school site must not be located within one-quarter mile of a hazardous materials site. Considering these requirements, the project would not be expected to have impacts related to existing or future planned schools.

### *Airports*

The project is not located within an airport planning area or within 2 miles of a public use or private airport; therefore, the project would not create any safety hazards for people working or living within these areas.

### *Emergency Plans*

The project is located in an area covered by several emergency plans, including the Sacramento County Area Plan and the Sacramento County Multihazard Disaster Plan. The proposed interchange would serve to improve traffic circulation in the area and would be expected to improve emergency access during operation. The project would not impede or conflict with the objectives or policies of the identified emergency response plans and evacuation plans. However, traffic within the project [site and surrounding](#) area, including Folsom Boulevard and U.S. 50, may be affected for periods of time during construction.

### *Wildland Fires*

The project site is bordered by primarily urbanized portions of Rancho Cordova and Sacramento County; however, south of Folsom Boulevard the vacant portion of the Aerojet property consists of primarily grasslands, shrubs, and trees. While this area has the potential for fire, the closest residents are located across U.S. 50 to the north, and risk to these homes is considered low. There are several structures associated with the Aerojet property located within this area.

The proposed project would include a new concrete interchange structure and roadway, the operation of which would not result in additional fire risk. However, temporary construction activities involving the use of combustion engines could result in increased risk of fire in the area.

Please see Section 3.2.10 for additional information on hazardous waste impacts.

### **Aerojet Facilities**

#### Specifics Related to Aerojet Rocketdyne (Aerojet) Property

##### *Magazines*

Towards the western limits of the ~~Aerojet Rocketdyne (Aerojet)~~ property, Aerojet has multiple storage buildings used to store solid propellants and explosives. Aerojet calls these facilities magazines. The storage of these solid propellants and explosives is regulated by the Department of Defense (DOD) and is subject to the DOD Contractor's Safety Manual for Ammunition and Explosives (DOD Manual 4145.26M dated March 2008). An important concept in complying with the DOD requirements is quantity distance. As defined in the DOD manual, quantity distance is "the quantity of explosive material and distance separation relationships that provide defined types of protection. These relationships are based on levels of risk considered acceptable for the stipulated exposures... Separation distances are not absolute safe distances but are relative protective or safe distances." Based on quantity distance, arcs are established based on the defined level of protection related to pressure (PSI); these arcs are called quantity distance arcs.

These quantity distance arcs address the maximum PSI allowed at the property line in the event that any propellant or energetic material explodes. The quantity distance arcs are based on the quantities of energetics stored within the magazines, and are part of the site map, which has been approved by the DOD. The purpose of the quantity distance arc is to minimize the effects of an accidental or unplanned explosion due to overpressure,

thermal wave, or fragmentation, any of which can result in serious personal injury and property damage.

Under the DOD standards, the quantity distance arc related to 1.0 PSI is used as the basis for regulation. The DOD regulations restrict certain uses with the 1.0 PSI quantity distance arc. The proposed project is located outside the 1.0 quantity distance arc. Therefore, the proposed project is not subject to any DOD regulations and, therefore, does not conflict with any DOD regulations based on quantity distance arc requirements.

The proposed project is located within the area subject to the Aerojet Special Planning Area Zoning Ordinance (SPA) adopted by the County in 1994 and amended in September 1997; and the Aerojet SPA is incorporated into the City Zoning Code section 23.1000.030. The SPA contains some provisions relating to quantity distance arc. Section 508-310(b) of the SPA states: “Aerojet has agreed to conduct its business in such a manner that overpressures generated, if any, will not exceed 0.50 PSI at any of its borders. Aerojet has also agreed to conduct its business such that overpressures generated, if any, will not exceed 0.25 PSI on any of the facilities of the adjacent commercial and recreational use commonly known as The Mine Shaft, which commitment will continue for so long as such or similar land uses exist on that site.”

The proposed project is not located within the area commonly known as The Mine Shaft. So, the SPA provisions on the quantity distance arc relating to 0.25 PSI do not apply to the proposed project. It is unclear if the SPA regulation relating to Aerojet maintaining a maximum of 0.50 PSI “at any of its boundaries” applies to the proposed project because it will not change the Aerojet boundaries. However, since the proposed project will result in the construction of a public roadway on Aerojet’s property that will be used by members of the public, the City has agreed that the project will be constructed in a manner that does not conflict with DOD regulations and any applicable quantity distance arc provisions under the SPA. The location of the 0.50 PSI quantity distance arc will be determined during final design (Plans, Specifications, and Estimate) of the roadway.

During the project development process, Aerojet also raised issues regarding the security of its property boundary during construction and operation of the proposed parkway. The City has agreed to work with Aerojet to ensure that any fencing and perimeter security directly impacted by the proposed project is replaced and/or relocated to maintain security on the Aerojet [property site proximate to the interchange and parkway](#). In particular, the City has agreed, as part of the project, to build a security fence on the eastern side of the portion of the proposed roadway located on [the](#) Aerojet property unless the adjacent property to the east has been developed for residential or commercial

uses at the time the roadway is built. The City has also agreed, as part of the proposed project, to determine, in consultation with Aerojet, the need for a security fence on the western side of the portion of the proposed roadway located on Aerojet's property at the time of construction of the roadway, based on the status of the ownership and development of the adjacent land located to the west at that time.

*Regulatory Approvals and Real Property Issues, including Groundwater Contamination*

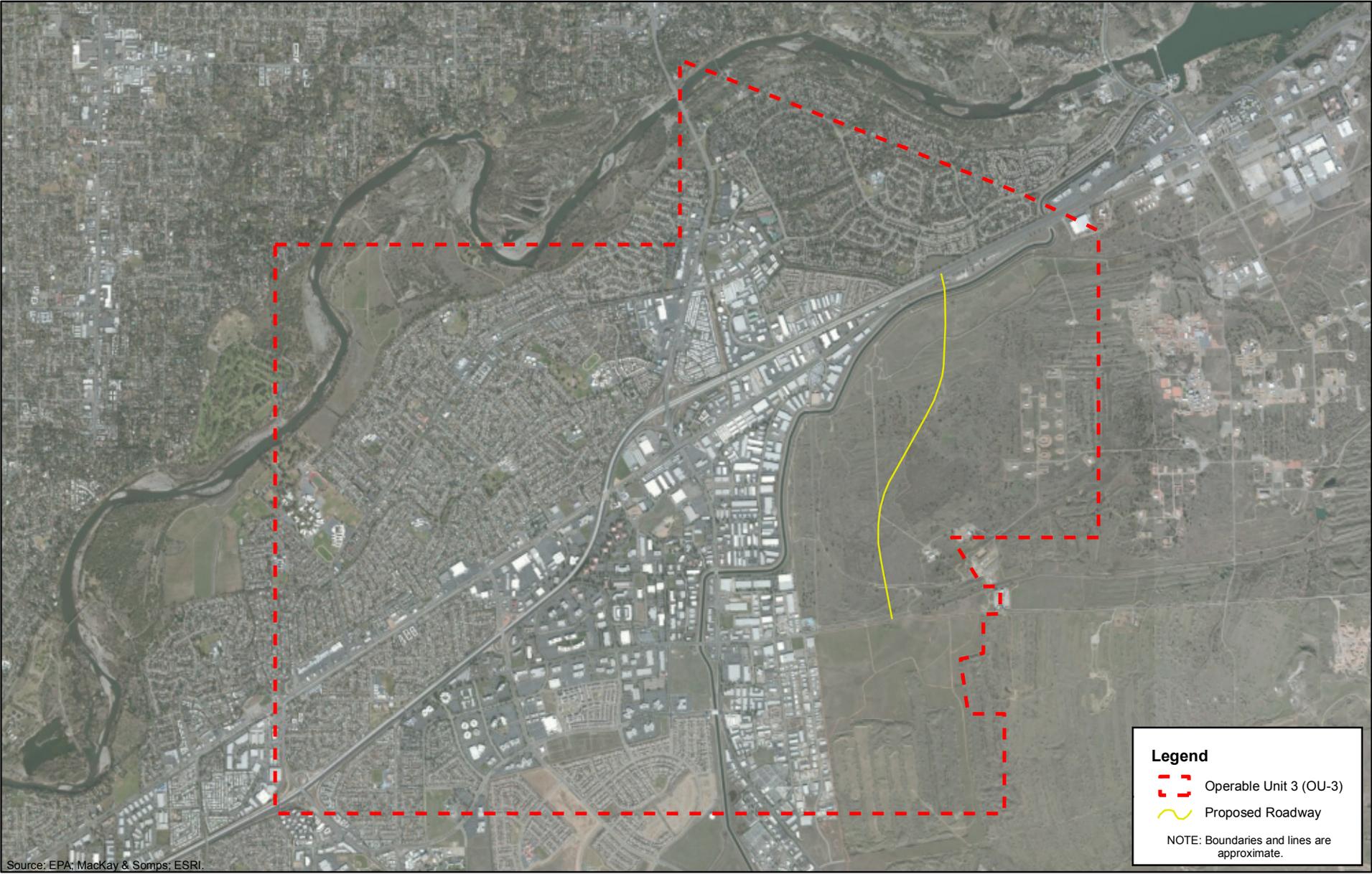
Portions of land surrounding and within the proposed project **sitearea** are subject to regulatory oversight by the U.S. Environmental Protection Agency (EPA), California Regional Water Quality Control Board, and/or the California Department of Toxic Substances Control (DTSC) as a result of groundwater contamination associated with the Aerojet **testing and manufacturing** facility. Under a 1989 Partial Consent Decree (PCD), Aerojet is obligated to investigate contamination conditions on its facility. The PCD requires the completion of a Remedial Investigation (RI) and Feasibility Study (FS) on an operable unit basis. The RI is a report detailing the nature and extent of contamination and the FS describes alternatives to address the contamination. In order to prioritize investigation and cleanup work, and to accelerate cleanup, the Aerojet Superfund Site has been divided into Operable Units (OUs). Each OU has or will have its own cleanup plan, which is subject to separate environmental and public review. EPA Region 9 maintains a webpage for the Aerojet Superfund Site that contains links to the documents, reports, public meeting minutes, and other additional information regarding the nature and extent of the contamination at the site, as well as the proposed cleanup plans and status of the cleanup efforts to date. The information found on the EPA Region 9 Aerojet Superfund Site webpage is incorporated into this document by reference.<sup>19</sup>

With the exception of a very small sliver of land within the northern section of the proposed Rancho Cordova Parkway, the proposed project is located within the geographic area of groundwater contamination that has been designated by the EPA as Operable Unit 3 (OU-3)<sup>20</sup>; see **Figures 2.2.4-1** and **2.2.4-2**.

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<sup>19</sup> EPA Region 9, Superfund, Site Overview, Aerojet General Corp. <http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dec8ba3252368428825742600743733/60508b9cae7346f088257007005e9436!OpenDocument>. Accessed October 22, 2013.

<sup>20</sup> This geographic area has also been referred to as the Western Groundwater Study Area. [Please see Declaration of Covenants and Environmental Restrictions recorded April 1, 2003, in Book 20030401, page 2637.](#)



Source: EPA, Mackay & Soms, ESRI.

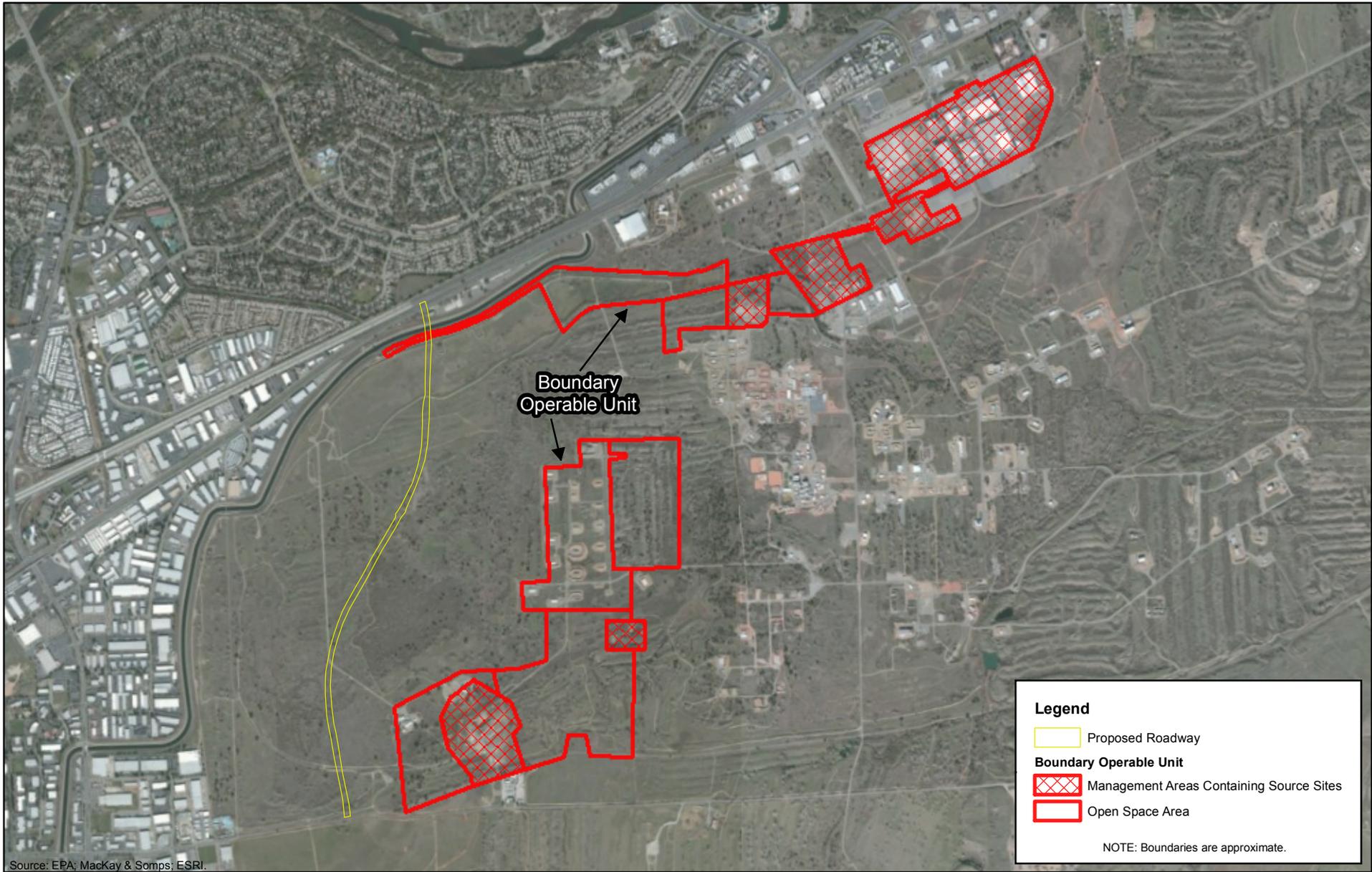


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**Figure 2.2.4-1**  
Western Groundwater Operable Unit 3 (OU-3) Boundary

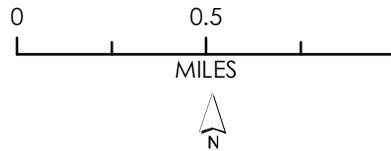




Source: EPA; MacKay & Somp; ESRI.



City of Rancho Cordova  
Planning Department



**Figure 2.2.4-2**  
Boundary Operable Unit On Aerojet Property



The area designated as OU-3 is under the jurisdiction of the EPA and is subject to the PCD. The cleanup plan for OU-3 was approved by the EPA in a Record of Decision dated July 20, 2001 and a Unilateral Administrative Order for OU-3 was issued by the EPA on August 9, 2002.

The remediation within OU-3 is focused on the clean-up of groundwater contamination; the groundwater within this area was found to contain detectable levels of several chemicals, including primarily perchlorate, trichloroethylene and other volatile organic compounds, and N-Nitrosodimethylamine (NDMA).

By Stipulation and Order Modifying the PCD entered with the Court in 2001, the EPA granted Aerojet's request to remove portions of Aerojet land from the Superfund designation because of the absence of sources of contamination on the property; these lands are commonly referred to as "carve-out lands." With the exception of the sliver of land at the northern boundary of the Aerojet property, all of the proposed project [site area](#) is within these carve-out lands. The carve-out lands that are within or near the project [site area](#) are subject to a series of Declarations of Covenants and Environmental Restrictions<sup>21</sup>. The covenants and environmental restrictions are focused on groundwater concerns. Most relevant to the proposed project are the following covenants and environmental restrictions:

- A prohibition on installing, operating, or maintaining a sedimentation control basin designed to infiltrate water (unless permitted in writing by Aerojet and the Regional Water Quality Control Board);
- A prohibition on conducting sustained extraction of groundwater that is encountered during excavation for construction (unless expressly permitted in writing by Aerojet and the Regional Water Quality Control Board);
- A right of access for the State of California (e.g., the Regional Water Control Board) and the United States of America (e.g., the EPA) to implement and oversee the implementation of remediation responses, to verify data or information regarding groundwater contamination, and to verify that no action is being taken with respect to groundwater contamination in violation of the

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<sup>21</sup> Declaration of Covenants and Environmental Restrictions Related to Groundwater [Assessor Portions of Parcel Numbers 072-0231-044, 055, 040, 035, 036-0000 and 072-0231-011, 012, 048, 049, 050, 051-0000 final signature 11/20/02 and First Amendment to Declaration of Covenants and Environmental Restrictions Related to Groundwater final signature 8/13/03; Declaration of Covenants and Environmental Restrictions Portions of Parcel Numbers 072-0231-053-0000 and 072-0231-057-0000 final signature 3/12/03 recorded November 22, 2002, in Book 200211-22, page 1899, as amended by that certain First Amendment to Declaration of Covenants and Environmental Restrictions Related to Groundwater recorded August 22, 2003, in Book 20030822, page 462.](#)

covenants and environmental restrictions or any other federal or state environmental laws and regulations.

These covenants and environmental restrictions “run with the land,” which means that any future property owners will be subject to them. In the case of the proposed project, if the City assumes title to the property for the proposed parkway, the City would be subject to these covenants and environmental restrictions. The covenants and environmental restrictions would also apply to the City during construction of the proposed parkway. The construction and operation of the proposed parkway is not inconsistent with these restrictions.

The small sliver of land at the northern limit of the intersection of the proposed project within the Aerojet property boundary was not carved out and is part of the Boundary Operable Unit; see **Figure 2.2.4-2**. This portion of land remains subject to the original requirements of the PCD and is subject to the general terms of the decree<sup>22</sup>. Under the terms of the PCD, before granting any possessory real property interests, Aerojet must give not less than 60 days prior notice to the California Attorney General and the United States with the grantee’s name, the intended uses of the land by the grantee, and Aerojet’s obligations, if any, to be performed by the grantee. For the proposed project, Aerojet would need to give notice, as stated above, that the City was assuming title to the property for purposes of building, operating, and maintaining the parkway<sup>23</sup>. U.S. EPA issued a proposed cleanup plan for the Boundary Operable Unit for public comment through September 20, 2013, but it has not yet been approved. It did not identify any sources on the sliver that are within the project footprint. However, it is anticipated that the land will also be subject to land use restrictions that restrict use and access to groundwater other than for remediation purposes.

See Section 2.2.2 for a discussion of potential impacts and measures related to Aerojet’s groundwater monitoring wells and monitoring-related infrastructure.

Aerojet has granted Granite Construction Company exclusive rights to mine or remove aggregate from certain real properties under Aerojet ownership; ~~however, none of those areas are within the proposed project site area. They are located either south of White Rock Road or farther east from the project including all of the Aerojet property across which the parkway is to be constructed.~~

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<sup>22</sup> 2250834.2

<sup>23</sup> Aerojet must provide notice to and receive written confirmation from the regulatory agencies approving the transfer of title to the City before any such transfer can occur, or otherwise approving the construction, operation, and maintenance by the City of the parkway extending south from the interchange onto and across Aerojet property.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Contaminated Groundwater***

Appropriate BMPs will be incorporated into project plans to protect worker safety, and applicable hazardous materials regulations pertaining to collection, testing, and disposal of contaminated groundwater will be followed. Avoidance, minimization, and mitigation measures outlined in Section 2.2.2, “Water Quality and Stormwater Runoff,” will be implemented to further reduce the potential for accidental contact with, or release of, contaminated groundwater or soils.

In addition, as discussed in Section 2.2.2, measures shall be incorporated into the construction plans that comply with applicable regulations that shall ensure worker safety and ensure that groundwater contact with adjacent waterways is avoided.

### ***Lead-Containing Materials***

During project development/final design of the project, Phase II soil sampling shall be conducted within areas of potential ADL. If lead is detected in the soil at concentrations that could pose a health hazard and/or violate local, state, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Rancho Cordova, Sacramento County, and Caltrans. Project construction shall not commence until the site has been remediated and is cleared for construction. If signs of potential contamination (e.g., odors, discolored soil) are observed during construction activity in areas where Phase II sampling was not conducted, sampling and analysis and appropriate remediation shall be conducted.

If yellow thermoplastic striping is to be removed separately from pavement during construction, the City shall require the construction contractor to prepare a project-specific Lead Compliance Plan to prevent or minimize worker exposure to lead while handling removed yellow thermoplastic and yellow paint residue. The plan shall be in accordance with City of Rancho Cordova, Sacramento County, and Caltrans requirements.

Before submission to the City, the plan shall be approved by an industrial hygienist certified in comprehensive practice by the American Board of Industrial Hygiene. The plan shall be submitted to the City for approval at least seven days prior to beginning removal of yellow thermoplastic and yellow paint. The yellow thermoplastic striping shall be removed and disposed of in accordance with the Caltrans Standard Specifications Standard Special Provisions for removal of yellow traffic stripe and pavement markings.

### **PCB Transformers**

If existing transformers are removed as part of the proposed project, the City shall coordinate with the utility companies during final design and ensure that transformers are tested in accordance with applicable regulations. If PCBs are detected in materials to be removed, these materials shall be disposed of in accordance with applicable regulations.

### **Other Construction-Related Impacts**

The use of and handling of hazardous materials during construction would be in accordance with applicable federal, state, and local laws including California Occupational Safety and Health Administration requirements.

Prior to start of construction, the construction contractor shall designate staging areas where fueling and oil-changing activities will take place. The staging areas shall be reviewed and approved by the City's Environmental Mitigation Monitor and the Storm Water Pollution and Prevention Manager prior to the start of construction. No fueling or oil-changing activities shall be permitted outside the designated staging areas. The staging areas, as much as practicable, shall be located on level terrain and away from sensitive land uses such as residences, day care facilities, and schools. Staging areas shall not be located near any stream, channel, wetlands, or other sensitive biological or water resources. The proposed staging areas shall be identified in the SWPPP.

If contaminated soil is encountered during excavation or grading, the construction contractor shall stop work and contact an environmental hazardous materials professional to conduct an on-site assessment. If the materials are determined to pose a risk to the public or construction workers, the construction contractor shall prepare and submit a remediation plan to the appropriate agency and comply with all federal, state, and local laws. Soil remediation methods could include excavation and on-site treatment, excavation and off-site treatment or disposal, and/or treatment without excavation. Construction plans shall be modified or postponed to ensure construction will not inhibit remediation activities and will not expose the public or construction workers to hazardous conditions.

### **Emergency Plans**

Plans for alternative emergency access would be provided to the City for approval prior to the start of construction through the creation of a Traffic Management Plan. The contractor would be required to submit an emergency access plan to accommodate emergency traffic during the construction period, and this plan would be provided to emergency agencies (i.e., fire and police departments) prior to the start of construction.

## **Wildland Fires**

The City would require the construction contractor to clear the staging and development areas of the project site of all dried vegetation or other materials that could serve as fire fuel, and that construction equipment would be equipped with spark arresters.

### **2.2.5. Air Quality**

#### **Regulatory Setting**

The Federal Clean Air Act (FCAA) as amended in 1990 is the federal law that governs air quality. The California Clean Air Act of 1988 is its companion state law. These laws, and related regulations by the USEPA and the California Air Resources Board (CARB), set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns. The criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM, broken down for regulatory purposes into particles of 10 micrometers or smaller – PM<sub>10</sub> and particles of 2.5 micrometers and smaller – PM<sub>2.5</sub>), lead (Pb), and sulfur dioxide (SO<sub>2</sub>). In addition, state standards exist for visibility-reducing particles, sulfates, hydrogen sulfide (H<sub>2</sub>S), and vinyl chloride. The NAAQS and state standards are set at a level that protects public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics, or TAC); some criteria pollutants are also air toxics or may include certain air toxics within their general definition.

Federal and state air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA and CEQA. In addition to this type of environmental analysis, a parallel “conformity” requirement under the FCAA also applies.

FCAA Section 176(c) prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs or projects that are not first found to conform to the State Implementation Plan (SIP) for achieving the goals of Clean Air Act requirements related to the NAAQS. “Transportation conformity” takes place on two levels: the regional, or planning and programming, level; and the project level. The proposed project must conform at both levels to be approved. Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment)

areas for the NAAQS, and only for the specific NAAQS that are or were violated. USEPA regulations at 40 CFR 93 govern the conformity process.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the standards set for carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and in some areas sulfur dioxide (SO<sub>2</sub>). California has attainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO<sub>2</sub>, and also has a nonattainment area for lead (Pb). However, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on regional transportation plans (RTP) and federal Transportation Improvement Programs (FTIP) that include all of the transportation projects planned for a region over a period of at least 20 years (for the RTP), and 4 years (for the FTIP). RTP and FTIP conformity is based on use of travel demand and air quality models to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization, and the FHWA and Federal Transit Administration (FTA), make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept, scope, and “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and the FTIP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter (PM<sub>10</sub> or PM<sub>2.5</sub>). A region is “nonattainment” if one or more of the monitoring stations in the region measures violation of the relevant standard, and USEPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially redesignated to attainment by USEPA, and are then called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a “hot spot” analysis. In general, projects must not cause the “hot spot”-related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

## **Affected Environment**

An air quality analysis was prepared in August 2010 by Don Ballanti, Certified Meteorologist, using methodologies and assumptions recommended by Sacramento Metropolitan Air Quality Management District (SMAQMD). A supplemental memo was also prepared by Don Ballanti in March 2011.

### ***Climate and Meteorology***

The project lies at the southern end of the Sacramento Valley, a broad, flat valley bounded by the coastal ranges to the west and the Sierra Nevada to the east. A sea level gap in the Coast Range (the Carquinez Strait) is located approximately 50 miles southwest, and the intervening terrain is very flat. The prevailing wind direction is southwesterly, which occurs when marine breezes flow through the Carquinez Strait. Marine breezes dominate during the spring and summer months and show strong daily variations. Highest average wind speeds occur in the afternoon and evening hours; lightest winds occur in the night and morning hours. During fall and winter, when the sea breeze diminishes, northerly winds occur more frequently, but southwesterly winds still predominate.

The project is within the SMAQMD, which is part of the Sacramento Valley Air Basin. The Sacramento Valley Air Basin has been further divided into planning areas called the Northern Sacramento Valley Air Basin and the Greater Sacramento Air Region, designated by the USEPA as the Sacramento federal ozone nonattainment area. The nonattainment area consists of all of Sacramento and Yolo counties and parts of El Dorado, Solano, Placer, and Sutter counties. Sacramento County is also within the Sacramento federal nonattainment area for PM<sub>10</sub> and PM<sub>2.5</sub>.

The San Francisco Bay Area Air Basin lies to the west, and the San Joaquin Valley Air Basin is located to the south of the planning area. Considerable transport of pollutants occurs between these air basins, so that air quality in the planning area is partially determined by the release of pollutants elsewhere. In turn, pollutants generated within the planning area affect air quality in areas to the north and east.

### ***Air Pollutants and Ambient Air Quality Standards***

Both the USEPA and CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called “criteria” pollutants because the health and other effects of each pollutant are described in criteria documents.

The federal and California state ambient air quality standards are summarized in **Table 2.2.5-1** for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and suspended particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>).

**Table 2.2.5-1  
Air Quality Standards and Status**

Pollutant	Averaging Time	State Standard	State Attainment Status	Federal Standard	Federal Attainment Status	Health and Atmospheric Effects	Typical Sources
Ozone <sup>a</sup>	1 hour	0.09 parts per million	Nonattainment	N/A	N/A	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases and nitrogen oxides in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes.
	8 hours	0.070 parts per million	Nonattainment	0.075 parts per million <sup>b</sup>	Nonattainment		
Carbon Monoxide	1 hour	20 parts per million	Attainment	35 parts per million	Attainment	<del>CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. -CO also is a minor precursor for photochemical ozone. Colorless, odorless. Carbon monoxide interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. Carbon monoxide is a minor precursor for photochemical ozone.</del>	Combustion sources, especially gasoline-powered engines and motor vehicles. Carbon monoxide is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
	8 hours	9.0 parts per million	Attainment	9 parts per million	Maintenance		
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>a</sup>	24 hours	50 µg/m <sup>3</sup>	Nonattainment	150 µg/m <sup>3</sup>	<del>Non</del> Attainment	<del>Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility.</del>	<del>Dust- and fume-producing industrial and agricultural operations; combustion smoke &amp; and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities;</del>

Pollutant	Averaging Time	State Standard	State Attainment Status	Federal Standard	Federal Attainment Status	Health and Atmospheric Effects	Typical Sources
	Annual	20 µg/m <sup>3</sup>	Nonattainment	N/A	N/A	Includes some toxic air contaminants. Many toxic & other aerosol and solid compounds are part of PM <sub>10</sub> . Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of particulate matter less than 10 microns.	unpaved road dust and re-entrained paved road dust; natural sources. Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>a</sup>	24 hours	N/A	N/A	35 µg/m <sup>3</sup>	Nonattainment	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the PM <sub>2.5</sub> size range. Many toxic & other aerosol and solid compounds are part of PM <sub>2.5</sub> . Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the particulate matter less than 2.5 microns in diameter size range. Many aerosol and solid compounds are part of particulate matter less than 2.5 microns in diameter.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO <sub>x</sub> , sulfur oxides (SO <sub>x</sub> ), ammonia, and ROG. Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including nitrogen oxides, sulfur oxides, ammonia, and reactive organic gases.
	Annual	12 µg/m <sup>3</sup>	Nonattainment	12.5 µg/m <sup>3</sup>	Nonattainment		

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Pollutant	Averaging Time	State Standard	State Attainment Status	Federal Standard	Federal Attainment Status	Health and Atmospheric Effects	Typical Sources
Nitrogen Dioxide	1 hour	0.18 parts per million	Attainment	100 parts per billion	Attainment	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain. Part of "NOx" group of ozone precursors.	Motor vehicles and other mobile sources; refineries; industrial operations.
	Annual	0.030 parts per million	Attainment	53 parts per billion	Attainment		
Sulfur Dioxide	1 hour	0.25 parts per million	Attainment	75 parts per billion	Attainment	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel is not used.
	3 hours	–	Attainment	0.5 parts per million	Attainment		
	Annual	–	Attainment	0.030 ppm	Attainment		
Lead <sup>d</sup>	Monthly Quarterly	1.5 µg/m <sup>3</sup>	Attainment	0.15 µg/m <sup>3</sup> 111.5 µg/m <sup>3</sup>	Attainment	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant and water pollutant.	Primary: lead-based industrial process like battery production and smelters. Past: lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed along major roads.

Sources: California Air Resources Board Ambient Air Quality Standards chart, 2014 February 16, 2019 (<http://www.arb.ca.gov/aqs/aaqs2.pdf>). Sonoma-Marín Area Rail Transit Draft Air Pollutant Standards and Effects table, November 2005, page 3-52. U.S. Environmental Protection Agency and California Air Resources Board air toxics web sites, May 17, 2006.

Notes: Ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter

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<sup>a</sup> Annual particulate matter less than 10 microns in diameter National Ambient Air Quality Standard revoked October 2006; was 50  $\mu\text{g}/\text{m}^3$ . 24-hr. particulate matter less than 2.5 microns in diameter National Ambient Air Quality Standard tightened October 2006; was 65  $\mu\text{g}/\text{m}^3$ .

<sup>b</sup> 12/22/2006 Federal court decision may affect applicability of Federal 1-hour ozone standard. Prior to 6/2005, the 1-hour standard was 0.12 parts per million. Case is still in litigation.

<sup>c</sup> Rounding to an integer value is not allowed for the State 8-hour carbon monoxide standard. A violation occurs at or above 9.05 parts per million.

<sup>d</sup> The California Air Resources Board has identified lead, vinyl chloride, and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of particulate matter less than 10 microns and, in larger proportion, particulate matter less than 2.5 microns in diameter. Both the California Air Resources Board and U.S. Environmental Protection Agency have identified various organic compounds that are precursors to ozone and particulate matter less than 2.5 microns in diameter as toxic air contaminants. There is no threshold level of exposure for adverse health effect determined for toxic air contaminants, and control measures may apply at ambient concentrations below any criteria levels specified for these pollutants or the general categories of pollutants to which they belong.

### *Potential Sensitive Receptors*

Some land uses are considered more sensitive to air pollutants than others. The reasons for greater sensitivity than average include proximity to the emissions source, duration of exposure to air pollutants, or occupants with preexisting health problems. Residential areas are considered sensitive to poor air quality because people in residential areas are often at home for extended periods. Sensitive receptors in the project vicinity area include residences adjacent and to the north of the proposed interchange and Prospect Hill Park located on Prospect Hill Drive, north of the proposed interchange.

#### **2.2.5.1. Environmental Consequences**

##### ***Regional Air Quality Conformity***

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

The proposed project is listed in the SACOG's 2035 MTP, which was found to conform by SACOG on March 20, 2008, and FHWA and FTA made a regional conformity determination on May 16, 2008. The project is also included in SACOG's financially constrained 2011/2014/2013/16 Metropolitan Transportation Improvement Program MTIP as project number SAC24220 in Appendix B. The SACOG 2011/2014/2013/16 MTIP was adopted by SACOG on September 9, 2010/August 16, 2012. The SACOG 2011/2014/2013/16 MTIP was determined to conform by FHWA and FTA on December 14, 20120. The design concept and scope of the proposed project is consistent with the project description in the 2035 MTP, and the 2011/2014/2013/16 MTIP and the "open to traffic" assumptions of the SACOG regional emissions analysis.

FHWA made its air quality conformity finding for the proposed project on **DATE**; FHWA's letter is included in Appendix I.

### **Project Level Conformity**

Conformity at the project level is also required for localized pollutants. Sacramento is currently a federal maintenance area for carbon monoxide and a nonattainment area for PM<sub>10</sub> and PM<sub>2.5</sub>.

Conformity at the project level also requires “hot spot” analysis if an area is nonattainment or maintenance for CO and/or particulate matter. A region is a nonattainment area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called maintenance areas. Hot-spot analysis is essentially the same, for technical purposes, as CO or PM analysis performed for NEPA and CEQA purposes. Conformity does include some specific standards for projects that require a hot-spot analysis.

### **Ambient Air Quality**

SMAQMD and CARB maintain several air quality monitoring sites in the Sacramento area. **Table 2.2.5-2** shows data for the years 2006–2009 for the Sacramento Del Paso Manor monitoring site, the closest monitoring site to the proposed project.

**Table 2.2.5-2  
Days Exceeding Air Quality Standards at the Sacramento Del Paso Manor  
Monitoring Site, 2006–2009<sup>24</sup>**

<b>Pollutant/Standard</b>	<b>Year</b>	<b>Highest Concentration</b>	<b>Days Exceeding Standard</b>
Ozone/State 1-Hour	2006	0.125 ppm	18
	2007	0.138 ppm	6
	2008	0.113 ppm	17
	2009	0.122 ppm	14
Ozone/State 8-Hour	2006	0.102 ppm	35
	2007	0.116 ppm	16
	2008	0.097 ppm	23
	2009	0.102 ppm	32
Ozone/Federal 8-Hour	2006	0.102 ppm	24
	2007	0.115 ppm	10
	2008	0.096 ppm	18
	2009	0.101 ppm	15
Nitrogen Dioxide/State	2006	0.056 ppm	0

<sup>24</sup>Unlike state standards (which are all not-to-exceed) nonattainment for most federal standards is not determined simply by the number of days above the standard; calculation of design values is required. This table is included for informational purposes only and shows days over the standard; it is not based on calculation of design values.

Pollutant/Standard	Year	Highest Concentration	Days Exceeding Standard
1-Hour	2007	0.051 ppm	0
	2008	0.058 ppm	0
	2009	0.049 ppm	0
PM <sub>10</sub> /State 24-Hour	2006	67.0 µg/m <sup>3</sup>	7
	2007	75.0 µg/m <sup>3</sup>	5
	2008	72.0 µg/m	2
	2009	48.0 µg/m	0
PM <sub>10</sub> /Federal 24-Hour	2006	63.0 µg/m	0
	2007	70.0 µg/m	0
	2008	71.0 µg/m	0
	2009	45.0 µg/m	0
PM <sub>2.5</sub> /Federal 24-Hour	2006	78.0 µg/m	19
	2007	61.0 µg/m	22
	2008	74.4 µg/m	8
	2009	49.8 µg/m	9
Carbon Monoxide/Federal and State 8-Hour	2006	3.49 ppm	0
	2007	2.90 ppm	0
	2008	2.49 ppm	0
	2009	2.77 ppm	0

Source: California Air Resources Board, *Aerometric Data Analysis and Management (ADAM)*, 2010.  
(<http://www.arb.ca.gov/adam/topfour/topfour1.php>). Accessed April 14, 2011.

### Carbon Monoxide

In general, projects must not cause the CO standard to be violated, and in nonattainment areas the project must not cause any increase in the number and severity of violations. If a known CO or PM violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

The analysis of CO impacts described below indicates that the project meets the above criteria for CO.

Project traffic would change traffic volumes on the freeway, ramps, and surface streets in the project vicinity, changing concentrations of local pollutants such as CO. Sacramento County and the Sacramento Valley Air Basin are considered an attainment area for this pollutant, meaning that the state and federal ambient air quality standards are met. Concentrations of this pollutant have been falling for the last 25 years and are forecast to continue falling in the future, despite increased traffic, due to the gradual reduction in per-mile emissions as older cars are retired and replaced with newer cars with more stringent emission controls.

CALINE-4 computer models of existing U.S. 50 and the proposed interchange/Rancho Cordova Parkway were created to estimate concentrations of CO at existing sensitive receptors located along the north side of U.S. 50 adjacent the proposed interchange and its proposed ramps. Twenty discrete receptors were located in the rear yards of the houses closest to the freeway right-of-way.

The modeling procedures and assumptions were based on Caltrans' *Transportation Project-Level Carbon Monoxide Protocol* (1997). The assumptions made in running the program were:

- Windspeed: 0.5 meter per second
- Wind Direction: Worst Case
- Roughness: 100 cm
- Sigma Theta: 5 degrees
- Temperature: 30 degrees Fahrenheit

The EMFAC2007 program generated emissions factors in 2016. The default vehicle mix for Sacramento County was utilized.

The CALINE-4 program procedure provides a worst-case estimate of 1-hour concentrations of carbon monoxide generated by vehicles. To calculate 8-hour concentrations, the 1-hour projections were multiplied by a persistence factor of 0.7.

The other contribution to the total concentration is the background level attributed to more distant traffic. Background concentrations were forecast using a methodology developed by the SMAQMD.<sup>25</sup> The resulting predicted 1-hour background level was 2.7 parts per million (ppm) in 2016.

Under the No Build Alternative, maximum concentration predicted would be 3.9 ppm for the 1-hour averaging time and 2.7 ppm for the 8-hour averaging time. With Alternative 3 (proposed project), the maximum concentration predicted would be 4.8 ppm for the 1-hour averaging time and 3.4 ppm for the 8-hour averaging time. While the project would increase concentrations of carbon monoxide at homes adjacent to the project, concentrations would remain well below the applicable state and federal standards.

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<sup>25</sup> Sacramento Metropolitan Air Quality Management District. 2009. *Guide to Air Quality Assessment in Sacramento County*.

Therefore, the proposed project would not cause any or contribute to exceedances of any state or federal CO standards.

### *Particulate Matter*

Federal regulations also require qualitative hot-spot analyses to determine transportation conformity in PM<sub>10</sub> or PM<sub>2.5</sub> nonattainment areas. Such analyses are only required, however, for a “project of air quality concern.” Guidance developed by the USEPA and FHWA identifies examples of projects that would be projects of air quality concern and projects that are not an air quality concern.<sup>26</sup> Projects of concern are generally those that would substantially increase diesel truck or bus traffic. Projects that are not a concern are those that do not result in a substantial increase in truck/bus traffic or that improve highway operations. The proposed project would fall in this second category.

According to findings made by SACOG, SMAQMD, USEPA, CARB, Caltrans, FHWA, and FTA during interagency consultation, the project is not a project of air quality concern and would not require a PM<sub>10</sub> or PM<sub>2.5</sub> qualitative hot-spot analysis despite the region’s nonattainment status for these pollutants.<sup>27</sup> The reasons for this finding are the relatively low truck and traffic volumes in the area. Minutes from the SACOG Regional Planning Partnership Meeting, June 28, 2007, document interagency consultation and the finding that the project is not a “project of air quality concern.” The minutes from this meeting are included as **Appendix I**.

### ***Construction Impacts***

#### *No Build Alternative (2037 Conditions without the Project)*

Under the No Build alternative, the proposed interchange and roadway would not be constructed, and air quality impacts associated with the construction of the project would not occur. The existing traffic LOS in and around the interchange area operates at an unacceptable LOS and is expected to worsen over the next several years as traffic increases due to planned and expected growth. Worsening traffic LOS would contribute to worsening air quality in and around the project **vicinityarea** as a result of increased traffic congestion in and around the interchange area.

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<sup>26</sup> U.S. Environmental Protection Agency, *Transportation Conformity Guidance for Qualitative Hot-spot Analysis in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas*, USEPA 410-B-06-902, March 2006.

<sup>27</sup> SACOG Regional Planning Partnership Meeting, June 28, 2007.

### *Alternative 3 (Proposed Project)*

Alternative 3 (proposed project) may subject sensitive receptors to short-term, temporary construction emissions. The City's General Plan considers facilities where sensitive receptor population groups (children, the elderly, the acutely ill, and the chronically ill) live or congregate to be where sensitive receptors will be located. Schools, retirement homes, convalescent homes, hospitals, and medical clinics are examples of sensitive receptors in relation to air quality issues. The project site is located in a predominantly developed area of the city with residences located north of U.S. 50 adjacent to the project site.

Implementation of the proposed project would result in temporarily increased particulate matter levels in the immediate vicinity during construction. During construction, gaseous and particulate emissions would be released by equipment and vehicles on the site, trucks bringing materials to the site, and construction employee vehicles. During the construction period, fugitive particulate emissions (PM<sub>10</sub> and PM<sub>2.5</sub>) would occur due to the action of vehicles/equipment and wind on unpaved areas. Construction activities would temporarily affect local air quality, causing a temporary increase in particulate matter and dust emissions.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment also are anticipated and would include CO, nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOC), directly emitted particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO<sub>x</sub> and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM<sub>10</sub>, PM<sub>2.5</sub>, and small amounts of CO, SO<sub>2</sub>, NO<sub>x</sub>, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM<sub>10</sub> emissions would vary from day to day, depending on the nature and magnitude of construction

activity and local weather conditions. PM<sub>10</sub> emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the USEPA to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Soil stabilization and dust control would be requirements of the construction contract (see Section 3.2.11, “Air Quality,” for additional details).

In addition to dust-related PM<sub>10</sub> emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO<sub>2</sub>, NO<sub>x</sub>, VOCs and some soot particulate (PM<sub>10</sub> and PM<sub>2.5</sub>) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site. Idling restrictions to control diesel emissions would be part of the construction contract (see Section 3.2.11, “Air Quality,” for additional details).

SO<sub>2</sub> is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting federal standards can contain 300 ppm or more of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm), so SO<sub>2</sub>-related issues due to diesel exhaust will be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as distance from the site(s) increases.

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in long-term adverse conditions. Implementation of the measures discussed in detail in Section 3.2.11, “Air Quality,” would reduce any air quality impacts resulting from construction activities.

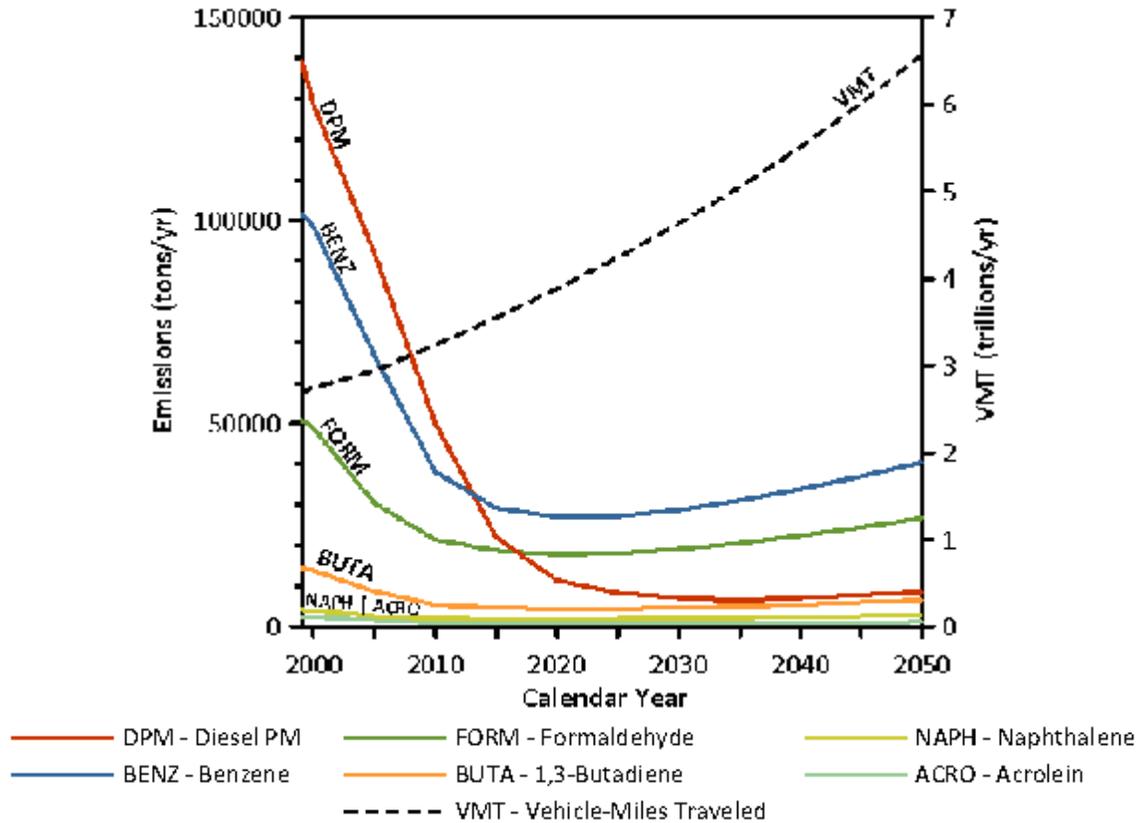
### **Mobile Source Air Toxics**

Mobile source air toxics (MSATs) are air contaminants emitted by vehicles. Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments of 1990, whereby Congress mandated that the USEPA

regulate 188 air toxics, also known as hazardous air pollutants. The USEPA has assessed this expansive list in its latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are listed in its Integrated Risk Information System (<http://www.epa.gov/ncea/iris/index.html>). In addition, the USEPA identified seven compounds with substantial contributions from mobile sources that are among the national and regional-scale cancer risk drivers from its 1999 National Air Toxics Assessment (<http://www.epa.gov/ttn/atw/nata1999/>). These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While the FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future USEPA rules.

The 2007 USEPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using USEPA's MOBILE6.2 model, even if vehicle activity (vehicle-miles traveled [VMT]) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050, as shown on **Figure 2.2.5-1**.

**Figure 2.2.5-1  
NATIONAL MSAT EMISSION TRENDS 1999–2050 FOR VEHICLES  
OPERATING ON ROADWAYS USING USEPA'S MOBILE 6.2 MODEL**



*Note:*

- 1 Annual emissions of polycyclic organic matter are projected to be 561 tons/yr for 1999, decreasing to 373 tons/yr for 2050.
- 2 Trends for specific locations may be different, depending on locally derived information representing vehicle miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.

Source: U.S. Environmental Protection Agency. MOBILE6.2 Model run 20 August 2009.

Air toxics analysis is a continuing area of research. Although much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA. The FHWA, USEPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field.

Available technical tools do not allow prediction of project-specific health impacts of the emission changes associated with the project. Evaluating the environmental and health impacts from MSATs for a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

First, tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. Second, the tools to predict how MSATs disperse are also limited. USEPA's current regulatory models were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. Lastly, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways and to determine the portion of a year that people are actually exposed to those concentrations at a specific location.

#### *Project-Specific MSAT Impact Analysis*

This EIR/EA includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable this EIR/EA to predict the project-specific health impacts of the emission changes. Due to these limitations, a discussion is included in **Appendix H** in accordance with Council on Environmental Quality (CEQ) regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information.

However, it is possible to qualitatively assess the levels of future MSAT emissions. The travel lanes contemplated as part of the proposed project would have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, there may be localized areas where ambient concentrations of MSAT may be higher. The

localized differences in MSAT concentrations would likely be most pronounced along the new/expanded Rancho Cordova Parkway and the homes along the westbound side of U.S. 50. However, the magnitude and the duration of these potential increases cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Further, under all alternatives, overall future MSAT are expected to be substantially lower than today due to implementation of USEPA's vehicle and fuel regulations.

In sum, in the design year it is expected there would be slightly higher MSAT emissions in the study area relative to the No Build alternative due to increased VMT. There also could be increases in MSAT levels in a few localized areas where VMT increases. However, USEPA's vehicle and fuel regulations will bring about substantially lower MSAT levels for the area in the future than today.

### ***Naturally Occurring Asbestos***

Naturally occurring asbestos (NOA) is found in some areas throughout California, most commonly where ultramafic rock or serpentine rock is present. Because asbestos is a known carcinogen, NOA is considered a TAC. Asbestos includes fibrous minerals found in certain types of rock formations. Natural weathering or human disturbance could generate microscopic NOA fibers which are easily suspended in air.

The project is not located in a known area of serpentine or ultramafic rock.<sup>28</sup> The project would also not require demolition of buildings or structures that would contain asbestos.

Please see Section 3.2.11 for additional information on air quality impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

Since the proposed project meets regional and project level conformity requirements, no measures would be needed for operational emissions. Minimization and avoidance measures would be incorporated into the project to address the slight increase in air quality contaminants during construction. Those measures are discussed in detail in Section 3.2.11, "Air Quality."

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<sup>28</sup> California Department of Conservation, *Relative Likelihood for the Presence of Naturally-Occurring Asbestos in Eastern Sacramento County, California*, 2006.

## **Climate Change**

Climate change is analyzed in Section 3.3, “Climate Change under the California Environmental Quality Act.” Neither the USEPA nor FHWA has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA’s climate change web site (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because there have been more requirements set forth in California legislation and executive orders regarding climate change, the issue is addressed in Section 3.3, “Climate Change under the California Environmental Quality Act,” and may be used to inform the NEPA decision. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours traveled.

### **2.2.6. Noise**

#### **Regulatory Setting**

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

### **California Environmental Quality Act**

CEQA requires a strictly baseline<sup>29</sup> versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible. The rest of this section will focus on the NEPA-23 CFR 772 noise analysis; see Section 3.2.12, “Noise,” for further information on the noise analysis under CEQA.

### **National Environmental Policy Act and 23 CFR 772**

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA [A-weighted decibels]) is lower than the NAC for commercial areas (72 dBA). **Table 2.2.6-1** lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis.

**Table 2.2.6-1  
Noise Abatement Criteria**

<b>Activity Category</b>	<b>NAC, Hourly A-Weighted Noise Level, dBA L<sub>eq</sub>(h)</b>	<b>Description of Activities</b>
A	<b>57 Exterior</b>	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	<b>67 Exterior</b>	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	<b>72 Exterior</b>	Developed lands, properties, or activities not included in Categories A or B above.
D	–	Undeveloped lands.
E	<b>52 Interior</b>	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

<sup>29</sup> In this section, baseline and existing conditions are used synonymously to mean the conditions that existed in 2005. Please see footnote #4 for further discussion.

**Table 2.2.6-2** lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

**Table 2.2.6-2  
Noise Levels of Common Activities**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

In accordance with Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, August 2006*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans

and specifications. This EIR/EA discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence.

### **Affected Environment**

A revised noise study report was prepared in April 2010. The report identified land uses and sensitive noise receptors within ~~and adjacent to~~ the project vicinity area that could be affected by the project. A supplemental memo was also developed in March 2011 to assess the project's impacts under an Existing Plus Project scenario.

Noise-sensitive land uses are generally defined to include places where people sleep, such as residences, hospitals, and hotels; institutional land uses where it is important to avoid interference with speech or reading, including schools, libraries, and churches; and outdoor areas where quiet is fundamental to its specific use (e.g., amphitheaters and national parks). The noise-sensitive receptors in the project consist of single-family residences along the north side of U.S. 50. These houses are two-story construction and are set back 150–575 feet from the centerline of the U.S. 50 roadway. An approximately 7.9-foot noise wall currently exists between U.S. 50 and these receptors. **Figure 2.2.6-1** shows the project study area and the existing receptors located within and adjacent to it.

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Source: ATS Consulting, December 2006



City of Rancho Cordova  
Planning Department

Figure 2.2.6-1  
Sensitive Receptor and Noise Measurement Locations



A total of seven representative single-family residences were selected for the noise analysis:

- **R1** is 118 feet from the edge of the westbound lane of U.S. 50 in the backyard of the residence where measurement Site M2 was located. This receiver is representative of residences on Linday Way and Prospect Hill Drive that have their backyards adjacent to the sound wall running parallel to the westbound lanes of U.S. 50.
- **R2** is 293 feet from the edge of the westbound lane of U.S. 50 in the backyard of the residence where measurement Site M1 was located. This receiver is representative of residences on Prospect Hill Drive with backyards that are not directly adjacent to the sound wall running parallel to the westbound lanes of U.S. 50.
- **R3** is located in the backyard of a residence 449 feet from the edge of the westbound lane of U.S. 50. This receiver is representative of two residences situated on the corner of Prospect Hill Drive and Union Hill Way.
- **R4** is located in the backyard of a residence 499 feet from the edge of the westbound lane of U.S. 50. This receptor represents a residence on Prospect Hill Drive that does not have a direct line of sight to U.S. 50.
- **R5** is 492 feet from the edge of the westbound lane of U.S. 50 in the front yard of the residence where measurement Site M4 was located.
- **R6** is located in the backyard of a residence 210 feet from the edge of the westbound lane of U.S. 50. This receiver is representative of residences on Union Hill Way.
- **R7** is 102 feet from the edge of the westbound lane of U.S. 50 in the backyard of the residence where measurement Site M3 was located. This receiver is representative of houses closest to U.S. 50 on South Carson Way.

### Noise Measurements

Measurements of existing noise levels were taken at four sites in the project [vicinity area](#) between January 10 and January 11, 2006. The primary purpose of the measurements was to characterize existing noise sources at noise-sensitive receptors along U.S. 50 between Sunrise Boulevard and Hazel Avenue and to obtain data to calibrate the noise prediction model. The four measurement sites, identified as M1 through M4, are discussed below

and summarized in **Table 2.2.6-3**. **Figure 2.2.6-1** shows the locations of the noise measurement sites. Average traffic speeds observed during the short-term measurements were 75 mph for autos, 69 mph for medium trucks, and 60 mph for heavy trucks.

The measurement sites were:

- **Site M1:** A 24-hour measurement was performed in the backyard of the single-family residence at 11817 Prospect Hill Drive on January 10 and January 11, 2006. The microphone was placed 290 feet from the edge of the westbound traffic lane of U.S. 50.
- **Site M2:** A 15-minute measurement was taken in the backyard of a residence at 11596 Linday Way on January 10, 2006. The microphone was placed 118 feet from the edge of the westbound lane of U.S. 50.
- **Site M3:** This 15-minute measurement was taken in the backyard of a residence at 11808 South Carson Way on January 10, 2006. The microphone was placed 102 feet from the edge of the westbound lane of U.S. 50.
- **Site M4:** This site was located in the front yard of a single-family residence at 2143 Gold Coin Court. The microphone was placed 492 ft from the edge of the westbound lane of U.S. 50. Sound levels were measured over a 15-minute period on the afternoon of January 10, 2006.

**Table 2.2.6-3  
Summary of Noise Measurements**

Parameter	Site M1	Site M2		Site M3		Site M4	
Date	01/10/2006	01/10/2006		01/10/2006		01/10/2006	
Start Time	12:00 p.m.	2:29 p.m.		3:27 p.m.		1:42 p.m.	
Duration	24 hr	15 min		15 min		15 min	
Traffic Counts <sup>1</sup>							
Eastbound U.S. 50		1,632		1,820		2,464	
Westbound U.S. 50		2,140		2,364		2,628	
Fleet Mix <sup>2</sup>		EB	WB	EB	WB	EB	WB
Autos		96%	95%	99%	96%	94%	94%
Medium Trucks		2%	2%	1%	3%	3%	3%
Heavy Trucks		1%	3%	0%	2%	3%	3%
Sound Levels							
Measured Leq	65 dBA <sup>3</sup>	68 dBA		62 dBA		57 dBA	
Predicted <sup>5</sup>	65 dBA <sup>4</sup>	67 dBA		62 dBA		58 dBA	
Calibration Factor <sup>6</sup>	-0.5	1.3		-0.1		-1.8	

Source: ATS 2010

Notes:

1 Traffic counts taken over 15 minutes and extrapolated to 1 hour

2 Fleet mix rounded to nearest integer

3 Ldn/CNEL

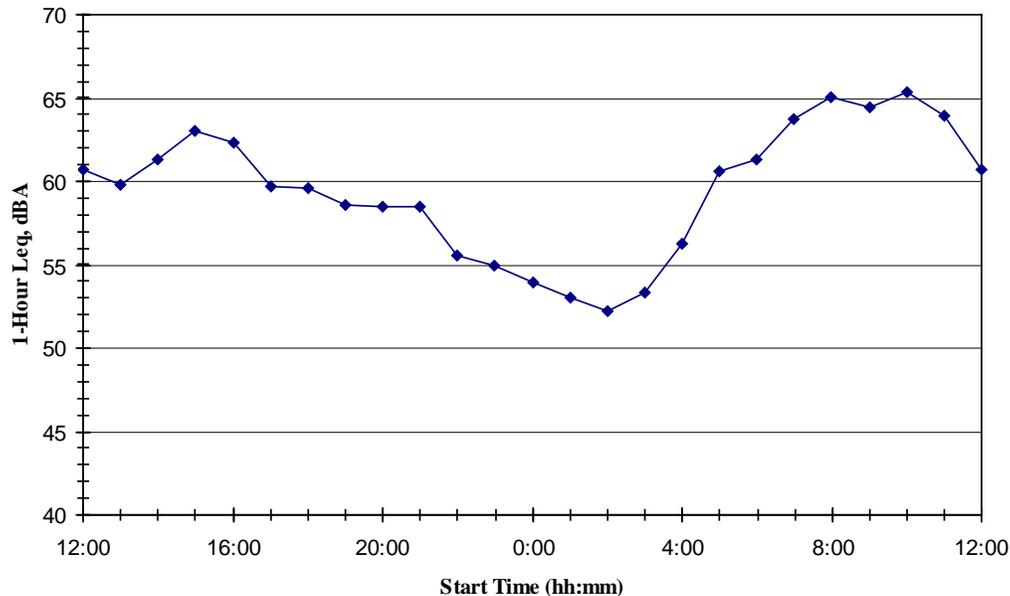
4 Predicted Ldn/CNEL

5 Sound levels predicted using TNM with traffic volumes normalized to 1 hour

6 Measured minus predicted

Traffic on U.S. 50 was the dominant noise source at all of the measurement sites. Other noise-generating activities included typical residential activities (e.g., dogs barking and landscaping equipment). **Figure 2.2.6-2** shows the hourly sound levels at measurement Site M1 over the 24-hour measurement period. The sound levels were relatively consistent during the daytime (generally between 60 and 65 dBA). The highest sound levels, which occurred between 8 a.m. and 10 a.m., occur when high traffic volumes would be moving at steady speeds just after the AM peak. Nighttime levels drop substantially because of the drop in traffic volumes. Of the four measurement sites, the highest sound levels were measured at Site M2, which was adjacent to U.S. 50. Although Site M2 was 16 feet farther away from U.S. 50 than Site M3, Site M2 was elevated relative to Site M3, which means that the existing sound wall is less effective at reducing traffic noise.

**Figure 2.2.6-2**  
**Hourly Sound Levels at Site M1 Existing Noise Levels**



Source: ATS 2010

Existing noise levels were estimated using the FHWA Traffic Noise Model (TNM, Version 2.5). The current Caltrans methodology for assessing traffic noise impacts is to use the operating condition that results in the highest noise levels. This corresponds to a PM peak hour traffic volume of 1,950 vehicles per lane per hour for the freeway mainline and 1,500 vehicles per lane/hour for high occupancy vehicle (HOV) lanes.<sup>30</sup> The fleet mix is 94 percent autos, 3 percent medium trucks, and 4 percent heavy trucks for the freeway mainline with 95 percent autos and 5 percent medium trucks for the HOV lanes (note that all fleet mix percentages are rounded to the nearest integer).<sup>31</sup> Consistent with Caltrans guidance, the assumed vehicle speeds are 65 mph for automobiles and medium trucks and 60 mph for heavy trucks. The predicted average daily traffic (ADT) volumes were calculated with the assumption that peak hour traffic volumes represent 10 percent of the overall ADT. The ADT was then weighted to represent daytime and nighttime traffic volumes of 88 percent and 12 percent, respectively.<sup>32</sup>

**Table 2.2.6-4** lists the predicted existing (baseline) peak hour Leq (energy-equivalent noise level) and Ldn (day-night average noise level) from traffic noise for each receiver. As can be seen, the existing Leq(h) ranges from a low of 61 dBA at receiver R4 to a high of 71 dBA at receiver R1. The existing Ldn ranges from a low of 61 dBA at receiver R4

<sup>24</sup> Based on traffic data provided by Fehr & Peers, February 2010.

<sup>31</sup> FHWA, *Annual Average Daily Truck Traffic on the California State Highway System*, August 2005.

<sup>32</sup> Jason Isaac, Fehr and Peers, February 2010.

to a high of 70 dBA at receiver R1. The predicted noise levels are highest at R1 because of its proximity and elevation in relation to the westbound lanes of U.S. 50. All of the residences are currently protected by an approximately 7.9-foot sound wall that runs parallel to U.S. 50.

**Table 2.2.6-4  
Predicted Existing (Baseline) Traffic Noise Levels**

Receiver	Land Use Type	Predicted Existing Leq(h), dBA	Predicted Existing Ldn, dBA
R1	Residential	71	70
R2	Residential	66	65
R3	Residential	63	62
R4	Residential	61	61
R5	Residential	62	61
R6	Residential	64	64
R7	Residential	66	65

Source: ATS 2010

## Environmental Consequences

### Methodology

Following is a brief discussion of the procedures and methodology used for the traffic noise analysis for the proposed Rancho Cordova Parkway Interchange project:

- *Measure Existing Noise Levels:* Short- and long-term noise measurements were taken ~~at~~ the project ~~site~~ sitearea to document existing noise levels and identify major noise sources.
- *Develop Noise Prediction Model:* Using FHWA’s Traffic Noise Prediction Model (TNM Version 2.5), models of the project sitearea were developed to predict both existing and future traffic noise levels.
- *Calibrate Noise Prediction Model:* The noise models were calibrated to account for site-specific factors using the measurement data and observed traffic conditions during the measurements. The calibration factors were then applied to predict existing and future noise levels, as appropriate.

- *Predict Existing Traffic Noise Levels:* The Leq(h) and Ldn/CNEL at representative noise-sensitive receptors were calculated using recent peak hour and ADT counts on U.S. 50.
- *Predict Future Traffic Noise Levels:* Using forecast 2037 traffic volumes, future noise levels were predicted at the representative locations both with and without the proposed project.
- *Identify Traffic Noise Impacts:* Potential traffic noise impacts were identified using the criteria established in the Caltrans protocol.
- *Evaluate Attenuation Options:* As necessary, noise attenuation measures were evaluated to reduce traffic noise impacts.

### *Traffic Noise Prediction*

Using forecast Design Year (2037) traffic volumes, future noise levels were predicted at the representative locations both with and without the proposed project. Potential traffic noise impacts were identified using the criteria established in the Caltrans protocol. (Potential traffic noise impacts using the criteria identified under the City of Rancho Cordova General Plan and the Sacramento County General Plan are discussed in Section 3.2.12, "Noise.")

### **No Build Alternative (2037 Conditions without the Project)**

Under the No Build alternative, noise increases resulting from the construction and operation of the project would not occur because the project would not be built. However, because traffic from U.S. 50 is the predominant source of noise ~~at~~ and around the project ~~site~~area, and traffic on U.S. 50 is anticipated to increase as a result of planned development in ~~and around~~ the project ~~vicinity~~area, noise levels ~~at~~ and around the project ~~site~~area would continue to increase over time as traffic in the area increases. **Table 2.2.6-8** below outlines the noise levels for the Design Year (2037) No Build alternative as compared to the Alternative 3 (proposed project).

### **Alternative 3 (Proposed Project)**

#### *Operational Impacts*

#### Design Year (2037) Scenario

**Table 2.2.6-5** shows the estimated peak hour traffic and ADT volumes on selected road segments under Design Year (2037) conditions without the project (No Build) and with the project (Build). The estimated percentage of autos, medium trucks, and heavy trucks

for the eastbound freeway mainline is 94 percent, 4 percent, and 2 percent, respectively. The estimated percentage of autos, medium trucks, and heavy trucks for the westbound freeway mainline is 97 percent, 2 percent, and 1 percent, respectively. The estimated percentage of autos and medium trucks for both eastbound and westbound HOV lanes mainline is 95 percent and 5 percent, respectively.

**Table 2.2.6-5  
Design Year (2037) Traffic Volumes under Build  
and No Build Conditions**

Roadway	Peak Hour Traffic Volumes		Average Daily Traffic Volumes			
	No Build	Build <sup>(1)</sup>	Future No Build		Future Build <sup>1</sup>	
			Day	Night	Day	Night
U.S. 50						
Eastbound	7,390	8,320	65,032	8,868	73,216	9,984
Westbound	5,770	7,230	50,776	6,924	63,624	8,676
Eastbound HOV Lane	1,620	1,830	14,256	1,944	16,104	2,196
Westbound HOV Lane	1,330	1,510	11,704	1,596	13,288	1,812
Interchange On-/Off-Ramps						
Eastbound On-Ramp	--	1,540	--	--	13,552	1,848
Eastbound Off-Ramp	--	860	--	--	5,896	804
Westbound On-Ramp	--	1,110	--	--	9,768	1,332
Westbound Off-Ramp	--	1,620	--	--	14,256	1,944

Source: ATS 2010

Notes:

Traffic data provided by Fehr & Peers.

Speeds = 65 mph for autos and medium trucks, 60 mph for heavy trucks.

<sup>1</sup> Average of traffic before and after interchange.

**Table 2.2.6-6** shows predicted Design Year (2037) peak hour noise levels, in Leq(h), for each receptor in the project **vicinityarea** without the proposed project (No Build), and the predicted Design Year (2037) noise levels, in Leq(h), for each receptor in the project **vicinityarea** with the proposed project (Build). This provides a point of comparison for anticipated future noise levels with and without construction of the proposed project during the estimated loudest hour of the day, to determine how much noise can be attributed to the operation of the proposed interchange versus what can be attributed to general noise in the area, generated predominantly from the operation of U.S. 50.

**Table 2.2.6-6  
Predicted Design Year (2037) Peak Hour Traffic  
Noise Levels and Impacts [in Leq(h)]**

Receiver	Traffic Noise Levels, Leq(h) (dBA)				
	Existing	Future No Build <sup>2</sup>	Future Build	Difference (Build Minus No Build)	Approach or Exceed Federal NAC <sup>1</sup> ?
R1	71	70	68	-2	Yes
R2	66	65	64	-1	No
R3	63	62	62	0	No
R4	61	61	61	0	No
R5	62	61	60	-1	No
R6	64	63	64	+1	No
R7	66	65	66	+1	Yes

Source: ATS 2010

Notes: Future No Build and all future Build projects are for 2037.

1. FHWA Noise Abatement Criteria (NAC) for exteriors of residences is 67 dBA Leq(h).
2. Decrease in noise levels with Future No Build is a result of the model calibration that varies by approximately 1 dBA.

As can be seen in **Table 2.2.6-6**, Design Year (2037) peak hour traffic noise levels with the proposed project (Build) are predicted to increase by 1 dBA at Receivers R6 and R7, relative to without the project (No Build). Design Year (2037) peak hour traffic noise levels with Alternative 3 are predicted to be equal to the predicted noise levels without the project (No Build) at Receivers R3 and R4. The project (Build) is predicted to reduce noise levels at Receivers R1, R2, and R5 by 1 to 2 dBA compared to levels without the project (No Build) because of the acoustical shielding that would be provided by the proposed U.S. 50 westbound on- and off-ramps, which would be elevated and would serve as a barrier between the U.S. 50 mainline and adjacent residences.

In the Caltrans protocol, a traffic noise impact is defined to occur when there will be a “substantial” noise increase predicted (e.g., when noise levels with the project will exceed noise levels without the project by 12 dBA) or when predicted noise levels with the project will approach within 1 dBA or exceed the NAC of 67 dBA for the receptors surrounding the project [sitearea](#).

As shown in **Table 2.2.6-6**, the project (Build) will not cause a substantial noise increase in terms of Leq(h) based on the Caltrans definition of “substantial increase.” However, predicted Design Year (2037) noise levels approach or exceed the NAC of 67 dBA established by FHWA for residences at Receivers R1 and R7 with Alternative 3. Therefore, noise attenuation must be considered for Receivers R1 and R7.

### Construction Noise Impacts

Construction of the proposed project would require the use of heavy equipment that could increase noise levels in the immediate project area. Examples of equipment used for roadway construction include concrete mixers, bulldozers, backhoes, and heavy trucks. Typical noise levels from this type of equipment are provided in **Table 2.2.6-7**.

**Table 2.2.6-7  
Typical Construction Noise Levels**

Equipment	Noise Levels at 50 feet
Front End Loader	80 dBA
Pile Driver	95 dBA
Bulldozer	85 dBA
Backhoe	80 dBA
Water Truck (or other heavy truck)	85 dBA
Generator	82 dBA
Concrete Mixer	85 dBA
Tamper/Roller	85 dBA
Paver	85 dBA

Source: ATS 2010

Based on the types of construction activities and equipment required for the proposed project, noise levels at 50 feet from the center of construction activities would generally range from 80 to 95 dBA. There are approximately 15 residential parcels in the Gold River Community that would be located approximately 50 feet from construction areas and approximately 13 within 360 feet of construction areas. Any increase in the background noise level due to project construction would be temporary. Several measures could be implemented to minimize potential construction noise impacts. It should be noted that, due to the heavy traffic on U.S. 50 during daytime hours, detouring traffic on U.S. 50 to accommodate construction activities may not be feasible in all instances, and construction work outside of the recommended daytime hours may be necessary to construct the project.

Construction of the interchange bridge structure would require installation of bridge support piles. It is anticipated that the bridge support piles would be installed with a pile drill, rather than a pile driver, which can create percussive noise that is disruptive to adjacent residences, particularly during nighttime hours. If during project construction it is determined that use of a pile driver would be the appropriate method for installing

bridge support piles, attenuation measures shall be applied to reduce the project’s effects on adjacent sensitive receptors during construction.

**Noise Attenuation Considered**

**Table 2.2.6-8** shows the additive predicted noise levels, in Leq, at Receivers R1 and R7 under Design Year (2037) conditions with Alternative 3 and compares noise levels that would result after implementation of no attenuation and after implementation of the attenuation methods, including replacing the existing 7.9-foot sound wall on the north side of U.S. 50, the noise attenuation effect of the interchange structure and ramps, and raising the height of the sound wall on the north side of U.S. 50 to 16 feet plus adding a 8-foot wall to the westbound and eastbound interchange ramps.

As shown in **Table 2.2.6-8**, the noise levels solely from sources on U.S. 50 are the dominant source of noise, ranging from 65 to 78 dBA Leq, and would be the primary cause for the predicted future noise level increases at Receivers R1 and R7. The traffic noise that would be predicted to be caused solely from the westbound and eastbound ramps is much lower ranging from 42 to 56 dBA Leq. This is due to lower anticipated traffic volumes on the ramps versus the mainline of U.S. 50. The combined total columns show the overall predicted future noise levels that are expected to occur when both the U.S. 50 mainline and the proposed ramps are modeled together.

**Table 2.2.6-8  
Predicted Design Year (2037) Peak Hour  
Traffic Noise Levels (in Leq) with Attenuation**

Receiver	U.S. 50			Westbound Ramps		Eastbound Ramps		Combined Total		
	With No Wall along U.S. 50	With Existing 7.9-foot Wall along U.S. 50	Add 16-foot Wall along U.S. 50	With No Wall along Ramps	Add 8-foot Wall along Ramps	With No Wall along Ramps	Add 8-foot Wall along Ramps	With Existing 7.9-foot Wall along U.S. 50	With Existing Wall Plus 8-foot Wall on Ramps	Add 16-foot Wall Along U.S. 50 Plus 8-foot Wall on Ramps
R1	<b><u>78</u></b>	<b><u>68</u></b>	64	43	42	56	51	<b><u>68</u></b>	<b><u>68</u></b>	64
R7	<b><u>68</u></b>	65	63	45	43	48	45	<b><u>66</u></b>	65	63

Source: ATS Consulting 2010

Notes:

1 Sound levels are maximum hourly Leq in dBA.

2 Numbers in **bold** and underline approach or exceed the NAC of 67 dBA.

As shown in **Table 2.2.6-8**, predicted future noise levels would exceed the 67 dBA NAC at Receiver R1 even with the existing 7.9-foot sound wall at that location. Adding the

noise levels from both sets of ramps, R1 both with the 7.9-foot existing sound wall and with the 7.9-foot existing sound wall plus a wall of the same height on the ramps, does not change the future predicted noise levels; the noise level remains 68 dBA. At R7 the future predicted noise level would decrease by 1 dBA with the 7.9-foot existing sound wall plus a wall of the same height on the ramps.

### Abatement Feasibility and Reasonableness under Caltrans Protocol

According to the Caltrans protocol, for noise abatement to be implemented, it must be determined to be both “feasible” and “reasonable.” Noise abatement feasibility involves many engineering considerations. A minimum 5 dBA noise reduction must be achieved to be considered feasible. However, feasibility may also be restricted by topography, access requirements, presence of local cross streets, other noise sources in the area, and safety considerations.

The Caltrans protocol states that “reasonableness” of noise abatement consider cost of the abatement, absolute noise levels, changes in noise levels, noise abatement benefits, development along the highway, life cycle of the proposed noise abatement, environmental impacts of the proposed noise abatement, opinions of impacted residents, input from the reviewing public agencies, and the social, economic, environmental, legal, and technological factors.

### Noise Abatement Considered

As shown in **Table 2.2.6-8**, without implementation of a taller (16-foot) wall and addition of an 8-foot wall at all ramps, noise levels approach or exceed the federal NAC of 67 dB at Receivers R1 and R7. With implementation of a taller (16-foot) wall and addition of an 8-foot wall at all ramps, noise levels are reduced to below the federal NAC of 67 dB at all receptor locations.

As shown in **Table 2.2.6-8**, implementation of all possible noise attenuation methods (e.g., increasing the height of the existing wall along U.S. 50 to a maximum height of 16 feet and constructing 8-foot walls on all ramps) would not produce the 5 dB reduction at the adjacent receivers that is required by the Caltrans protocol for the attenuation to be considered “feasible.” The predicted noise level reduction would be 4 dBA Leq for Receiver R1 and 1 dBA Leq for Receiver R7. Therefore, both increasing the height of the existing wall to 16 feet and building the proposed 8-foot wall on interchange ramps is not considered “feasible” under the Caltrans protocol, and federal funds cannot be used for this noise attenuation measure. However, the City is proposing to build an 8-foot-high

sound wall along the outside edge of shoulder of the westbound auxiliary lane, including the proposed ramps; this sound wall would be built with nonfederal (local) funds.

### Other Exterior Noise Abatement Options Considered

Other exterior noise abatement options were qualitatively considered to reduce the project's potential noise impacts to sensitive receptors. Following is a discussion of the options considered and the explanation of why they were not selected as abatement for potential project noise impacts.

#### *Traffic Management Measures*

Traffic management measures include traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive land designations.

It is infeasible to implement traffic management measures on U.S. 50 through the project [sitearea](#). Because the predominance of noise comes from the U.S. 50 mainline and the interchange's contribution to noise in the area would be minimal, limitations on truck usage and reductions of speed on U.S. 50 were considered to potentially further reduce traffic noise near the project [sitearea](#). Although limitations on truck usage and reductions of speeds could result in a noticeable decrease in traffic noise along this highway corridor, the nature of U.S. 50 is such that these restrictions would not be feasible for this project because U.S. 50's designation as a state highway is such that trucks cannot be restricted from utilizing it, and because the speed limits for this segment of U.S. 50 are based on standard formulas for setting safe vehicle speeds. Therefore, this abatement option is not considered feasible for this project.

#### *Alteration of Horizontal and Vertical Alignments*

Given that the U.S. 50 corridor between Sunrise Boulevard and Hazel Avenue is almost entirely developed with commercial or residential uses on both sides of the freeway, the available construction footprint within which the proposed interchange can be constructed is substantially constrained, such that its location is largely fixed to be constructed within the proposed location. Within the "pocket" of the proposed location, adjustment of the horizontal alignment of the interchange was considered. Modification to the horizontal alignment of the interchange footprint would not be feasible, however, due to the limitations of design geometry required by Caltrans design standards. Additionally, given that the predominance of noise in the area is a result of vehicles traveling on the U.S. 50 mainline, modification of the horizontal alignment of the

interchange would likely not cause a substantial reduction in noise adjacent to the project [sitearea](#).

Modification of the vertical alignment of the interchange was also considered. Given that the predominance of noise in the area is a result of the vehicles traveling on the U.S. 50 mainline, the vertical alignment of the interchange would have to be substantially higher than what is proposed to result in a perceptible reduction in noise in the area. A substantial increase in the vertical alignment of the interchange would result in a taller interchange structure and larger interchange footprint that would further encroach into adjacent properties and would increase the project's impacts to other resources, such as visual resources and right-of-way acquisition. Modification of the vertical alignment of the interchange to reduce noise in the surrounding areas would not be feasible.

Due to the general constraints associated with existing roadways and land uses in the project [vicinityarea](#), modifications to roadway alignments would not be feasible noise attenuation options for this project.

Please see Section 3.2.12 for additional information on noise impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following measure will be implemented to reduce the project's potential noise effects during construction:

To minimize potential construction noise impacts, the contractor shall:

- Conform to Section 14-8, "Noise and Vibration," in Caltrans Standard Specifications.
- Adhere to local ordinances and codes relating to construction equipment and sound levels.
- Install and maintain effective mufflers on construction equipment.
- Locate equipment and staging areas as far from residences as possible.
- Limit unnecessary idling of equipment.
- Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted within 100 feet of residences, i.e., the westbound on- and off-ramps (north side of U.S. 50), or during any pile-driving activities.

## **2.3. Biological Environment**

### **2.3.1. Natural Communities**

#### **Regulatory Setting**

This section of the EIR/EA discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

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

#### **Affected Environment**

The majority of information in this section is based on information provided in the Natural Environmental Study (NES) for the Rancho Cordova Parkway Interchange prepared by the City of Rancho Cordova in May 2008, in a supplemental NES memo prepared by the City in November 2010, and in the biological assessment (BA) prepared by the City and submitted to the U.S. Fish and Wildlife Service (USFWS) in July 2011.

#### ***Biological Study Area***

The biological study area (BSA) consists of the project footprint (the maximum construction area) as well as a 250-foot buffer around the proposed project footprint (**Figure 2.3.1-1**). It includes the edges of U.S. 50, the portion of land north of U.S. 50 set aside for the highway interchange, and the alignment of the new Rancho Cordova Parkway that would connect U.S. 50 and White Rock Road to the south.



Source: Airphoto 2004, National Geographic TOPOI, City of Rancho Cordova



City of Rancho Cordova  
Planning Department

Figure 2.3.1-1  
Biological Study Area



### *Physical Conditions in the Biological Study Area*

U.S. 50 is the dominant transportation feature of the BSA. The Sac RT/UPRR parallels the U.S. 50 corridor to the south. South of the Sac RT/UPRR is Folsom South Canal and then Buffalo Creek, both of which parallel the U.S. 50 corridor through the majority of the BSA.

While a small commercial development is located south of U.S. 50, most of the lands to the south of U.S. 50 are part of the ~~Aerojet property~~~~GenCorp/Aerojet facility~~ and are largely undeveloped. This area is generally flat with moderate to major irregularity of the soil surface. A network of roadways and monitoring wells is present. Portions of ~~the Aerojet property~~~~this GenCorp/Aerojet area~~ are highly disturbed and include dredge tailings of rock cobbles.

Land use to the north of U.S. 50 is primarily residential, but also includes some industrial and commercial buildings in the eastern and western portions of the project ~~vicinity~~~~area~~. Other existing land uses within the BSA are vacant urban land, planned residential development, and associated roadways.

The BSA is generally flat, ranging in elevation from about 130 to 140 feet. The majority of the soils are Xerorthents, dredge tailings–urban land complex, 0–2 percent slopes. A small portion of the site to the north and northeast consists of Xerorthents, dredge tailings, 0–50 percent slopes. Most of the area has been mined for gold, leaving an irregular surface of dredge tailing piles of cobbles and rock.

The BSA also contains seasonally ponded areas and areas that have been historically flooded from the pumping of treated groundwater.

### Natural Communities

The natural communities occurring within the Rancho Cordova Parkway Interchange project ~~vicinity~~~~area~~ are discussed below. Common wildlife and plant species observed, or expected to occur, in these areas and special-status species and sensitive plant habitats observed, or expected to occur, in these areas are also addressed below. The proposed project is located in nonnative grassland, Fremont cottonwood-oak woodland, coyote brush scrub, and Fremont cottonwood woodland including aquatic resources such as vernal pool, isolated seasonal wetland, and an intermittent creek (Buffalo Creek), all of which may provide necessary foraging, nesting, and cover opportunities for a variety of wildlife species. In addition, Buffalo Creek and the Folsom South Canal are sources of water for numerous wildlife species.

The ~~GenCorp~~/Aerojet property, located along the southeastern edge of the City of Rancho Cordova, is generally undeveloped and provides for wide migration movements across its gently rolling terrain. Numerous deer, as well as wild turkey (*Meleagris gallopavo*), coyote (*Canis latrans*), and bobcat (*Felis rufus*) are known to traverse the site for foraging.

The wetland areas identified within the BSA represent marginal habitat for migrating waterfowl. The entire Central Valley is part of the Pacific Flyway; however, the majority of usable migration and wintering habitat in the region occurs in agricultural and wildlife areas several miles southwest of the BSA.

**Figures 2.3.1-2a** and **2.3.1-2b** depict the vegetation types and aquatic resources within the BSA. **Table 2.3.1-1** provides a summary of the estimated number of acres of each vegetation type and aquatic resource in the BSA. Further details involving the affected environment and impacts to aquatic resources are discussed in Section 2.3.2, “Wetlands and Other Waters,” and Section 2.3.5, “Threatened and Endangered Species.”

**Table 2.3.1-1  
Vegetation Types and Aquatic Resources within  
the Biological Study Area**

<b>Vegetation Type and Aquatic Resources</b>	<b>Acres Within the BSA</b>
Nonnative Grassland	62.3
Fremont Cottonwood-Oak Woodland	58.9
Fremont Cottonwood Woodland	1.5
Coyote Brush Scrub	20.9
Ruderal	43.0
Urban	191.6
<i>Aquatic Resources (total)</i>	<b>3.38</b>
Vernal Pool	0.34
Historic Water Discharge Area*	0.31*
Isolated Seasonal Wetland	0.81*
Folsom South Canal	1.42
Intermittent Creek (Buffalo Creek)	0.50
<b>TOTAL</b>	<b>381.58</b>

Source: City of Rancho Cordova, Biological Assessment, July 2011

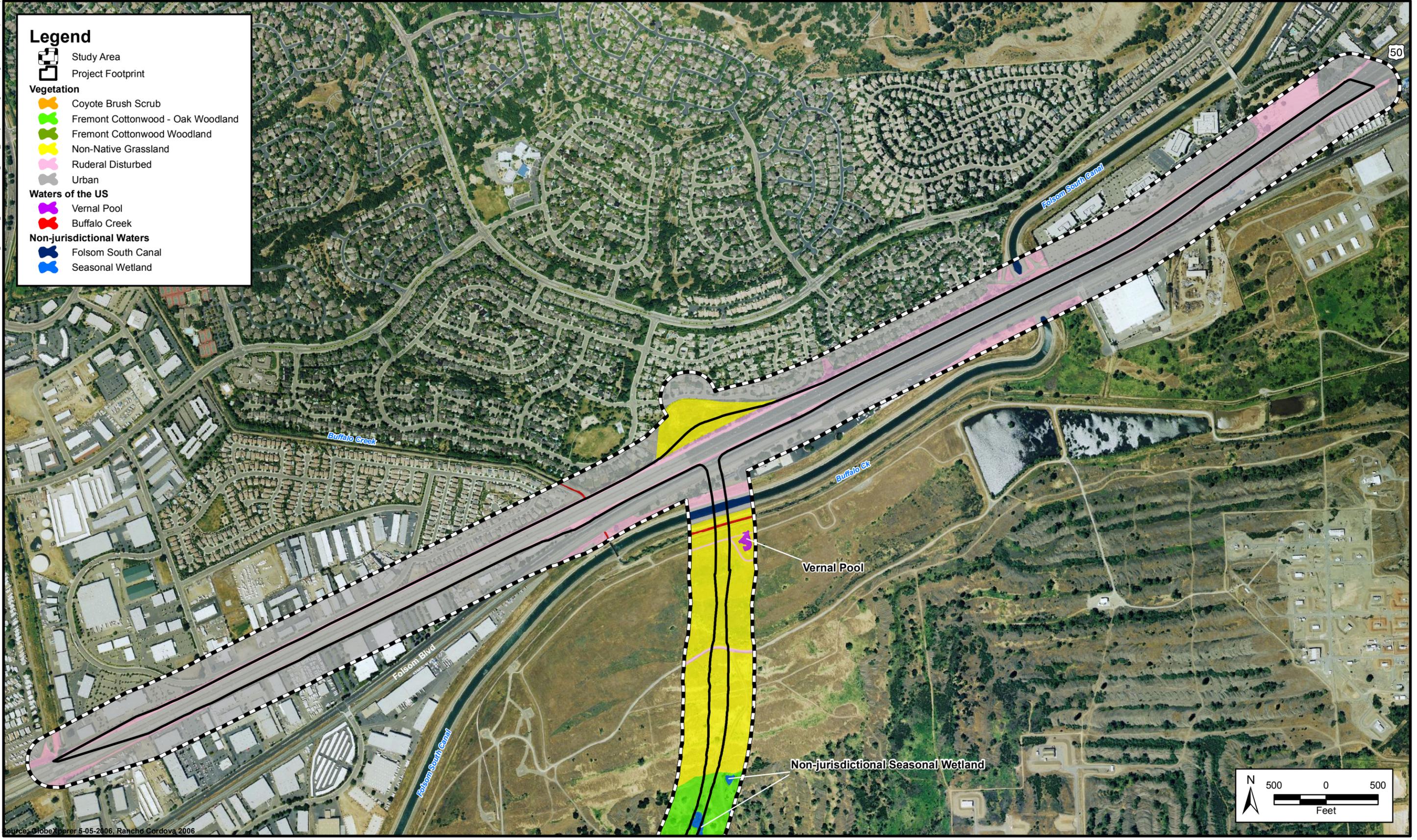
\*These areas are determined to be nonjurisdictional by USACE.

Notes: Aquatic resources (total) include acres covered by vernal pools, historic water discharge areas, isolated seasonal wetlands, the Folsom South Canal, and Buffalo Creek.

T:\GIS\Brancho\_Cordova\MXD\Brancho\_Cordova\_2018\ER\Fig 2.3.1-2a Vegetation, north.mxd (7/21/2014)

**Legend**

- Study Area
- Project Footprint
- Vegetation**
- Coyote Brush Scrub
- Fremont Cottonwood - Oak Woodland
- Fremont Cottonwood Woodland
- Non-Native Grassland
- Ruderal Disturbed
- Urban
- Waters of the US**
- Vernal Pool
- Buffalo Creek
- Non-jurisdictional Waters**
- Folsom South Canal
- Seasonal Wetland



Source: GlobeXpress 5-05-2006, Rancho Cordova 2006

Figure 2.3.1-2a  
 Vegetation Types and Aquatic Resources  
 within the Northern Portion of the Biological Study Area



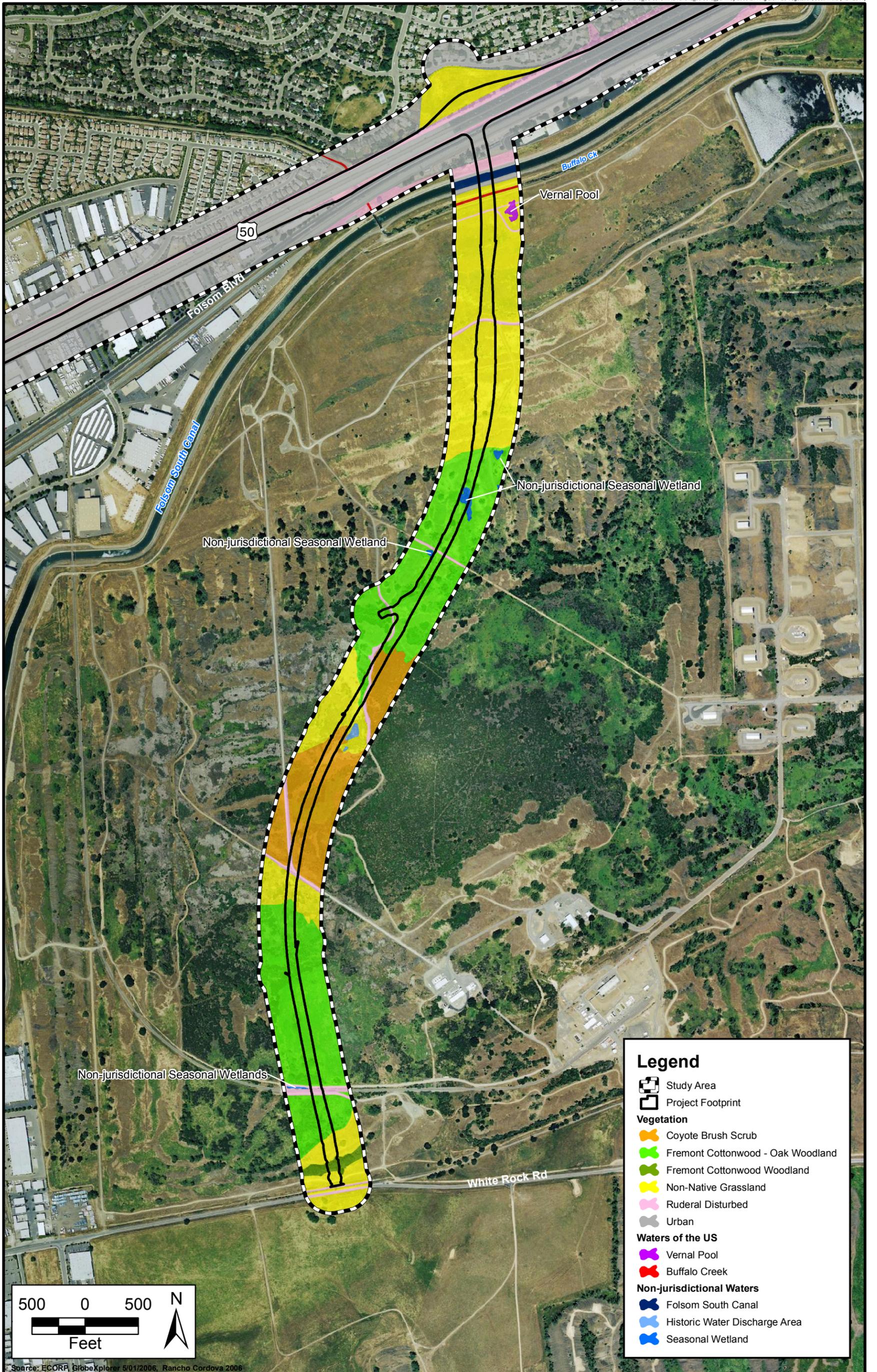


Figure 2.3.1-2b  
Vegetation Types and Aquatic Resources within  
the Southern Portion of the Biological Study Area



### Nonnative Grassland

Within the BSA, nonnative grasslands are located on areas disturbed by dredge mining consisting of irregular piles of dredge spoils of cobbles and gravel, covering approximately 62.3 acres. Most of the dominant species within the nonnative grassland within the BSA include introduced, nonnative grasses such as soft brome (*Bromus hordeaceus*), wild rye (*Lolium multiflorum*), wild oats (*Avena fatua*), wild barley (*Hordeum marinum gussoneanum*), rip-gut brome (*Bromus diandrus*), and medusa head grass (*Taeniatherum caput-medusae*). Other herbaceous species include Italian thistle (*Carduus pycnocephalus*), filaree (*Erodium botrys*), and yellow star-thistle (*Centaurea solstitialis*).

Wildlife observed within these nonnative grasslands are those that tolerate disturbed conditions such as American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), black-tailed deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), Botta's pocket gopher (*Thomomys bottae*), and house mouse (*Mus musculus*).

### Fremont Cottonwood-Oak Woodland

Fremont cottonwood-oak woodland is dominated by an overstory of Fremont cottonwood (*Populus fremontii*) and a mixture of oaks including interior live oak (*Quercus wislizenii*), blue oak (*Q. douglasii*), and valley oak (*Q. lobata*). The subcanopy of this vegetative community is variable, with some areas containing dense patches of coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), willow (*Salix* sp.), and blue elderberry (*Sambucus mexicana*). Dredge tailings are also present within this community. The BSA includes approximately 58.9 acres of this plant community.

Wildlife species that have been observed within Fremont cottonwood-oak woodland within the BSA include California slender salamander (*Batrachoseps attenuatus*), southern alligator lizard (*Elgaria multicarinata*), northern flicker (*Colaptes auratus*), California vole (*Microtus californicus*), and Botta's pocket gopher.

### Fremont Cottonwood Woodland

Fremont cottonwood woodland is dominated by Fremont cottonwood and may include willow and oak species. A shrub understory of coyote brush, willow, and poison oak are present. Fremont cottonwood woodland covers approximately 1.5 acres within the BSA.

Wildlife observed within this community within the BSA include Pacific treefrog (*Pseudacris [Hyla] regilla*), western rattlesnake (*Crotalis viridis*), American kestrel (*Falco sparverius*), yellow-rumped warbler (*Dendroica coronata*), and black-tailed deer.

### Coyote Brush Scrub

The coyote brush scrub community is dominated by coyote brush with occasional trees. Other shrubs such as blue elderberry, poison oak, and willow are also found in this community. Shrub species may grow in dense or scattered stands, with herbaceous ground cover within openings. Coyote brush scrub covers approximately 20.9 acres of the BSA.

Wildlife species observed within this community include western fence lizard (*Sceloporus occidentalis*), ringneck snake (*Diadophis punctatus*), California quail (*Callipepla californica*), wrentit (*Chamaea fasciata*), California towhee (*Pipilo crissalis*), black-tailed jackrabbit (*Lepus californicus*), coyote, and black-tailed deer.

### Ruderal

Ruderal (roadside) communities occur in areas of disturbances such as along roadsides, trails, parking lots, etc. These communities are subjected to ongoing or past disturbances (e.g., vehicle activities, mountain bikes, mowing). Ruderal habitat in these disturbed areas supports a diverse weedy flora. Vascular plant species associated with these areas typically include Canadian horseweed (*Conyza canadensis*), turkey mullein (*Eremocarpus setigerus*), milk thistle (*Silybum marianum*), yellow star-thistle, field bindweed (*Convolvulus arvensis*), wild lettuce (*Lactuca serriola*), prickly sow thistle (*Sonchus arvensis*), and common mallow (*Malva neglecta*). Mediterranean hoary-mustard (*Hirschfeldia incana*) and curly dock (*Rumex crispus*) are also typical of this area. Ruderal communities cover approximately 43 acres of the BSA.

### Urban

Vegetation in these areas consists primarily of introduced ornamental trees and shrubs and manicured lawns as well as invasive weeds in disturbed areas. A distinguishing characteristic of urban habitats is the mixture of native and exotic plant species. Exotic plant species may provide valuable habitat elements such as cover for nesting and roosting, as well as food sources such as nuts or berries. Native and introduced animal species that are tolerant of human activities often thrive in urban habitats.

Urban/developed lands are generally not of high value for wildlife. Birds and mammals that occur in these areas typically include introduced species adapted to human

habitation, including rock pigeon (*Columba livia*), European starling, house sparrow (*Passer domesticus*), house mouse, and Norway rat (*Rattus norvegicus*). Some native species persist in developed lands, including Brewer's blackbird (*Euphagus cyanocephalus*), house finch (*Carpodacus mexicanus*), western scrub jay (*Aphelocoma californica*), and American crow. Urban habitat covers approximately 191.6 acres of the BSA.

## **Environmental Consequences**

### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, natural communities would not be affected because the project would not be implemented. No vegetation or trees would be removed or affected as a result of the project.

Cumulative urban development of adjacent natural communities consistent with the City's General Plan may eventually isolate and fragment natural communities within the project study area, restricting wildlife migration routes and the quality of foraging habitat.

### ***Alternative 3 (Proposed Project)***

#### ***Direct Impacts***

The proposed project would permanently and directly remove up to 11.82 acres of nonnative grassland and temporarily disturb approximately 5.56 acres<sup>33</sup> of nonnative grassland, which many species may inhabit and use for foraging. The proposed project would directly remove thin segments of Fremont cottonwood-oak woodland, Fremont-cottonwood woodland, and coyote brush scrub communities that provide wildlife habitat.

The construction of Rancho Cordova Parkway south of Folsom South Canal would create a north-south barrier for terrestrial wildlife migration across these natural communities, fragmenting an approximately 547-acre section of undeveloped land west of the roadway from the remainder of the larger ~~GenCorp/Aerojet~~ property to the east. An approximately 800-foot-long segment of Rancho Cordova Parkway just south of Buffalo Creek would be elevated above ground, thus preserving a terrestrial wildlife corridor, linking these two areas of ~~Aerojet property/Aerojet/GenCorp land~~ after project completion.

Implementation of the proposed project would result in the direct removal of trees and vegetation in these natural communities that meet the species or size criteria for protection under the Sacramento County Tree Protection Ordinance and Rancho Cordova

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<sup>33</sup> The temporarily disturbed area comprises 4.05 acres adjacent to the roadway corridor, plus 1.51 acres under the future overpass area.

General Plan. Trees meeting the protection and/or mitigation criteria are discussed further in Section 2.3.3, “Plant Species.” The removal of trees in the natural communities within the project footprint would result in a loss of canopy cover and other beneficial ecological contributions that trees make to the environment. The continual removal of native trees, especially mature trees, within the vicinity of the proposed project has and continues to irreversibly change the landscape of area.

### *Indirect Impacts*

Indirect impacts to natural communities could occur for a number of reasons, though primarily through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. The proposed project would be heavily traveled with vehicular traffic and pedestrians, increasing the amount and severity of indirect impacts to plant and wildlife species and their habitats in the BSA. Additionally, roads can be a barrier to movement and effectively isolate populations.

Please see Section 3.2.13 for additional information on natural community impacts.

### **Avoidance, Minimization, and/or Mitigation Measures**

The quantities of nonnative grassland, Fremont cottonwood-oak woodland, Fremont cottonwood woodland, and coyote brush scrub communities that would be removed for Alternative 3 (proposed project) do not qualify for protection under any local, state, or federal protection on their own. However, avoidance, minimization, and/or mitigation for impacts to some of these communities serving as habitat for special-status species are incorporated into the project and are discussed in Sections 2.3.2 through 2.3.6 pertaining to biological resources.

#### **2.3.2. Wetlands and Other Waters**

##### **Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 USC 1344) is the primary law regulating wetlands and surface waters. The Clean Water Act (CWA) regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during

saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by USACE with oversight by USEPA.

USACE issues two types of 404 permits: Standard and General permits. Nationwide permits, a type of General permit, are issued to authorize a variety of minor project activities with no more than minimal effects. Ordinarily, projects that do not meet the criteria for a Nationwide permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with USEPA's Section 404(b)(1) Guidelines (40 CFR Part 230), and whether permit approval is in the public interest. The 404 (b)(1) Guidelines were developed by USEPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the United States) only if there is no practicable alternative which would have fewer adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative to the proposed discharge that would have a lesser effect on waters of the United States, and not have any other significant adverse environmental consequences.

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

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Wildlife (CDFW), SWRCB, and the RWQCBs. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600–1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the

outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCBs also issue water quality certifications in compliance with Section 401 of the CWA. See Section 2.2.2, “Water Quality and Stormwater Runoff,” for additional details.

### **Affected Environment**

The majority of information in this section is based on information provided in the Natural Environmental Study (NES) for the Rancho Cordova Parkway Interchange prepared by the City of Rancho Cordova in May 2008, by a supplemental NES Memo prepared by the City in November 2010, and by wetland delineations prepared for the proposed project (#200700347) and for the Westborough at Easton residential development projects (#200500852).

### **Biological Study Area**

The BSA, described in Section 2.3.1, “Natural Communities,” and shown on **Figure 2.3.1-1**, consists of the project footprint (the maximum construction area) as well as a 250-foot buffer around the proposed project footprint. It includes the edges of U.S. 50, a portion of land north of U.S. 50 set aside for the highway interchange, and the alignment of the new Rancho Cordova Parkway that would connect U.S. 50 and White Rock Road to the south.

The proposed Rancho Cordova Parkway alignment would cross over Folsom South Canal and intermittent creek habitat (Buffalo Creek). The BSA also contains seasonally ponded areas and areas that have been historically flooded from the pumping of treated groundwater.

According to the Soil Survey of Sacramento County, California, four soil types have been mapped in the BSA as described below (USDA 2004):

- Natomas Loam, 0–2 percent slopes
- Natomas-Xerorthents dredge tailings complex, 0–50 percent slopes
- Xerorthents, dredge tailings, 2–50 percent slopes
- Xerorthents, dredge tailings–urban land complex, 0–2 percent slopes

### *Aquatic Resources*

Two wetland delineations were conducted for areas that comprise the BSA. One was prepared as part of the Westborough at Easton residential development project located on [the GenCorp/Aerojet property](#) south of U.S. 50, and verified January 31, 2008 (#200500852); the other for the remainder of the BSA, and was verified July 19, 2007 (#200700347). Both delineations followed the guidelines established in the *1987 Army Corps of Engineers Wetlands Delineation Manual*. These efforts involved the collection of information on soils, vegetation, and hydrologic data at several locations to establish the jurisdictional boundary of waters of the U.S., including wetlands.

Biologists conducted a wetland delineation on [the GenCorp/Aerojet property](#) that includes a portion of the BSA south of the Folsom South Canal at various times between October 2003 and August 2005. A draft wetland delineation was submitted to USACE on August 25, 2005. Based on site visits and coordination with USACE, a revised delineation map was submitted to USACE on November 13, 2007. Verification of the wetland delineation was received from USACE on January 31, 2008.

The delineation conducted by city biologists for the remainder of the BSA near the interchange and auxiliary lane area was submitted to USACE on February 23, 2007. A representative from USACE conducted a field visit of the BSA outside the [GenCorp/Aerojet property](#) on March 14, 2007. The wetland delineation map prepared by the City was revised based on comments received from USACE during that field visit, and the wetland delineation was resubmitted to USACE on March 20, 2007. Verification of the wetland delineation was received from USACE on July 19, 2007.

According to these two wetland delineations, and as shown on **Table 2.3.2-1 and Figures 2.3.1-2a and 2.3.1-2b**, a total of 3.38 acres of aquatic resources are located within the BSA, including one vernal pool, isolated seasonal wetlands, historic water discharge areas, an intermittent creek (Buffalo Creek), and Folsom South Canal. Each of these aquatic resources, some of which are not USACE-jurisdictional waters, is described below.

### *Jurisdictional Waters of the United States*

#### Intermittent Creek

Buffalo Creek is an intermittent creek within the BSA and flows east to west during the rainy season, eventually drying out in the summer. The headwaters of Buffalo Creek are located near Prairie City Road to the east of the BSA, and the creek reaches its confluence with the American River near the Sunrise Boulevard Bridge. Plants associated

with the intermittent creek habitat include annual rabbit's foot grass (*Polypogon monspeliensis*), hyssop loosestrife (*Lythrum hyssopifolium*), dock (*Rumex* sp.), cattail, and smartweed (*Polygonum* sp.). Buffalo Creek provides the only intermittent creek habitat within the BSA, covering 0.50 acre. A separate drainage channel (a separate branch of Buffalo Creek) flows south toward the BSA to a culvert beneath U.S. 50 at the western terminus of the BSA, but does not reach the BSA boundaries. Another drainage channel (without bed-and-bank characteristics) drains local runoff between the Sac RT/UPRR right-of-way and Folsom Boulevard. The intermittent creek within the BSA is within the jurisdiction of the USACE, according to the wetland delineation verified by them on July 19, 2007 (#200700347).

Since there is limited vegetation along the intermittent creek habitat, common wildlife species may include bullfrog (*Rana catesbeiana*), Pacific treefrog (*Pseudacris [Hyla] regilla*), herons, egrets, ducks, and other waterfowl. Species such as the western pond turtle and western spadefoot may be found within intermittent creek habitat within the BSA.

### *Non-Jurisdictional Aquatic Resources*

Several types of aquatic resources are present within the BSA that are not considered waters of the U.S., either because they are isolated from other jurisdictional waters or because they do not possess other required characteristics that define jurisdictional waters<sup>34</sup>. Some of these aquatic resources, such as vernal pools and isolated seasonal wetlands, however, possess the characteristics to define them as wetlands. Other resources, such as the Folsom South Canal, qualify as neither a jurisdictional water nor a wetland, but are discussed here to ensure full disclosure of the project's effects to all aquatic resources within the BSA.

### Vernal Pools

Vernal pools are seasonally flooded depressions found on ancient soils with an impermeable layer such as a hardpan, claypan, or volcanic basalt. The impermeable layer allows the pools to retain water over the winter much longer than the surrounding uplands. A single vernal pool, located near Buffalo Creek, lies within the BSA. Plant species within it include slender popcorn flower (*Plagiobothrys stipitatus*), creeping spikerush (*Eleocharis macrostachya*), dwarf woolly-heads (*Psilocarphus brevissimus*), and hyssop loosestrife. This single vernal pool within the BSA covers 0.34 acre. This

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<sup>34</sup> Note that waters that are not considered jurisdictional waters of the U.S. by USACE subject to the provisions of Section 404 of the federal Clean Water Act may still be considered jurisdictional waters of the State by CDFW under the provisions of the Porter-Cologne Act.

vernal pool is isolated and therefore not under the jurisdiction of USACE; however, since this habitat is suitable for federally listed species, removal or disturbance of the isolated seasonal wetlands would require avoidance, minimization, and/or mitigation under requirements of USFWS pursuant to FESA.

Vernal pools are habitat for a wide array of wildlife, including raptors, migratory birds, shorebirds, frogs, toads, salamanders, and pollinating insects. They are also home for various sensitive species of vernal pool fairy shrimp and tadpole shrimp.

### Isolated Seasonal Wetlands

Isolated seasonal wetlands are areas that are ephemerally wet as a result of the accumulation of surface water and rainwater within low-lying depressions and are not hydrologically connected to other sources of water. Plant species found in seasonal wetlands within the BSA include creeping spikerush and hyssop loosestrife, as well as Baltic rush (*Juncus balticus*), wild rye, Mediterranean barley (*Hordeum marinum*), and annual rabbit's foot grass. Approximately 0.81 acres of isolated seasonal wetlands occur within the BSA. The isolated seasonal wetlands within the BSA are not under the jurisdiction of USACE since they are isolated; however, since this habitat could be suitable habitat for federally listed species, removal or disturbance of the isolated seasonal wetlands may require avoidance, minimization, and/or mitigation under requirements of USFWS pursuant to FESA.

Seasonal wetlands provide food, cover, and water for various species of birds, mammals, reptiles, and amphibians. Many wildlife species are dependent on wetland habitats for foraging, nesting, and cover. Wetlands provide habitat for several species of ducks, geese, herons, egrets, and other shorebirds such as the American coot, great blue heron, and great egret. Several passerine or songbirds, including the black phoebe, may also forage in wetland habitats. The isolated seasonal wetlands within the BSA may provide habitat for special-status invertebrates including vernal pool fairy shrimp, vernal pool tadpole shrimp, or midvalley fairy shrimp, which are all protected under federal or state laws.

### Folsom South Canal

Folsom South Canal is a concrete-lined channel that flows southwesterly across the southern portion of the BSA. The canal originates at Nimbus Dam, on the American River, and eventually extends southward. It is a source of water for industrial, municipal, and irrigation users in Sacramento and San Joaquin counties (City of Rancho Cordova 2006). This concrete-lined canal has a capacity of 3,500 cubic feet per second. The right-of-way

for the canal has been developed to provide trails for horseback riding, bicycling, and hiking. The canal has a bottom width of 34 feet, and the maximum water depth is 17.8 feet. A total of 1.42 acres are designated as canal within the BSA. No vegetation occurs in the canal within the BSA. The Folsom South Canal is not within the jurisdiction of USACE, according to the wetland delineation verified on July 19, 2007 (#200700347). The Folsom South Canal is also not considered a wetland, because it lacks the soil, vegetation, and other characteristics of a wetland.

Coordination with USBR will be required for encroachment onto Folsom South Canal. USBR will need to conduct environmental documentation under NEPA and issue an encroachment permit for the project prior to construction.

Wildlife that has the potential to occur in the canal may include common species of fish and the occasional bullfrog or pacific chorus frog, as well as a variety of migratory birds such as the double-crested cormorant. In addition, a river otter (*Lutra canadensis*) was observed within the canal during surveys.

## **Environmental Consequences**

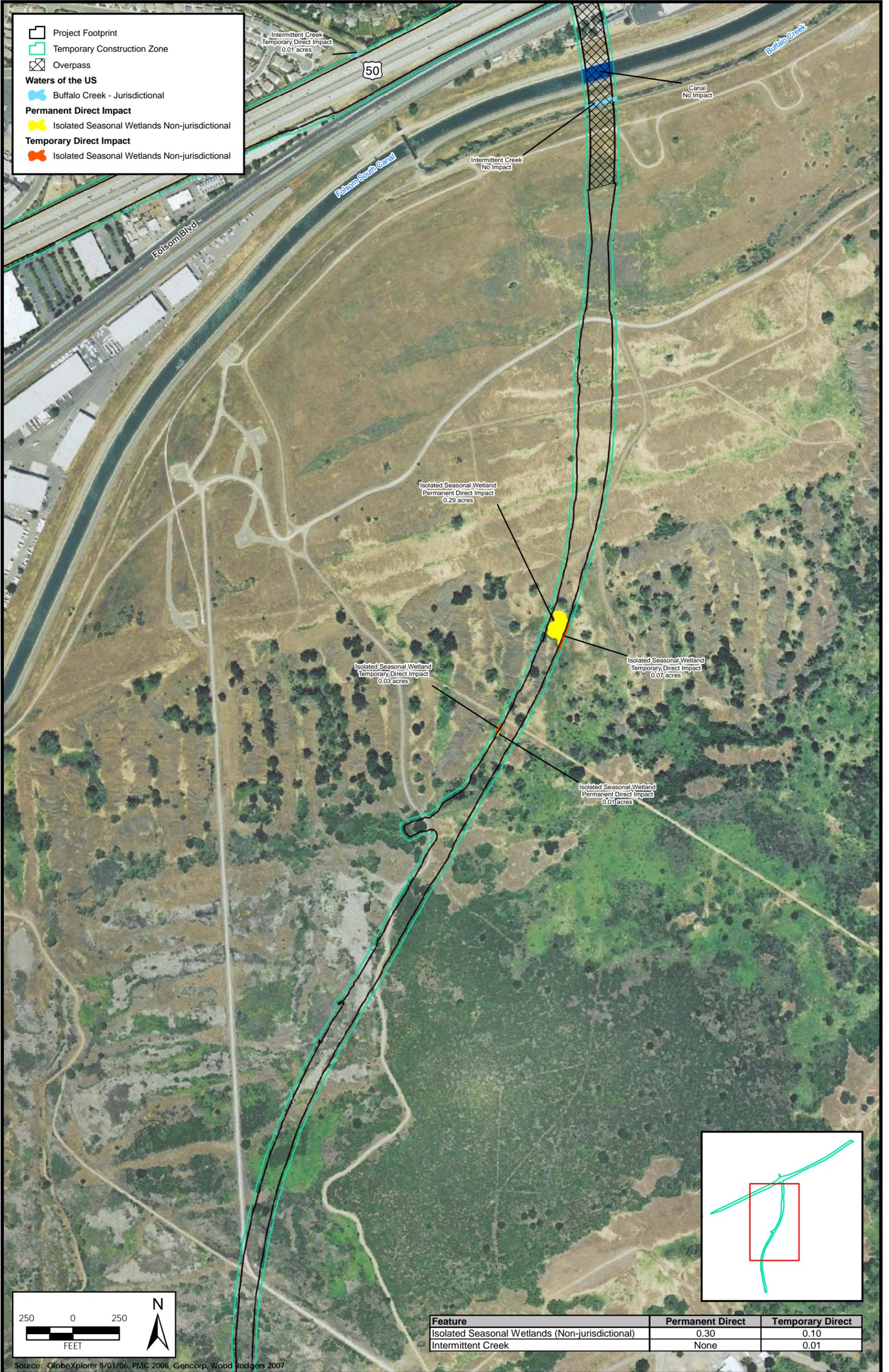
### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, because the project would not be implemented, there would be no effects to wetlands or waters of the U.S.

### ***Alternative 3 (Proposed Project)***

The proposed project will implement all BMPs that are feasible and applicable to reduce impacts to wetlands and waters of the U.S. In addition, as discussed in Section 1.2.5.4, “Alternatives Considered but Eliminated from Further Discussion,” no alternative alignment is available within the project vicinity that would avoid wetlands and waters and still achieve the project purpose.

Locations of permanent and temporary direct effects to wetlands and other waters of the U.S., as well as non-jurisdictional wetland features, are shown on **Figure 2.3.2-1**. **Table 2.3.2-1** shows acreages of potential project direct, indirect, and temporary effects to aquatic resources within the project [vicinityarea](#).



Feature	Permanent Direct	Temporary Direct
Isolated Seasonal Wetlands (Non-jurisdictional)	0.30	0.10
Intermittent Creek	None	0.01

Source: GlobeXplorer 5/01/06, PMC 2006, Gencorp, Wood Rodgers 2007

Figure 2.3.2-1  
Impacts to Waters of the U.S. and Non-jurisdictional  
Wetland Resources



**Table 2.3.2-1  
Aquatic Resources Affected Within the Biological Study Area**

Type of Aquatic Resource	Jurisdictional Water of the United States? (Y/N)	Wetland? (Y/N)	Permanent Direct Effects (acres)	Temporary Direct Effects (acres)	Indirect Effects (acres) <sup>1</sup>
Vernal Pool	N	Y	None	None	0.34
Isolated Seasonal Wetland	N	Y	0.30 <sup>2</sup>	0.10	0.23
Intermittent Creek (Buffalo Creek)	Y	Y	<0.1	<0.1	<0.1
Folsom South Canal	N	N	None	None	None
<b>TOTAL</b>			<b>0.30</b>	<b>0.11</b>	<b>0.23</b>

Source: City of Rancho Cordova, Natural Environment Study, May 2008

Notes:

- 1 Indirect effects are calculated based on USFWS guidelines for assessing effects to potential habitats of special-status vernal pool invertebrates under the requirements of FESA. USACE considers only permanent direct and temporary direct effects under the requirements of the CWA, and does not consider indirect effects in the same manner as USFWS does under FESA.
- 2 Acreage for permanent direct effects for USFWS special-status vernal pool invertebrate habitat is 0.58 acre, including partially filled isolated seasonal wetlands, as discussed in Section 2.3.5, "Threatened and Endangered Species."
- 3 Please see Figure 2.3.4-2 for additional information regarding vernal pool impacts.

### Vernal Pool

#### **Direct Effects**

The vernal pool is not considered a jurisdictional wetland under the authority of the USACE, according to the wetland verification issued by USACE on January 31, 2008; therefore, there would be no direct impacts to this resource as defined under USACE criteria.

The vernal pool would not be filled by implementation of the proposed project, and therefore there would be no direct effects to the vernal pool by the proposed project as defined by USFWS criteria.

#### **Indirect Effects**

The vernal pool is not considered a jurisdictional wetland under the authority of the USACE. Because the vernal pool present in the BSA is not subject to Section 404 of the CWA, there would be no indirect effects from project implementation to waters protected under Section 404.

USFWS considers indirect impacts to vernal pools to occur if a project would not directly place fill within a vernal pool, but the project would cause disturbance within 250 feet of a vernal pool. These indirect impacts are considered permanent impacts under USFWS

guidelines. The proposed project would cause disturbance within 50–100 feet of the vernal pool. Because the vernal pool is within 250 feet of the proposed project [site area](#), impacts are considered to be an indirect loss under USFWS guidelines. Approximately 0.34 acres of indirect impacts to vernal pools are anticipated to occur as a result of the project. These indirect impacts to special-status invertebrates that utilize this vernal pool as habitat are discussed further in Section 2.3.5, “Threatened and Endangered Species.”

### Isolated Seasonal Wetlands

#### **Direct Effects**

Isolated seasonal wetlands are not under the jurisdiction of USACE, according to the wetland verification issued by USACE on January 31, 2008. Because the isolated seasonal wetlands present in the BSA are not subject to Section 404 of the CWA, there would be no direct effects from project implementation to waters protected under Section 404.

The proposed project would permanently fill approximately 0.30 acres and temporarily impact approximately 0.10 acres of isolated seasonal wetlands, as shown in **Table 2.3.2-1**. The isolated seasonal wetlands present in the BSA may provide habitat for special-status invertebrates including vernal pool fairy shrimp, vernal pool tadpole shrimp, or midvalley fairy shrimp, which are protected under federal or state laws. Therefore, under the provisions of FESA and according to the guidance from USFWS on effects to special-status invertebrates, construction of the proposed project would result in direct effects on isolated seasonal wetland habitat. Within the BSA, approximately 0.58 acres of potential vernal pool invertebrate habitat within isolated seasonal wetlands would be directly affected by being filled or partially filled by the project.

#### **Indirect Effects**

The isolated seasonal wetlands present in the BSA are not protected under Section 404 of the CWA; therefore, there would be no indirect effects from project implementation to waters protected under Section 404.

USFWS considers indirect effects to isolated seasonal wetlands that support potential habitat for special-status invertebrates to occur if a project would not directly place fill within an isolated seasonal wetland, but the project would cause disturbance within 250 feet of a vernal pool. These indirect effects are considered permanent effects under USFWS guidelines. The proposed project would cause disturbance within 50–100 feet of isolated seasonal wetlands. Because the isolated seasonal wetlands are within 250 feet of

the proposed project sitearea, effects would be considered an indirect loss under USFWS guidelines. Approximately 0.23 acres of indirect effects to vernal pool invertebrate habitat are anticipated to occur as a result of the project. These indirect effects to special-status invertebrates are discussed further in Section 2.3.5, “Threatened and Endangered Species.”

The proposed project has the potential to introduce invasive exotic plant species to the area, causing native plant life to be replaced by exotic species. As native plants are replaced by exotic species, indirect effects would occur, such as modification or degradation of habitat. These indirect impacts are discussed further in Section 2.3.6, “Invasive Species.”

As development occurs, surface water flows normally increase due to an increase in impermeable surfaces through paving over permeable surfaces. In addition, surface water flows are modified due to changes in surface flow by point source stormwater infrastructure installed in order to handle greater flows from the increasing impermeable surfaces as well as from the introduction of drainage flows during seasons when waterways and wetland features are typically dry (commonly referred to as “summer nuisance flows”). The isolated seasonal wetlands can be indirectly impacted by such changes. Alteration of current inundation and desiccation regimes due to altered hydrology could substantially alter the characteristics of seasonal wetland habitats, resulting in loss or degradation of seasonal wetland habitat.

### Intermittent Creek

#### **Direct Effects**

A total of 0.50 acres of intermittent creek habitat lies within the BSA. Less than 0.1 acre of intermittent creek habitat would be directly impacted by the proposed project by widening the culvert under U.S. 50 on the north side up to 10 feet in length (**Figure 2.3.2-1** and **Table 2.3.2-1**). The banks of the intermittent creek north of U.S. 50 would be temporarily impacted by construction of the proposed project.

There is an existing concrete box culvert that conveys the creek under the U.S. 50 freeway from south to north. This culvert extends slightly longer than the existing freeway pavement on the north side of the freeway. The Buffalo Creek culvert under U.S. 50 may need to be widened by up to 10 feet on the north side to accommodate widening of U.S. 50 westbound auxiliary lanes. The area of the culvert extension has not been determined at this time, but will involve direct and temporary effects expected to total less than 0.1 acre to Buffalo Creek.

Because the intermittent creek is under the jurisdiction of CDFW, disturbance of the creek would require a 1602 Streambed Alteration Agreement from CDFW, and would likely also require a 404 Permit from USACE and a 401 Water Quality Certification from RWQCB. On the south side of U.S. 50, the project would avoid direct effects to the intermittent creek by constructing the interchange overpass to avoid direct fill of the creek.

### **Indirect Effects**

Portions of intermittent creek habitat would be shaded by the overpass structure and by eastbound off-ramps. The overpass structure would be approximately 26 to 28 feet above intermittent creek channel banks. The eastbound ramps would be approximately 13 feet above the channel banks. The overpass structure would create high shade over a portion of intermittent creek. The low ramps would create more shade than that created by the overpass, but would affect only a small portion of intermittent creek.

Activities related to the construction of the bridge over intermittent creek habitat and extension of the culvert on the north side would result in localized loss of vegetation, general disturbance to the soil, and an increase in impervious surfaces. Removal of vegetation and soil can accelerate erosion processes within the BSA and increase the potential for sediment to enter into the intermittent creek. Aquatic organisms are generally not directly affected by suspended solids and turbidity unless they reach extremely high levels (i.e., levels of suspended solids reaching 25 mg/L). At these high levels, suspended solids can adversely affect the physiology of aquatic organisms and may suppress photosynthetic activity at the base of food webs, thereby impacting aquatic organisms either directly or indirectly.

Additionally, runoff from increased impervious surfaces, such as roadways, contains pollutants (i.e., heavy metals, oil, or litter) that would be directly discharged into the intermittent creek via sheet flow and storm drains.

The construction of the proposed project under flowing water conditions could result in the release of high levels of sedimentation and debris into downstream aquatic habitat. Temporary construction activities could increase sediment and urban runoff into waterways that could result in effects to the aquatic environment.

Construction activities typically include the refueling of construction equipment on location. As a result, minor fuel and oil spills may occur with a risk of larger releases. Without rapid containment and cleanup, these materials could be potentially toxic depending on the location of the spill in proximity to water features, including the

intermittent creek. Oils, fuels, and other contaminants could directly affect aquatic organisms. Accidental spills within the project work site and into the intermittent creek could result in adverse effects to the aquatic environment.

### Folsom South Canal

#### **Direct and Indirect Effects**

The project would have no direct effects to the canal because the project would construct the interchange bridge to clear-span the canal, and no encroachment into the canal would take place. However, indirect impacts to common wildlife species such as bullfrogs and pacific chorus frogs as well as a variety of migratory bird species could occur during project construction.

Please see Section 3.2.14 for additional information on wetland and other water impacts.

#### **Avoidance, Minimization, and/or Mitigation Measures**

##### ***Vernal Pool***

Because the vernal pool is hydrologically isolated, it is not protected under USACE jurisdiction as defined by Section 404 of the CWA, and therefore no compensatory mitigation under Section 404 of the CWA would be required. Avoidance, minimization and/or mitigation measures in relation to USFWS species are discussed in Section 2.3.5, “Threatened and Endangered Species” (i.e., threatened and endangered aquatic invertebrate habitat).

However, in order to avoid and minimize project effects to the vernal pool, the following measures shall be implemented during construction activities:

- During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.
- Additional impacts from vernal pool disturbance will be avoided by installing protective Environmentally Sensitive Area fencing and silt fencing between the vernal pool and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the vernal pool during construction.
- Standard BMPs will be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

### ***Isolated Seasonal Wetlands***

Because the seasonal wetlands are hydrologically isolated, they are not protected under USACE jurisdiction as defined by Section 404 of the CWA, and therefore no compensatory mitigation under Section 404 of the CWA would be required. Implementation of the measures discussed under “Vernal Pool” above would avoid and minimize project effects to isolated seasonal wetlands during project construction.

### ***Intermittent Creek***

As permanent and temporary direct impacts would occur to Buffalo Creek, a USACE jurisdictional feature, compensatory mitigation for direct impacts would be required, as follows.

The City will execute a revegetation plan with three years of monitoring for the temporary degradation of intermittent creek habitat. The specific goals and criteria will aim to fully restore the functions and values to levels that are statistically identical or superior to that of adjacent habitat.

The City shall obtain all necessary permits required by the CWA and a Streambed Alteration Agreement from CDFW and implement all conditions specified in these permits:

- Section 404 permit from USACE for fill of waters of the United States, including wetlands.
- Section 401 water quality waiver or certification from the RWQCB.
- Streambed Alteration Agreement from CDFW.

The City shall ensure that the proposed project would result in no net loss of waters of the U.S. Where a Section 404 Permit has been issued by USACE, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of USACE for granting a permit may be submitted for purposes of achieving a no net loss of wetlands. Compensatory mitigation may consist of: (1) obtaining credits from a mitigation bank; (2) making a payment to an in-lieu fee program that will conduct wetland, stream or other aquatic resource restoration, creation, enhancement, or preservation activities; these programs are generally administered by government agencies or nonprofit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants; and/or (3) providing compensatory mitigation through

an aquatic resource restoration, establishment, enhancement and/or preservation activity. This last type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project proponent/permit applicant retains responsibility for the implementation and success of the mitigation project.

In addition, the following measures will be implemented as part of the proposed project to avoid and minimize project effects to Buffalo Creek:

- During project development the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas. The interchange structure will be elevated, resulting in avoidance of any fill of intermittent creek habitat where it lies south of U.S. 50.
- Impacts to the water quality of the intermittent creek within the BSA will be minimized by implementing BMPs and an erosion and sediment control plan that minimize impacts to water quality within the creek.
- Measures to avoid temporary and indirect impacts would include fencing off the intermittent creek with orange construction fencing and limiting construction equipment access across the channel within the BSA.
- To reduce potential impacts to vegetation and aquatic habitat associated with accidental spills of pollutants (e.g., fuel, oil, grease), the construction contractor will implement appropriate hazardous materials management practices to reduce the possibility of chemical spills or releases of contaminants, including any nonstormwater discharge.

In addition, standard staging area practices for sediment-tracking reduction should also be implemented where necessary, including vehicle washing and street sweeping.

### ***Folsom South Canal***

Because no impacts would occur from the project, no compensatory mitigation would be necessary. The following measures will be implemented as part of the proposed project to avoid and minimize project effects to Folsom South Canal:

- The interchange structure would be elevated, resulting in avoidance of any fill or disturbance to the Folsom South Canal.

- To reduce potential impacts to vegetation and aquatic habitats associated with accidental spills of pollutants (e.g., fuel, oil, grease etc.), the construction contractor will implement appropriate hazardous materials management practices to reduce the possibility of chemical spills or releases of contaminants, including any nonstormwater discharge.

In addition, standard staging area practices for sediment-tracking reduction should also be implemented where necessary, including vehicle washing and street sweeping.

### **Wetland Only Practicable Alternative Finding**

Wetlands and other water are protected under a number of laws and regulations, one of which is the Executive Order for the Protection of Wetlands (E.O. 11990). E.O. 11990 regulates the activities of federal agencies with regards to wetlands. It essentially provides that a federal agency cannot undertake or provide assistance for new construction located in wetlands unless it finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm to wetlands.

Only one build alternative was evaluated in the Draft Environmental Document: Alternative 3. Other alternatives were considered and eliminated due to a variety of factors, including: operational and safety concerns; excessive right-of-way acquisition requirements; failure to meet most of the basic project objectives; or infeasibility of the alternative due to engineering constraints. A No Build Alternative was also evaluated; however, it was not selected as the preferred alternative because it does not meet the purpose and need of the project.

The area between the Folsom South Canal and White Rock Road is largely undeveloped nonnative grassland with scattered isolated seasonal wetlands and vernal pools that may provide suitable habitat for protected aquatic invertebrate species. All potential alignments would result in some amount of both direct and indirect effects to isolated seasonal wetland habitat. As such, no alternative was identified that would avoid or substantially reduce effects to isolated seasonal wetland habitat.

All isolated seasonal wetland habitat in the project area is marginal habitat, as described in this section. As such, this habitat represents low-value habitat for both endangered and common species that use wetland habitat. Replacement mitigation that would be required to compensate for the loss of isolated seasonal wetland habitat as a result of the proposed project would be high-quality, high-value habitat, which, cumulatively, would result in

improvement of wetland habitat available as compared to preservation of the marginal wetland habitat on-site.

Alternative 3 includes all practicable measures to minimize harm to wetlands. The proposed mitigation consists of fully restoring the functions and values of temporarily disturbed wetlands to levels that are statistically identical or superior to that of adjacent habitat. In addition, no net loss of wetlands will be achieved through purchase of mitigation credits, payment to an in-lieu fee program, or restoration. Based on the above considerations, there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands

### 2.3.3. Plant Species

#### Regulatory Setting

The USFWS and CDFW share regulatory responsibility for the protection of “special-status” plant species. Special-status species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under FESA and/or the California Endangered Species Act (CESA). See Section 2.3.5, “Threatened and Endangered Species,” for detailed information regarding these species.

This section of the EIR/EA discusses all the other special-status plant species, including CDFW fully protected species and species of special concern, USFWS candidate species, and nonlisted California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for the FESA can be found at 16 USC 1531 et seq. See also 50 CFR Part 402. The regulatory requirements for the CESA can be found at California Fish and Game Code Section 2050 et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code Sections 1900–1913, and CEQA, PRC Sections 2100–21177.

#### Affected Environment

The information in this section is based on information provided in the Natural Environmental Study (NES) for the Rancho Cordova Parkway Interchange prepared by the City of Rancho Cordova in May 2008.

### **Biological Study Area**

The BSA, described in Section 2.3.1, “Natural Communities,” and shown on **Figure 2.3.1-1**, consists of the project footprint (the maximum construction area) as well as a 250-foot buffer around the proposed project footprint. The BSA includes the edges of U.S. 50, a portion of land north of U.S. 50 set aside for the highway interchange, and the alignment of the new Rancho Cordova Parkway Interchange that would connect U.S. 50 and White Rock Road to the south.

### **Field Surveys and Technical Reports**

Rare plant surveys were conducted on April 18 and August 8, 2005, on the ~~GenCorp/Aerojet~~ propertysite that includes the BSA. ECORP conducted a tree survey to map types of trees within the ~~GenCorp/Aerojet~~ property. Although no formal arborist report was completed, all the information that would be contained in an arborist report is available. Tree surveys of the northern portion of the BSA were conducted on May 16, June 15, and June 21, 2007. The northern portion of the BSA was surveyed for protected trees.

Special-status plants and wildlife documented by the California Natural Diversity Database (CNDDB) provide the main source of information regarding potential protected plant species in the area. Other sources of information include CNPS and USFWS (**Table 2.3.3-1**).

Range and habitat information for the special-status plant species below was obtained from the California Wildlife Habitat Relationships (CWHR) program version 8 and the CNDDB (CDFW 2006; updated 2012).

**Table 2.3.3-1  
Special-Status Plant Species Potentially Occurring in the Vicinity of the BSA**

Common Name Scientific Name	Status Federal <sup>1</sup> / State <sup>2</sup> /CNP S <sup>3</sup> /Other <sup>4</sup>	General Habitat Description	Considered in Impact Analysis	Rationale
<b>Plants</b>				
Ione manzanita <i>Arctostaphylos myrtifolia</i>	FT/~1B.2	Evergreen shrub. Chaparral, cismontane woodland (acidic, Ione soil clay or sandy). Blooming period: November–February Elevation: 60–580 meters	No	Although the surveys were conducted outside of this species' blooming period, this species is easily identified even when not in bloom. Additionally, the BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA, and this species was not observed during surveys.
Stebbin's morning-glory <i>Calystegia stebbinsii</i>	FT/SE/1B.2	California endemic found in chaparral, cismontane woodland Blooming period: April–June Elevation: 185–730 meters	No	Gabbroic or serpentinite are not present within or around the action area; therefore, suitable habitat is not present. There are no previously recorded occurrences within a 5-mile radius of the action area.
Pine hill ceanothus <i>Ceanothus roderickii</i>	FE/CR/1B.2	Perennial evergreen shrub. Chaparral, cismontane woodland (serpentinite or gabbroic). Blooming period: May–June Elevation: 260–630 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.
Red hills soaproot <i>Chlorogalum grandiflorum</i>	~/~/1B.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, lower montane coniferous forest (serpentinite or gabbroic). Blooming period: May–June Elevation: 245–1,170 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.
Brandegee's clarkia <i>Clarkia biloba ssp. brandegeae</i>	~/~/1B.2	Annual herb. Chaparral and cismontane woodland often on roadcuts. Blooming period: May–July Elevation: 225–915 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.
Dwarf downingia <i>Downingia pusilla</i>	~/~/2.2 SLC	Annual herb. Valley and foothill grassland (mesic) and vernal pools. Blooming period: March–May Elevation: 1–445 meters	No	There is one known occurrence of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA. This species was not found during surveys.

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

Common Name Scientific Name	Status Federal <sup>1</sup> / State <sup>2</sup> /CNP S <sup>3</sup> /Other <sup>4</sup>	General Habitat Description	Considered in Impact Analysis	Rationale
<b>Plants</b>				
Ione buckwheat <i>Eriogonum apricum</i> var. <i>apricum</i>	FE/SE/1B.2	Perennial herb. Chaparral (openings, Ione soil). Blooming period: July–October Elevation: 60–145 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.
Irish hill buckwheat <i>Eriogonum apricum</i> var. <i>prostratum</i>	FE/SE/1B.2	Perennial herb. Chaparral (openings, Ione soil). Blooming period: June–July Elevation: 90–120 meters	No	Although surveys were not conducted within this species' blooming period, habitat is not present and the BSA is not within this species' elevation range. This species was not observed during surveys.
Tuolumne button-celery <i>Eryngium</i> <i>pinnatisectum</i>	~/~/1B.2	Annual/perennial herb. Cismontane woodland, lower montane coniferous forest, vernal pools (mesic). Blooming period: June–August Elevation: 70–915 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.
Pine hill flannelbush <i>Fremontodendron</i> <i>decumbens</i>	FE/CR/1B.2	Evergreen shrub. Chaparral and cismontane woodland (rocky, serpentinite or gabbroic soils). Blooming period: April–July Elevation: 425–760 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.
El Dorado bedstraw <i>Galium californicum</i> <i>ssp. sierrae</i>	FE/CR/1B.2	Perennial herb. Chaparral, cismontane woodland, and lower montane coniferous forest (gabbroic). Blooming period: May–June Elevation: 100–585 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.
Bogg's lake hedge hyssop <i>Gratiola heterosepala</i>	~/SE/1B.2 SLC	Annual herb. Marshes, swamps, lake margins, and vernal pools with clay soils. Blooming period: April–June Elevation 10–2,375 meters	No	There are nine known occurrences of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA. However, this species was not found during surveys.
Parry's horkelia <i>Horkelia parryi</i>	~/~/1B.2	Perennial herb. Chaparral, cismontane woodland especially Ione formation. Blooming period: April–June (September) Elevation: 80–1,035 meters	No	The BSA is not within this species' elevation range, and habitat is not present within the BSA. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.

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

Common Name Scientific Name	Status Federal <sup>1</sup> / State <sup>2</sup> /CNP S <sup>3</sup> /Other <sup>4</sup>	General Habitat Description	Considered in Impact Analysis	Rationale
<b>Plants</b>				
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	~/~/1B.2 SLC	Annual herb. Chaparral, cismontane woodland, meadows, and seeps, valley and foothill grasslands, vernal pools (vernally mesic). Blooming period: March–May Elevation 30–100 meters	No	There are two known occurrences of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA. However, this species was not found during surveys.
Legenere <i>Legenere limosa</i>	~/~/1B.2 SLC	Annual herb. Vernal pools. Blooms: April–June Elevation: 1–880 meters	No	There are nine known occurrences of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA. However, this species was not found during surveys.
Pincushion navaretia <i>Navarretia myersii</i> ssp. <i>myersii</i>	~/~/1B.2 SLC	Annual herb. Vernal pools. Blooming period: May Elevation: 20–330 meters	No	There is one known occurrence of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA. However, this species was not found during surveys.
Slender orcutt grass <i>Orcuttia tenuis</i>	FT/SE/1B.2 SLC	Annual herb. Vernal pools. Blooming period: May–September (October) Elevation: 35–1,760 meters	No	There are three known occurrences of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA. However, this species was not found during surveys.
Sacramento orcutt grass <i>Orcuttia viscida</i>	FE/SE/1B.2 SLC	Vernal pools. Blooming period: April–July Elevation: 30–100 meters	No	There are nine known occurrences of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA. However, this species was not found during surveys.
Layne's ragwort <i>Packera layneae</i>	FT/CR/1B.2	Perennial herb. Chaparral and cismontane woodland (rocky, serpentinite or gabbroic soils). Blooming period: April–July Elevation: 200–1,000 meters	No	Suitable habitat does not occur within the BSA. The BSA is outside of this species' known elevation range. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.

Common Name Scientific Name	Status Federal <sup>1</sup> / State <sup>2</sup> /CNP S <sup>3</sup> /Other <sup>4</sup>	General Habitat Description	Considered in Impact Analysis	Rationale
<b>Plants</b>				
Sanford's arrowhead <i>Sagittaria sanfordii</i>	~/~/1B.2 SLC	Marshes and swamps (assorted shallow freshwater). Extirpated from Southern California, and mostly extirpated from the Central Valley. Blooming period: May–October Elevation 0–610 meters	No	There are 14 known occurrences of this species within 10 miles of the BSA. Suitable habitat occurs within the wetland features within the BSA. However, this species was not found during surveys.
El Dorado County mule ears <i>Wyethia reticulata</i>	~/~/1B.2	Perennial herb. Chaparral, cismontane woodland, and lower montane coniferous forest (clay or gabbroic). Blooming period: May–July Elevation: 185–630 meters	No	Suitable habitat does not occur within the BSA. The BSA is outside of this species' known elevation range. There are no known occurrences of this species within 10 miles of the BSA. This species was not observed during surveys.

**Code Designations for Table 2.3.3-1**

<sup>1</sup> Federal status: USFWS Listing	<sup>2</sup> State status: USFWS and CDFW Listing	<sup>3</sup> CNPS: CNPS Listing
<b>FE</b> = Listed as endangered under FESA	<b>SE</b> = Listed as endangered under CESA	<b>1A</b> = Plant species presumed extinct in California.
<b>FT</b> = Listed as threatened under FESA	<b>ST</b> = Listed as threatened under CESA	<b>1B</b> = Plant species that are rare, threatened, or endangered in California and elsewhere.
<b>FC</b> = Candidate for listing (threatened or endangered) under FESA	<b>CSC</b> = Species of Concern as identified by CDFW	<b>List 2</b> = Plant species that are rare, threatened, or endangered in California, but more common elsewhere.
		<b>CNPS Threat Code:</b> 0.1 = Seriously endangered in California (more than 80% of occurrences threatened/high degree and immediacy of threat) 0.2 = Fairly endangered in California (20-80% occurrences threatened) 0.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)
<b>FD</b> = Delisted in accordance with the FESA	<b>CFP</b> = Listed as fully protected under CDFW code	<b><sup>4</sup>Other</b>
<b>FSC</b> = Federal Species of Concern identified by USFWS	<b>CR</b> = Species identified as rare by CDFW	<b>SLC</b> = Species of Local or Regional Concern or conservation significance (County of Sacramento 2006)
Habitat description: <sup>4</sup> Habitat description adapted from CNDDB (CDFW 2007; updated 2012) and CNPS online inventory (CNPS 2007; updated 2012)		

As indicated on **Table 2.3.3-1**, many of the special-status plant species identified on these databases are outside the range of the project BSA, or suitable habitat for these species was not identified within the BSA. Although suitable habitat for several special-status plant species occurs in the one vernal pool within the BSA just south of Folsom South Canal (shown on **Figures 2.3.1-2a** and **2.3.1-2b** in Section 2.3.1, “Natural Communities”), none of these plant species were observed during field surveys.

#### *Protected Trees*

A total of 150 trees that would qualify for protection under the Sacramento County Tree Preservation Ordinance or under the City’s General Plan policies were identified within the project footprint and temporary construction zone (TCZ).

### **Environmental Consequences**

#### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, because the project would not be implemented, there would be no effects to special-status plant species.

#### ***Alternative 3 (Proposed Project)***

Because no special-status plant species were identified within the BSA, implementation of the project would have no effects to special-status plant species.

#### *Protected Trees*

Trees that would require removal to allow for the project construction are distributed through much of the BSA, and it is anticipated that native oak trees that qualify for protection under the Sacramento County and City of Rancho Cordova Tree Protection Ordinances and other trees protected by the Rancho Cordova General Plan would be removed by the project (**Figure 2.3.3-1**). **Table 2.3.3-2** details the native tree species surveyed within the project footprint and TCZ.

**Table 2.3.3-2  
Trees Affected by the Proposed Project**

Common Name	Project Footprint		TCZ	
	Number of Trees	Sum of DBH (in inches)	Number of Trees	Sum of DBH (in inches)
Black Oak	0	0	0	0
Black Walnut	1	19	1	30
Blue Oak	2	45	0	0
Fremont Cottonwood	61	1,508	6	197
Goodding's Black Willow	1	20	0	0
Interior Live Oak	48	842	10	246
Pacific Willow	2	44	0	0
Valley Oak	15	388	3	44
<b>Total</b>	<b>130</b>	<b>2,866</b>	<b>20</b>	<b>517</b>

Source: City of Rancho Cordova, Natural Environment Study, May 2008.

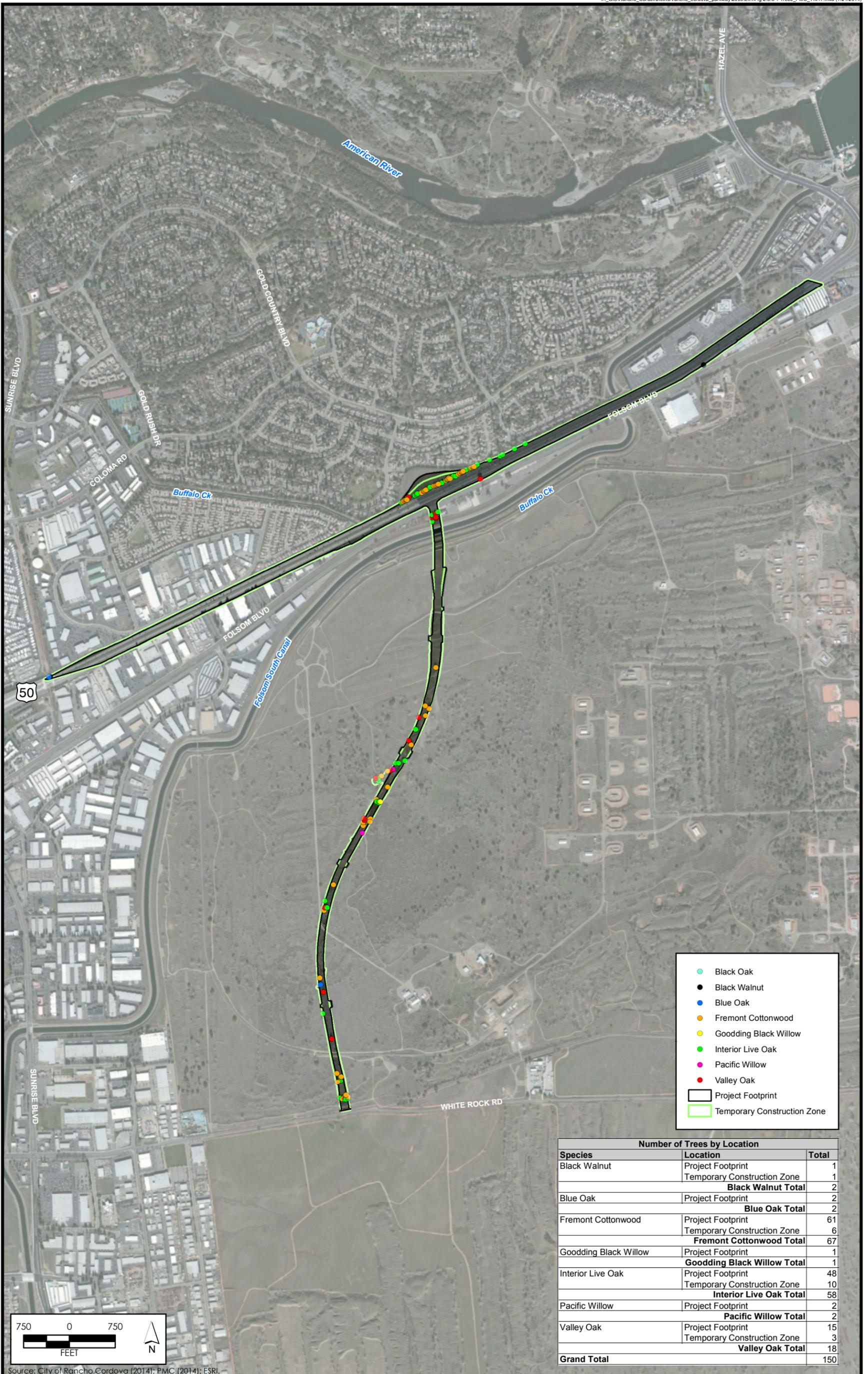
### Direct Effects

The implementation of the proposed project could result in the direct removal of approximately 130 native trees measuring a total of 2,866 inches diameter at breast height (dbh) (see **Figure 2.3.3-1**). Of these, 65 trees are native oaks, measuring a total of 1,275 inches dbh, protected under the Sacramento County Tree Protection Ordinance.

### Indirect Effects

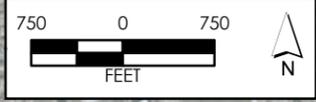
There are 20 trees that are within 20 feet of the project footprint and could be indirectly impacted by project construction (see **Figure 2.3.3-1**). Of these, 13 are native oaks that are protected under the Sacramento County Tree Protection Ordinance. The project footprint could be within the dripline of these trees and could therefore indirectly affect these trees by either compacting their root system or otherwise damaging the tree.

Please see Section 3.2.15 for additional information on plant species impacts.



- Black Oak
- Black Walnut
- Blue Oak
- Fremont Cottonwood
- Goodding Black Willow
- Interior Live Oak
- Pacific Willow
- Valley Oak
- Project Footprint
- Temporary Construction Zone

Number of Trees by Location		
Species	Location	Total
Black Walnut	Project Footprint	1
	Temporary Construction Zone	1
<b>Black Walnut Total</b>		<b>2</b>
Blue Oak	Project Footprint	2
	Temporary Construction Zone	0
<b>Blue Oak Total</b>		<b>2</b>
Fremont Cottonwood	Project Footprint	61
	Temporary Construction Zone	6
<b>Fremont Cottonwood Total</b>		<b>67</b>
Goodding Black Willow	Project Footprint	1
	Temporary Construction Zone	0
<b>Goodding Black Willow Total</b>		<b>1</b>
Interior Live Oak	Project Footprint	48
	Temporary Construction Zone	10
<b>Interior Live Oak Total</b>		<b>58</b>
Pacific Willow	Project Footprint	2
	Temporary Construction Zone	0
<b>Pacific Willow Total</b>		<b>2</b>
Valley Oak	Project Footprint	15
	Temporary Construction Zone	3
<b>Valley Oak Total</b>		<b>18</b>
<b>Grand Total</b>		<b>150</b>



Source: City of Rancho Cordova (2014); PMC (2014); ESRI.



City of Rancho Cordova  
Planning Department

Figure 2.3.3-1  
Trees Directly or Indirectly Impacted  
by the Proposed Project



## **Avoidance, Minimization, and/or Mitigation Measures**

The following measures from the Sacramento County Tree Preservation Ordinance (County Code Title 19.12), which was adopted by the City of Rancho Cordova, will be implemented as part of the proposed project to avoid and minimize damage to preserved trees during project construction:

- During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.
- A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.
- Protective fencing shall be installed at the driplines of the protected trees prior to the start of any construction work (including grading or placement of vehicles on site), in order to avoid damage to the trees and their root systems. This fencing may be installed around the outermost dripline of clusters of trees proposed for protection, rather than individual trees. Fencing shall be shown on all project plans.
- No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the driplines of protected trees. A laminated sign indicating such shall be attached to fencing surrounding trees on-site.
- No grading (grade cuts or fills) shall be allowed within the driplines of protected trees.
- Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.
- No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.

- The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system shall be installed under the supervision of a certified arborist. Wherever possible, pervious concrete shall be used as an alternative to traditional concrete, when it is required under tree driplines.
- No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines of protected trees. An aboveground drip irrigation system is recommended.
- Landscaping beneath protected trees may include non-plant materials such as bark mulch or wood chips. The only plant species that shall be planted within the driplines of protected trees are those that are tolerant of the natural environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.
- Any protected trees on the site which require pruning shall be pruned by an arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute A300 pruning standards and the International Society of Arboriculture’s “Tree Pruning Guidelines.”
- No signs, ropes, cables (except those which may be installed by an arborist to provide limb support), or any other items shall be attached to the protected trees.

In addition, any trees protected by the Tree Preservation Ordinance or the Rancho Cordova General Plan requiring removal for project construction will either be compensated for by replacement, purchase of habitat conservation areas to protect existing woodland habitats, through contribution to tree planting programs or in-lieu fee programs in the area, or through some combination of these options to achieve no net loss of trees from the project.

Prior to any groundbreaking activities, the City Planning Department will determine which trees would be suitable candidates for protection and which trees will need to be mitigated if removed. Trees that would be removed or otherwise harmed by the project shall be mitigated for as described below.

Prior to any groundbreaking activity, a Replacement Tree Planting Plan shall be prepared by an arborist or landscape architect. The Replacement Tree Planting Plan(s) shall follow the standards set forth in the City of Rancho Cordova Municipal Code and shall include the following minimum elements:

- Species, size, and locations of all replacement plantings.
- Method of irrigation.
- A tree planting detail, including a 10-foot depth-boring hole to provide for adequate drainage.
- Planting, irrigation, and maintenance schedules.
- Identification of the maintenance entity and a written agreement with that entity, if other than the City of Rancho Cordova, to provide care and irrigation of the trees for a five-year establishment period and to replace any of the replacement trees which do not survive during that period.

Replacement inches will be calculated based on the following size categories:

- One J-pot = 0.5 inch dbh
- One 15-gallon tree = 1 inch dbh
- One 24-inch box tree = 2 inches dbh
- One 36-inch box tree = 3 inches dbh

Existing native trees on-site proposed for removal that are less than 6 inches dbh and are in fair or better condition may be transplanted to the new planting area. If existing trees are successfully transplanted, new plantings may be reduced.

No replacement tree shall be planted within 15 feet of a building foundation or other known areas of future ground disturbance. The minimum spacing for replacement trees shall be 15 feet on center. J-pots may be planted closer at the discretion of the City Arborist or the consulting arborist.

#### 2.3.4. **Animal Species**

##### **Regulatory Setting**

Many state and federal laws regulate impacts to wildlife. The USFWS, the National Oceanic and Atmospheric Administration (NOAA) Fisheries, and the CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the CESA or FESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5. All other special-status animal species are discussed here,

including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act (NEPA)
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act (CEQA)
- Sections 1600–1603 of the Fish and Game Code
- Sections 4150 and 4152 of the Fish and Game Code

In addition to state and federal laws regulating impacts to wildlife, there are often local regulations that need to be considered when developing projects. If work is being done on federal land (Bureau of Land Management or US Forest Service, for example), then those agencies' regulations, policies, and habitat conservation plans are followed.

### **Affected Environment**

The information in this section is based on information provided in the Natural Environmental Study (NES) for the Rancho Cordova Parkway Interchange prepared by the City of Rancho Cordova in May 2008.

### ***Biological Study Area***

The BSA, described in Section 2.3.1, “Natural Communities,” and shown on **Figure 2.3.1-1**, consists of the project footprint (the maximum construction area) as well as a 250-foot buffer around the proposed project footprint. The BSA includes the edges of U.S. 50, a portion of land north of U.S. 50 set aside for the highway interchange, and the alignment of the new Rancho Cordova Parkway that would connect U.S. 50 and White Rock Road to the south.

The proposed Rancho Cordova Parkway alignment would cross over Folsom South Canal and intermittent creek habitat (Buffalo Creek). The BSA also contains seasonally ponded areas and areas that have been historically flooded from the pumping of treated groundwater.

### *Biological Studies and Technical Reports*

The vast majority of biological information on wildlife species used in this section of the EIR/EA is from the NES. Field surveys to evaluate the existing biological conditions within the BSA were conducted on April 27, April 28, and May 1 in 2006, as well as May 8–10, May 16, June 15, and June 21 in 2007 to determine the types and conditions of biological resources within the BSA.

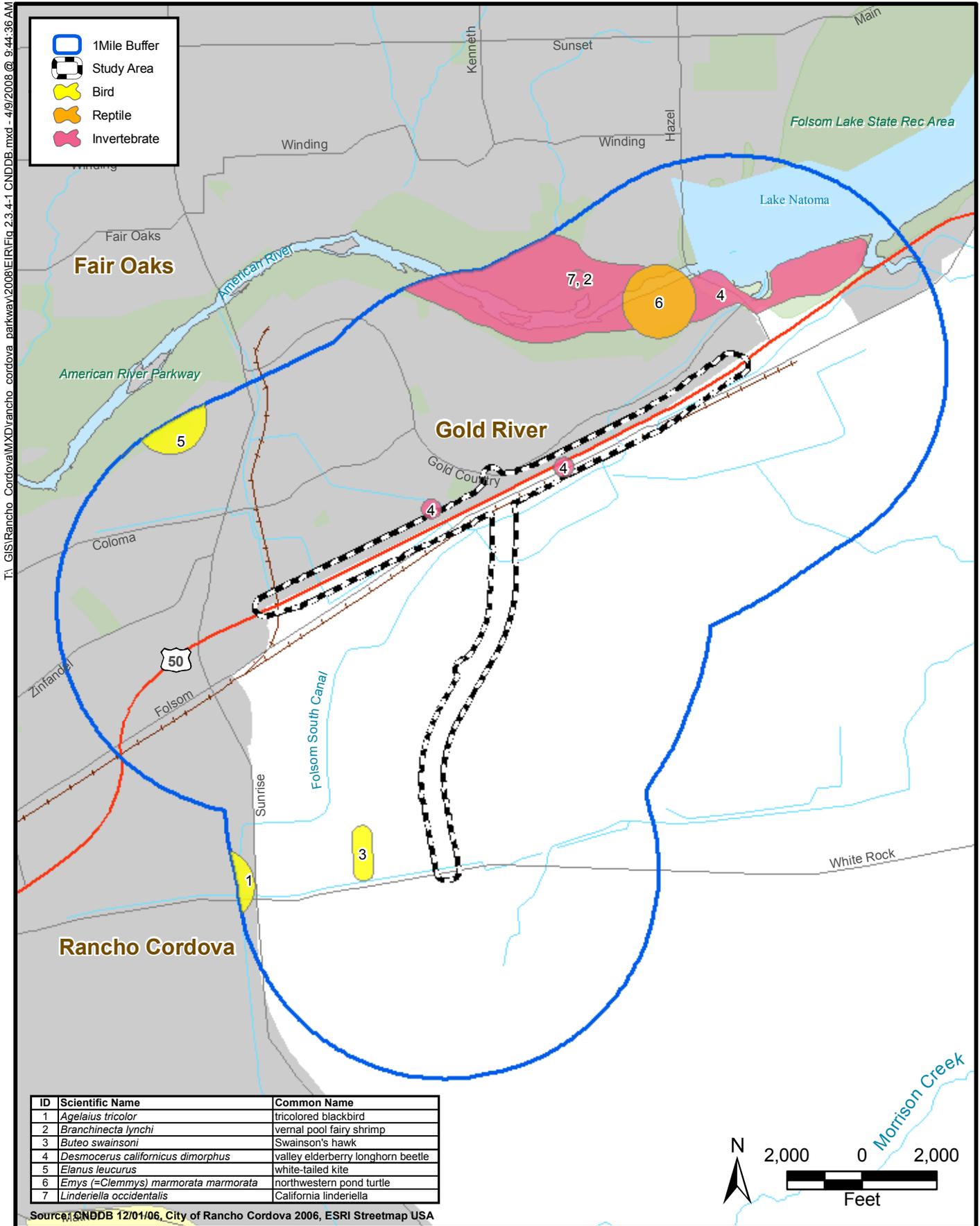
In preparation for the field surveys, a list of special-status wildlife species that have the potential to occur within the BSA or vicinity was prepared using information provided by the USFWS and the CNDDDB. Database searches were completed in 2006 before surveys were completed and updated in August 2007 and January 2012. The majority of the BSA is included in the Buffalo Creek USGS 7.5-minute quadrangle. The query included Buffalo Creek and the surrounding USGS 7.5-minute quadrangles (Citrus Heights, Folsom, Clarksville, Carmichael, Folsom SE, Elk Grove, Sloughouse, and Carbondale).

Biologists conducted surveys of the entire BSA. Previous studies include surveys of the land below the south end of the Folsom South Canal. Reports documenting previous field studies for the Westborough at Easton housing development on ~~GenCorp~~/Aerojet property evaluated biological and wetlands resources on land that includes most of the Rancho Cordova Parkway alignment. These biological study reports are referenced in the NES. Information from these reports was used herein for the BSA south of the Folsom South Canal. This information was field verified during field surveys.

All surveys were conducted during daylight hours. Binoculars were used in the identification of birds. All potential wetlands features were inspected and evaluated as habitat for special-status species as well as for characteristics that would include them under state or federal jurisdiction.

Special-status plants and wildlife documented by the CNDDDB, as shown on **Figure 2.3.4-1** and in **Table 2.3.4-1**, provide the main source of information regarding potential protected species in the area. Other sources of information include the USFWS. Range and habitat information for the special-status wildlife species below was obtained from the California Wildlife Habitat Relationships program version and the CNDDDB.

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City of Rancho Cordova  
Planning Department

Figure 2.3.4-1  
Recorded Occurrences of Special-status Species  
Within 1-mile Radius of the Biological Study Area



**Table 2.3.4-1  
Special-Status Wildlife Species Potentially Occurring  
in the Vicinity of the BSA**

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
<b>Invertebrates</b>				
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	FE/~/~	Inhabits rather large, cool-water vernal pools with moderately turbid water. They have been collected from early November to early April.	No	There are no occurrences of this species within 10 miles of the BSA. Marginal habitat occurs within the vernal pool within the BSA.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT/~ /SLC	Occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. Although the species has been collected from large vernal pools, including one exceeding 25 acres, it tends to occur in smaller pools. It is most frequently found in pools measuring less than 0.05 acre, most commonly in grass or mud-bottomed swales, or basalt flow depression pools in unplowed grasslands. Vernal pool fairy shrimp have been collected from early December to early May.	Yes	There are 34 known occurrences of this species within 10 miles of the BSA, one of which is known 1 mile to the north of the BSA. Suitable habitat occurs within the BSA.
Midvalley fairy shrimp <i>Branchinecta mesovallensis</i>	~/~/SLC	Endemic but distribution poorly understood. Associated with vernal pools, vernal swales, and other ephemeral water features. Habitat requirements similar to other local fairy shrimp species but tend to be in more shallow pools.	Yes	There are seven known occurrences of this species within 10 miles of the BSA. Suitable habitat occurs within the vernal pool within the BSA.
Valley elderberry longhorn beetle (VELB) <i>Desmocerus californicus dimorphus</i>	FT/~ /SLC	Associated exclusively with elderberry shrubs ( <i>Sambucus mexicana</i> ) in Central Valley and foothills during its entire life cycle; larvae bore into elderberry stems and feed upon the pith during their two-year life cycle.	Yes	There are approximately 105 elderberry shrubs or clumps present within the BSA. There are 13 known occurrences of this species within 10 miles of the BSA.

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>	~ICSC/SLC	A small aquatic beetle known only from pond habitats scattered around the San Francisco Bay area, including Marin, Sonoma, Alameda, and Contra Costa counties. It is an unusual species whose closest apparent relative is known from eastern Asia. Historical collecting records indicate that populations of this species probably have long existed at low densities. Where and if any populations of <i>Hydrochara rickseckeri</i> still exist is unknown.	No	There are two historic records of this species within 10 miles of the BSA, one of which is located about 2.5 miles south of the BSA. Since it is unknown if any populations still exist, it is unlikely that this species would occur within the BSA.
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	FE/~ /SLC	Inhabits vernal pools containing clear to highly turbid water, ranging in size from 54 square feet in the former Mather Air Force Base area of Sacramento County, to the 89-acre Olcott Lake at Jepson Prairie. Tadpole shrimp climb objects and plow along or within bottom sediments feeding on organic debris and living organisms, such as fairy shrimp and other invertebrates.	Yes	There are 38 known occurrences of this species within 10 miles of the BSA, one of which is located about 2 miles to the south of the BSA. The vernal pool and seasonal wetlands within the BSA may be suitable habitat for this species.
California linderiella <i>Linderiella occidentalis</i>	Not listed	Associated with vernal pools, vernal swales, and other ephemeral water features. Habitat requirements similar to other local fairy shrimp species but tend to be in more shallow pools.	Yes	This species was incidentally observed in a seasonal wetland at the south end of BSA during field surveys.
Fish				
Delta smelt <i>Hypomesus transpacificus</i>	FT/ST/~	Located exclusively in the Sacramento-San Joaquin Delta. They have been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River. They extend downstream as far as San Pablo Bay. Delta smelt are found in brackish water. They usually inhabit salinity ranges of less than 2 parts per thousand (ppt) and are rarely found at salinities greater than 14 ppt.	No	No suitable habitat is present within the BSA. The BSA is not within the known range for this species.

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Central Valley ESU steelhead <i>Oncorhynchus mykiss</i>	FT/~/~	Sacramento and San Joaquin rivers and their tributaries. Suitable spawning habitat also occurs in the Yuba River and tributaries.	No	No suitable habitat is present within the BSA.
Central Valley spring-run ESU chinook salmon <i>Oncorhynchus tshawytscha</i>	FT/ST/~	Spawns and juveniles rear for up to one year in the Sacramento and Yuba rivers and their tributaries.	No	No suitable habitat is present within the BSA.
Central Valley fall/late fall-run ESU chinook salmon <i>Onchorhynchus tshawytscha</i>	FC/CSC/~	Spawn and juveniles rear for two to six months in the Sacramento and San Joaquin rivers and their tributaries.	No	No suitable habitat is present within the BSA.
Amphibians				
California tiger salamander <i>Ambystoma californiense</i>	FT/CSC/~	Typically found in annual grasslands of lower hills and valleys; breeds in temporary and permanent ponds and in streams; uses rodent burrows and other subterranean retreats in surrounding uplands for shelter; appears to be absent in waters containing predatory game fish. The California tiger salamander spends most of its lifecycle estivating underground in adjacent valley oak woodland or grassland habitat, primarily in abandoned rodent burrows.	No	There are no known occurrences of this species within 10 miles of the BSA. The BSA is outside the range for this species; therefore, there is no potential that this species would occur within the BSA.
California red-legged frog <i>Rana draytonii</i>	FT/CSC/~	Lowlands and foothill streams, pool, and marshes in or near permanent or late season sources of deep water with dense, shrubby, riparian, or emergent vegetation (e.g., ponds, perennial drainages, well-developed riparian) below 3,936 feet in elevation. Breeds late December to early April.	No	There are no known occurrences of this species within 10 miles of the BSA. The BSA is outside the range for this species; therefore, there is no potential that this species would occur within the BSA.

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Western spadefoot <i>Spea (=Scaphiopus) hammondi</i>	~/CSC/SLC	Associated habitat divided between aquatic breeding ponds and upland, nonbreeding habitat. During much of the year found in upland grassland, chaparral, and woodland communities. Will travel long distances to ephemeral breeding pools. Breeding typically takes place January-May.	Yes	There are five known occurrences of this species within 10 miles of the BSA. Although a vernal pool and seasonal wetlands are present within the BSA, the soils are generally unsuitable for burrowing. Marginal habitat does occur within the BSA.
Reptiles				
Western pond turtle <i>Emys marmorata</i>	~/CSC/SLC	Permanent or nearly permanent water in various habitats (e.g., ponds, streams, perennial drainages). Requires basking sites particularly in areas vegetated with riparian habitats.	Yes	There are nine known occurrences of this species within 10 miles of the BSA. Observed on the <del>GenCorp</del> /Aerojet property. Suitable habitat occurs within the BSA in intermittent creek, Folsom South Canal, and other wetland features.
Giant garter snake <i>Thamnophis gigas</i>	FT/ST/SLC	Inhabits freshwater sloughs, marshes, canals, wetlands. Also uses rice fields, drainage canals, and irrigation ditches for hunting and overwinters underground in uplands. This species inhabits small mammal burrows and other soil crevices above prevailing flood elevations throughout its winter dormancy period. Burrows commonly have sunny exposure along south and west facing slopes.	No	There are no known occurrences within 10 miles of the BSA. Since Buffalo Creek conveys only intermittent flows and lacks emergent vegetation required for snake foraging and cover, there is marginal habitat present within the BSA. It is unlikely that this species would occur within the BSA.
Birds				
Cooper's hawk <i>Accipiter cooperi</i>	~/CSC/ MNBMC, SLC	Nests in densely canopied trees from foothill oak woodlands up to ponderosa pine forests. Nesting usually occurs in a deciduous tree near open water or riparian vegetation. Breeds March to August.	Yes	There are four known occurrences of this species within 10 miles of the BSA, one of which is 2 miles east of BSA. Nesting and foraging habitat is present within the BSA. Observed on the <del>GenCorp</del> /Aerojet property (ECORP 2005).

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Tri-colored blackbird <i>Agelaius tricolor</i>	~/CSC/SLC	Breeds in freshwater wetlands, with tall dense vegetation including tule, cattail, blackberry, and rose. Forages in grasslands and croplands. Resident year-round. Breeds April to July.	No	There are 27 known occurrences within 10 miles of the BSA. A foraging colony was also observed in southwest portion of the <del>GenCorp</del> /Aerojet property (ECORP 2005). Even though there are known occurrences in the vicinity of the BSA, there is no suitable habitat present within the BSA. This species has very specific habitat requirements; therefore, there is no potential that this species occurs within the BSA.
Grasshopper sparrow <i>Ammodramus savannarum</i>	~/CSC/ MNBMC	Inhabits grassland/herbaceous, old field, and savanna. Prefers grasslands of intermediate height and are often associated with clumped vegetation interspersed with patches of bare ground for breeding habitat. Other habitat requirements include moderately deep litter and sparse coverage of woody vegetation.	No	There are no known occurrences of this species within 10 miles of the BSA. Suitable nesting and foraging habitat does not occur within the BSA. Although this species may migrate through this area, it is unlikely that this species would occur within the BSA.
Golden eagle <i>Aquila chrysaetos</i>	~/CSC,CFP/ MNBMC, SLC	A large raptor. Found generally in open country including prairies, arctic and alpine tundra, open wooded country, and barren areas, especially in hilly or mountainous regions. Nests on rock ledge of cliff or in large tree (e.g., oak or eucalyptus in California). Pair may have several alternate nests.	No	There are no known occurrences of this species within 10 miles of the BSA. Suitable nesting and foraging habitat does not occur within the BSA. Although this species may migrate through this area, it is unlikely that this species would occur within the BSA.
Great egret <i>Ardea alba</i>	~/~/MNBMC	(Rookery) Typically nest in large breeding colonies or rookeries. Breeding season typically February–August. Rookeries typically found in large trees in riparian habitat.	No	There are three known occurrences of this species within 10 miles of the BSA. Although suitable foraging habitat is located within intermittent creek, only the rookeries of this species are protected and there is no suitable nesting habitat within the BSA. Observed on the <del>GenCorp</del> /Aerojet property (ECORP 2005).

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Great blue heron <i>Ardea herodias</i>	~/~/MNBMC	(Rookery) Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery site in close proximity to foraging areas, marshes, lake margins, tide-flats, rivers, streams, and wet meadows.	No	There are six known occurrences of this species within 10 miles of the BSA. Although suitable foraging habitat is located within intermittent creek, only the rookeries of this species are protected and there is no suitable nesting habitat within the BSA. Observed on the <del>GenCorp</del> /Aerojet property (ECORP 2005).
Western burrowing owl <i>Athene cunicularia hypugea</i>	~/CSC/SLC	Open grasslands and shrublands up to 5,300 feet with low perches and small mammal burrows. Resident year-round. Breeds February 1-August 31.	Yes	Ground squirrel holes are present within the BSA. No owls were observed during surveys; however, protocol-level surveys were not conducted. There are 14 known occurrences of this species within 10 miles of the BSA, one of which is known from 3 to 4 miles to the southwest of the BSA.
Ferruginous hawk <i>Buteo regalis</i>	~/CSC/ MNBMC, SLC	Ferruginous hawks are birds of open country. They are found in open habitats, such as grasslands, sagebrush, deserts, shrublands, and outer edges of pinyon-pine and other forests. They select rocky outcrops, hillsides, rock pinnacles, or trees for nest sites.	Yes	There is one known occurrence of this species within 10 miles of the BSA. Suitable habitat is located within the BSA. Observed on the <del>GenCorp</del> /Aerojet property (ECORP 2005).
Swainson's hawk <i>Buteo swainsoni</i>	~/ST/ MNBMC, SLC	Breeds in stands with few trees in juniper-sage flats, riparian areas, and oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa or grain fields supporting rodent populations. Nests in valley oaks, cottonwoods, willows, and a variety of other trees often in, or near, riparian habitats; forages in grasslands, irrigated pastures, and a variety of agricultural row and field crops; shows a preference for alfalfa. Breeds late March to late August.	Yes	There are 14 known occurrences of this species within 10 miles of the BSA. Nesting and foraging habitat is present within the BSA. This species was observed on <del>the GenCorp</del> /Aerojet property within 1 mile of the BSA (ECORP 2005).

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Northern harrier <i>Circus cyaneus</i>	~/CSC/ MNBMC, SLC	Meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands. Nests on ground, usually at marsh edge. Mostly nests in emergent wetland or along rivers or lakes, but may nest in grasslands, grain fields, or on sagebrush flats several miles from water. Breeds April to September.	Yes	Although there are no known occurrences of this species within 10 miles of the BSA, this species was observed on the <del>GenCorp</del> /Aerojet property (ECORP 2005).
White-tailed kite <i>Elanus leucurus</i>	~/CFP/SLC	Nests in shrubs (in Delta) and trees adjacent to grasslands oak woodland, edges of riparian habitats. Roosts communally, resident year-round, and breeds February-October.	Yes	There are 18 known occurrences within 10 miles of the BSA. Suitable habitat occurs within the BSA. Observed on the <del>GenCorp</del> /Aerojet property (ECORP 2005).
Merlin <i>Falco columbarius</i>	~/CSC/ MNBMC, SLC	Merlins prefer forest edges near open spaces, providing for both nesting and hunting space.	No	There are no known occurrences within 10 miles of the BSA. Even though this species was observed on the adjacent <del>GenCorp</del> /Aerojet property, only marginal habitat occurs within the BSA (ECORP 2005). Therefore, it is unlikely that this species occurs within the BSA.
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/SE, CFP/ MNBMC, SLC	Permanent resident and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity counties. Ocean shore, lake margins, and rivers, both nesting and wintering. Build stick nests within large tall trees and typically within 1 mile of permanent water. Wintering populations along major rivers and reservoirs in Yuba County. Breeds February to July.	No	There are no known occurrences within 10 miles of the BSA. Suitable habitat does not occur within the BSA since there are no large bodies of water. Therefore, there is no potential that this species would occur within the BSA.

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Yellow breasted chat <i>Icteria virens</i>	~/CSC/ MNBMC, SLC	Migrant species that nests in riparian habitats along rivers and streams up to 4,800 feet on the west side of the Sierra Nevada. Breeds May to July.	No	Although there are no known occurrences of this species within 10 miles of the BSA based on CNDDDB records. This species was observed nesting on the <del>GenCorp</del> /Aerojet property in 1981 (ECORP 2005). Intermittent creek does not have any riparian vegetation suitable for this species; therefore, it is unlikely that this species would occur within the BSA.
Double-crested cormorant <i>Phalacrocorax auritus</i>	~/CSC/ MNBMC	Brackish and freshwater habitats on lakes, rivers, swamps, bays, and coasts.	No	There is one known occurrence within 10 miles of the BSA. Even though this species was observed on the adjacent <del>GenCorp</del> /Aerojet property, only marginal habitat is present within the BSA (ECORP 2005). Therefore, it is unlikely that this species would occur within the BSA.
Bank swallow <i>Riparia riparia</i>	~/ST/ MNBMC	Primarily riparian and other lowland habitats in California. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils for nesting holes. Breeds early May to July.	No	There are five known occurrences within 10 miles of the BSA. Since the BSA lacks banks and bluffs for nesting, it is unlikely that this species would occur within the BSA.
Mammals				
Pallid bat <i>Antrozous pallidus</i>	~/CSC/SLC	Pallid bats roost in rock crevices, tree hollows, mines, caves, and a variety of anthropogenic structures, including vacant and occupied buildings. Buildings, mines, and natural caves are utilized as roosts. Occurrence is primarily in arid habitats. Colonies are usually small and may contain 12-100 bats.	No	There are no known occurrences of this species within 10 miles of the BSA. Additionally the BSA contains few trees suitable for roosting. Therefore, it is unlikely that this species would occur within the BSA.

Common Name <i>Scientific Name</i>	Status Federal <sup>1</sup> / State <sup>2</sup> /Other <sup>3</sup>	General Habitat Description <sup>4</sup>	Considered in Impact Analysis	Rationale
Silver-haired bat <i>Lasionycteris noctivagans</i>	~/CSC/~	Prefers forested (frequently coniferous) areas adjacent to lakes, ponds, and streams. Summer roosts and nursery sites are in tree foliage, cavities, or under loose bark, sometimes in buildings.	No	There are no known occurrences of this species within 10 miles of the BSA. Additionally the BSA contains few trees suitable for roosting. Therefore, it is unlikely that this species would occur within the BSA.
American badger <i>Taxidea taxus</i>	~/CSC/SLC	Stout-bodied, primarily solitary species that hunts for ground squirrels and other small mammal prey in open grassland, cropland, deserts, savanna, and shrubland communities. Badgers have large home ranges and spend inactive periods in underground burrows. Badgers typically mate in mid- to late summer and give birth between March and April.	No	There are three known occurrences of this species within 10 miles of the BSA. Since friable soils are lacking within the BSA, it is unlikely that this species would occur within the BSA.

### Code Designations for Table 2.3.4-1

<sup>1</sup> Federal status: USFWS Listing	<sup>2</sup> State status: USFWS and CDFW Listing
<b>ESU</b> = Evolutionary Significant Unit is a distinctive population	<b>SE</b> = Listed as endangered under CESA
<b>FE</b> = Listed as endangered under FESA	<b>ST</b> = Listed as threatened under CESA
<b>FT</b> = Listed as threatened under FESA	<b>CSC</b> = Species of Special Concern as identified by CDFW
<b>FC</b> = Candidate for listing (threatened or endangered) under FESA	<b>CFP</b> = Listed as fully protected under CDFW code
<b>FD</b> = Delisted in accordance with FESA	<b>CR</b> = Rare in California
<b>FPD</b> = Federally Proposed to be Delisted	<sup>3</sup> <b>Other</b>
<b>MNBMC</b> = Migratory Nongame Bird of Management Concern, protected under the MBTA	<b>SLC</b> = Species of Local or Regional Concern or conservation significance (County of Sacramento 2006)
<sup>4</sup> <b>Habitat description:</b> Habitat description information adapted from CNDDDB and www.natureserve.org	

### *Special-Status Wildlife Species*

Provided below are species accounts for each of the special-status wildlife species that, according to results of database searches, surveys, or historic records, have potential to occur within the BSA.

Based on known regional occurrences and the presence of suitable habitat within the BSA, eight special-status wildlife species may occur within the BSA including midvalley fairy shrimp (*Branchinecta mesovallensis*), western spadefoot toad, western pond turtle, Cooper's hawk, western burrowing owl, ferruginous hawk, northern harrier, and white-tailed kite. Individual discussions of these species and the extent of known and/potential habitat within the BSA are presented below. Federal and state-listed threatened and endangered species discussed in Section 2.3.5, "Threatened and Endangered Species," are vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), valley elderberry longhorn beetle (VELB), and Swainson's hawk.

### Aquatic Invertebrates

Potential invertebrate special-status species within the BSA include midvalley fairy shrimp, a species of local concern. This species is known from the general vicinity of the BSA.

No formal surveys have been conducted for the special-status invertebrate within the BSA. Since aquatic habitats within the BSA (in the form of a vernal pool and several seasonal wetlands) provide suitable habitat for this species, and the similar but unlisted aquatic invertebrate species (*Lindleriella occidentalis*) was incidentally observed in a seasonal wetland at the south end of BSA during field surveys, there is a reasonable expectation that some of the other aquatic invertebrate species are present within the BSA. A discussion of the potential for the midvalley fairy shrimp to occur within the BSA is presented below.

Midvalley fairy shrimp is a species of local concern. This species is endemic, but its distribution is poorly understood. Associated with vernal pools, vernal swales, and other intermittent water features, its habitat requirements are similar to other local fairy shrimp species but tend to be in more shallow pools. There is potential for midvalley fairy shrimp to occur within the BSA. It is known from a site about 5 miles southwest of the BSA.

The presence of all of the special-status aquatic invertebrates, including midvalley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp (discussed in Section

2.3.5, “Threatened and Endangered Species”), is inferred since they are known in the vicinity of the BSA and suitable habitat is present within the BSA (see **Figure 2.3.4-2**).

#### Western Spadefoot Toad

The western spadefoot toad is a California species of special concern. Western spadefoot toads utilize aquatic breeding ponds and upland, nonbreeding habitat; however, during much of the year they are found in upland grassland, chaparral, and woodland communities. This species prefers grassland, scrub, and chaparral locally, but could also occur in oak woodlands. Breeding typically takes place between January and May.

The seasonal wetlands, vernal pool, intermittent creek (Buffalo Creek), and adjacent grasslands located within the BSA represent suitable habitat for the western spadefoot toad. There are five known occurrences within 10 miles of the BSA, three of which are within 5 miles of the BSA. Although this species was not observed during field surveys, species-specific surveys were not conducted.

#### Western Pond Turtle

The western pond turtle is a California species of special concern. It prefers slow-water aquatic habitat with terrestrial and aquatic basking sites. They also require upland egg-laying sites with a high-clay or silt fraction in the vicinity of the aquatic site. The open waters of the intermittent creek (Buffalo Creek) and the seasonal wetlands within the BSA provide suitable habitat for the western pond turtle. There are nine known occurrences within 10 miles of the BSA, two of which are within 5 miles of the BSA and one of which is within 1 mile of the BSA. Although this species was not observed during field surveys, species-specific surveys were not conducted.

#### Western Burrowing Owl

The western burrowing owl is a ground-dwelling owl that is a California species of special concern. It is a year-long resident of open country in deserts and grasslands, and in urban and suburban sites including golf courses, road cuts, levees, and airports. Although these owls are often considered to be diurnal, they are almost entirely nocturnal or at least crepuscular (active at dawn and dusk). This small owl preys mostly on insects, small mammals, reptiles, birds, and carrion. This owl usually nests in the old burrows of ground squirrels, badgers, or other small mammals, although they may dig their own burrow in soft soil. Where burrows are scarce, pipes, culverts, and even nest boxes may be utilized.



Feature	Direct Impact	Indirect Impact
Isolated Seasonal Wetlands	0.58	0.23
Vernal Pool	None	0.34



Figure 2.3.4-2  
Impacts to Vernal Pool Invertebrate Habitat



Western burrowing owls have been observed 3 to 4 miles southwest of the BSA. Ground squirrel burrows are present within the BSA, but no observations of burrowing owls have been made there. They have a moderate potential to be present in the BSA.

### *Special-Status Raptor Species*

Other raptor species are known to occur within the project vicinity. These include the Cooper's hawk, ferruginous hawk, northern harrier, and white-tailed kite. These species nest and forage in grasslands and open woodlands such as those found within the BSA.

The Cooper's hawk is a medium-sized bird of prey that is a California species of special concern. The Cooper's hawk inhabits deciduous, coniferous, and mixed woodlands, typically near open areas, open woodlands, wooded edges of rivers, and occasionally in urban areas.

The ferruginous hawk is a California species of special concern. Ferruginous hawks are birds of open country. They are found in open habitats, such as grasslands, sagebrush, deserts, shrublands, and outer edges of pinyon-pine and other forests. They select rocky outcrops, hillsides, rock pinnacles, or trees for nest sites.

The northern harrier is a California species of special concern. This raptor feeds on voles and other small mammals, reptiles, and invertebrates. It nests on the ground in shrubby vegetation, typically in emergent wetland or along rivers and lakes. The northern harrier breeds April to September, with peak activity between June and July. It is mostly found in flat or open areas of tall, dense grasses, moist or dry shrubs, and plant community edges for nesting, cover, and feeding.

The white-tailed kite is a California fully protected species. It occurs year-round in coastal and valley lowlands of California. The species can be found in association with the herbaceous and open stages of a variety of habitat types, including open grasslands, meadows, emergent wetlands, and farmlands. White-tailed kites forage in grasslands, livestock pastures, and low-growing cropland for insects and small rodents. They feed primarily on small rodents, but will also feed on small birds, lizards, and insects when rodents are limited. White-tailed kites nest in tall trees near open fields.

There is a high potential for these five species to forage and nest within the BSA since suitable habitat is present within the BSA and these species have been documented on [the GenCorp/Aerojet property \(ECORP 2005\)](#) through which the proposed project would be constructed.

## Nesting Birds Protected Under the Migratory Bird Treaty Act

A variety of migratory birds could potentially nest in the vegetation located within and near the BSA. The majority of nesting birds are protected under the MBTA.

Although specialized nesting bird surveys have not been conducted, many species of birds under protection of the MBTA are presumed to nest within the BSA. The CNDDDB search found that great egret, great blue heron, and double-crested cormorant have been known to occur within 5 miles of the BSA.

## **Environmental Consequences**

### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build alternative, because the project would not be implemented, there would be no effects to special-status wildlife.

### ***Alternative 3 (Proposed Project)***

Alternative 3 (proposed project) would have permanent and temporary direct and indirect effects to eight special-status wildlife species, as described below.

#### *Aquatic Invertebrates*

##### Direct Effects

Implementation of the proposed project would result in the direct removal (fill) of approximately 0.58 acres of isolated seasonal wetlands that may provide habitat for midvalley fairy shrimp (**Figure 2.3.4-2**). The proposed project would result in impacts to this species since the proposed project includes removal of suitable habitat for this species.

##### Indirect Effects

Within 250 feet of the project footprint, there are 0.34 acres of vernal pool habitat and 0.23 acres of isolated seasonal wetland habitat. These areas will not be removed (filled) by implementation of the proposed project, but according to USFWS guidelines, if suitable habitat is present within 250 feet of the proposed project, then the project would indirectly impact special-status invertebrate species. The proposed project may indirectly impact vernal pool and seasonal wetland habitat that supports special-status invertebrate species, as stated in the impacts to natural communities section above.

### *Western Spadefoot Toad*

#### Direct Effects

The proposed project would result in the removal of approximately 0.30 acres of seasonal wetland habitat that could provide habitat for the western spadefoot toad (**Figure 2.3.2-1**). There is potential that impacts to this species could occur during construction activities, either through injury or death of adults or tadpoles during project construction or through injury or death of eggs through fill of habitat. Activities that produce low frequency noise and vibration in or near habitat for western spadefoot toads may be detrimental to the species. Spadefoot toads are extremely sensitive to such stimuli, which cause them to break dormancy and emerge from their burrows. This could result in mortality or reduced productivity. Additionally the proposed project will have impacts to this species since the proposed project includes removal of suitable habitat for this species.

#### Indirect Effects

Indirect impacts occur for a number of reasons, though primarily through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. The proposed project would be heavily traveled with vehicular traffic and pedestrians, increasing the amount and severity of indirect impacts to this species and its habitat in the BSA. Roads can be a barrier to movements and effectively isolate populations. Contaminants from road materials, leaks, and spills could also adversely impact toads by contaminating the water in their wetland habitat. Additionally, the proposed project may indirectly impact vernal pool and seasonal wetland habitat as stated in Section 2.3.2, “Wetlands and Other Waters.”

### *Western Pond Turtle*

#### Direct Effects

The proposed project would result in direct removal of approximately 0.30 acres of isolated seasonal wetland (**Figure 2.3.2-1**), which may provide habitat for the species. This species may utilize up to 15.87 acres of nonnative grasslands for over-wintering and nesting habitat that would be directly impacted by the proposed project either permanently or temporarily. If this species is nesting or over-wintering in the ground during construction activities, loss of individuals may occur.

### Indirect Effects

Indirect impacts occur for a number of reasons, though primarily through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. The proposed project would be heavily traveled with vehicular traffic and pedestrians, increasing the amount and severity of indirect impacts to this species and its habitat in the BSA. Roads can be a barrier to movements and effectively isolate populations. Additionally, the proposed project may indirectly impact seasonal wetland habitat as stated in Section 2.3.2, “Wetlands and Other Waters.”

### *Western Burrowing Owl*

### Direct Effects

The proposed project would permanently and directly remove up to 11.82 acres of nonnative grassland and temporarily disturb approximately 5.56 acres<sup>35</sup> of nonnative grassland, which this species may inhabit (**Figure 2.3.4-3**). Additionally, the project may result in impacts to western burrowing owls during project construction through injury or death of individuals from construction activities or through disturbance of nesting activities.

### Indirect Effects

Indirect impacts occur for a number of reasons, though primarily through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows due to development of previously undeveloped areas. The proposed project would be heavily traveled with vehicular traffic and pedestrians, increasing the amount and severity of indirect impacts to this species and its habitat in the BSA. Additionally, roads can be a barrier to movements and effectively isolate populations.

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<sup>35</sup> The temporarily disturbed area comprises approximately 4.05 acres adjacent to the roadway corridor, plus 1.51 acres under the future overpass area.

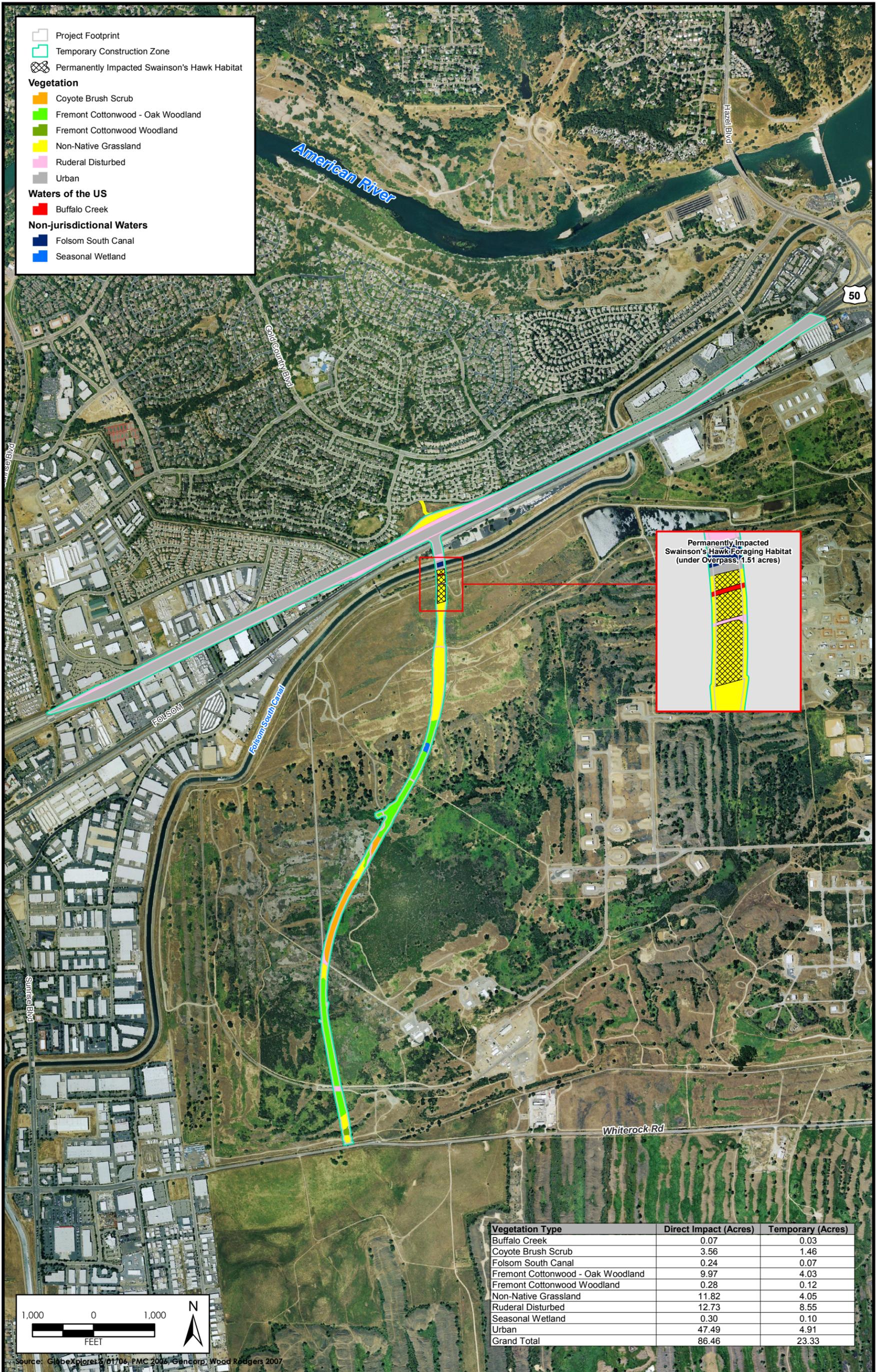


Figure 2.3.4-3  
Temporary and Permanent Impacts to Vegetation



## *Other Raptor Species*

### Direct Effects

The proposed project would result in the permanent loss of approximately 13.13 acres of suitable raptor foraging habitat. Within this area, the project would permanently impact approximately 11.82 acres of nonnative grassland from the construction of the interchange ramps and roadway extension, and would also impact 1.51 acres of nonnative grassland that would be shaded by the overpass and would therefore no longer be suitable raptor-foraging habitat (**Figure 2.3.4-3**). Additionally, the project would result in the loss of native vegetation associated with the Fremont cottonwood-oak woodland, Fremont cottonwood woodland, and coyote brush scrub habitat. This native vegetation supports wildlife that is an important food source for birds of prey.

Additionally, the project would result in temporary disturbance of approximately 4.05 acres of suitable foraging habitat during project construction.

The BSA contains several large trees or snags suitable for nesting. Construction of the project would result in the removal of several large trees or snags. Removal of trees or snags could result in direct mortality or nest abandonment of the protected raptor species if any of these species are present within 100 feet of construction activities. If nesting raptors are present during project construction, the proposed project may cause direct mortality of raptor species or the removal of trees that contain nests actively used by raptor species. Excessive noise, disturbance, and vibrations can cause nesting raptors to abandon their nests. The loss of active nests or direct mortality is prohibited by the MBTA and California Fish and Game Code Section 3503.5.

### Indirect Impacts

The proposed project could result in indirect impacts to special-status raptors through habitat degradation and removal of trees suitable for nesting, as well as from additional traffic and increased human presence.

## *Nesting Birds Protected Under the Migratory Bird Treaty Act*

### Direct Effects

There is the potential that nesting birds, protected under the MBTA, could be impacted in areas where the proposed project construction would occur, due to direct removal of vegetation with active nests and/or construction activities occurring near vegetation with active nests. The loss of active nests or direct mortality to migratory birds is prohibited by the MBTA. If construction occurs during the non-nesting season, no impacts are

expected; however, if construction activities were scheduled to occur during the nesting season, measures would be necessary to avoid potential impacts to migratory birds and their nests.

### Indirect Impacts

Construction noise and other human activity may result in nest abandonment if nesting migratory birds are present within 50 feet of the work site.

Please see Section 3.2.16 for additional information on animal species impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Aquatic Invertebrate***

The following measures will be implemented as part of the proposed project to avoid and minimize project effects to aquatic habitat (vernal pools and isolated seasonal wetlands) supporting special-status aquatic invertebrate species:

- During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.
- Temporary impacts from aquatic habitat disturbance will be avoided by installing protective silt fencing between the aquatic habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the aquatic habitats during construction.
- Standard BMPs will be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

In addition, measures set forth to compensate for adverse effects to listed aquatic invertebrate species habitats, discussed in Section 2.3.5, “Threatened and Endangered Species” (i.e., threatened and endangered aquatic invertebrate habitat), will also incidentally compensate for the midvalley fairy shrimp, as they share similar habitats.

### ***Western Spadefoot Toad***

Avoidance and minimization measures implemented for effects to listed aquatic invertebrate species habitats (i.e., seasonal wetlands and vernal pools) will also be employed as part of the project for the western spadefoot toad, as they share similar habitats.

Measures set forth to compensate for adverse effects to listed aquatic invertebrate species habitats (i.e., threatened and endangered aquatic invertebrate habitat) will also compensate for the western spadefoot toad, as they share similar habitats.

Prior to the start of construction activities that would disturb western spadefoot toad habitat, a biological monitor shall survey for the presence of adult toads. If adult toads are present, then they shall be relocated prior to disturbance of habitat, if feasible. This relocation shall be done in consultation with CDFW.

The City shall provide a Worker Environmental Awareness Program (WEAP) for all employees working within the BSA so that they are aware of resources in the area, required measures and practices for protecting biological resources, and contacts and procedures in case wildlife is injured or encountered during construction.

#### *Western Pond Turtle*

Avoidance and minimization measures implemented for effects to listed invertebrate species habitats will also be employed as part of the project for the western pond turtle, as they share similar habitats.

Measures set forth to compensate for adverse effects to listed invertebrate species habitats (i.e., intermittent creek habitat and threatened and endangered aquatic invertebrate habitat) will also compensate for the western pond turtle, as they share similar habitats.

The City shall include information on the western pond turtle in its WEAP for all employees working within the BSA as described in the measure above.

Prior to the start of construction activities that would disturb western pond turtle habitat, a biological monitor shall survey for the presence of turtles. If turtles are present, they shall be relocated prior to disturbance of habitat, if feasible. This relocation shall be done in consultation with CDFW.

#### *Western Burrowing Owl*

During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.

The City shall include information on the western burrowing owl in its WEAP for all employees working within the BSA as described above.

A qualified biologist shall perform burrowing owl surveys in order to determine burrow locations within 30 days prior to construction using CDFW and California Burrowing

Owl Consortium guidelines. The breeding period for burrowing owls is between February 1 and August 31 with the peak being between April 15 and July 15 (the recommended survey window). If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed.

- Surveys for occupied burrows shall be completed within all construction areas and within 250 feet out from the proposed project work areas (where possible and appropriate based on habitat). All occupied burrows will be mapped on an aerial photo by a qualified biologist.
- At least 15 days prior to the expected start of any project-related ground disturbance activities or the restart of activities, the City shall provide the burrowing owl survey report and mapping to the CDFW.

If burrowing owls are identified during pre-construction surveys, the following actions shall be taken by the City to offset impacts during construction:

1. All occupied burrows within 160 feet of all project construction during the non-breeding season of September 1 through January 31, or all occupied burrows within 250 feet of all project construction during the breeding season of February 1 through August 31, shall be clearly marked with flags to identify burrow locations.
2. If unpaired owls or paired owls are present in or within 160 feet of areas scheduled for disturbance or degradation (e.g., grading) and nesting is not occurring, owls are to be removed per CDFW-approved passive relocation protocols. Passive relocation requires the use of one-way exclusion doors, which must remain in place at least 48 hours prior to site disturbance to ensure owls have left the burrow prior to construction.
3. If paired owls are nesting in areas scheduled for disturbance or degradation, nest(s) shall be avoided from February 1 through August 31 by a minimum of a 250-foot buffer or until fledging has occurred. Following fledging, owls may be passively relocated.
4. When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected lands site.

### *Other Raptor Species*

During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.

No measures are specifically required by USFWS or CDFW for loss of Cooper's hawk, ferruginous hawk, northern harrier, and white-tailed kite foraging habitat; however, because these species require similar foraging and nesting habitat to the Swainson's hawk, it is anticipated that the avoidance, minimization, and/or mitigation measures developed for Swainson's hawk, as described in Section 2.3.5, "Threatened and Endangered Species," would also effectively mitigate for the loss of habitat of these species.

### *Nesting Birds Protected Under the Migratory Bird Treaty Act*

To prevent impacts to MBTA-protected birds and their nests, removal of trees will be limited to only those necessary to construct the proposed project.

The City will implement measures for the removal of trees protected under the Sacramento County Tree Protection Ordinance and Rancho Cordova General Plan within the BSA after determination of tree losses and replacement strategy and ratios, as described in Section 2.3.3, "Plant Species."

For trees/brush that must be removed to construct the proposed project, the City will target the removal of vegetation to occur outside the nesting season between September 1 and March 1. If trees/brush cannot be removed outside the nesting season, pre-construction surveys will be conducted prior to vegetation removal to verify the absence of active bird nests within 50 feet of construction activities. Two surveys will be conducted, at least one week apart, with the second survey occurring no more than two days prior to tree removal.

If no active nests are found, vegetation removal may proceed. If active nests are found, the CDFW shall be notified, and the vegetation shall not be removed until the nest is no longer active, as determined by a CDFW-approved biologist. No construction activities shall take place within a 100-foot radius of the active nest (or another distance determined appropriate during consultation with the CDFW).

### 2.3.5. Threatened and Endangered Species

#### Regulatory Setting

The main federal law protecting threatened and endangered species is FESA: 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as FHWA, are required to consult with USFWS and NOAA Fisheries to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an Incidental Take statement. Section 3 of the FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

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

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

## **Affected Environment**

The information in this section is based on information provided in the Natural Environmental Study (NES) for the Rancho Cordova Parkway Interchange prepared by the City of Rancho Cordova in May 2008 and by the Biological Assessment prepared by the City of Rancho Cordova and submitted to USFWS in July 2011.

### ***Biological Study Area***

The BSA, described in Section 2.3.1, “Natural Communities,” and shown on **Figure 2.3.1-1**, consists of the project footprint (the maximum construction area) as well as a 250-foot buffer around the proposed project footprint. It includes the edges of U.S. 50, a portion of land north of U.S. 50 set aside for the highway interchange, and the alignment of the new Rancho Cordova Parkway that would connect U.S. 50 and White Rock Road to the south.

The proposed Rancho Cordova Parkway Interchange alignment would cross over Folsom South Canal and intermittent creek habitat (Buffalo Creek). The BSA also contains seasonally ponded areas and areas that have been historically flooded from the pumping of treated groundwater.

### ***Biological Studies and Technical Reports***

Field surveys to evaluate the existing biological conditions within the BSA were conducted on April 27, April 28, and May 1 in 2006, as well as May 8–10, May 16, June 15, and June 21 in 2007 to determine the types and conditions of biological resources on the site. Biologists conducted protocol-level VELB surveys within the BSA on May 8–10 and May 16, 2007.

In preparation for the field surveys, a list of special-status species that have the potential to occur within the BSA or vicinity was prepared using information provided by the USFWS, CNDDDB, and CNPS. A summary of the most recently available USFWS species list is provided in **Table 2.3.4-1**. The complete USFWS species list is available as an appendix to the BA. Database searches were completed in 2006 before surveys were completed and updated in August 2007 and April 2008 and updated in January 2012 to determine if additional species needed to be considered in the impact analysis. The majority of the BSA is included in the Buffalo Creek USGS 7.5-minute quadrangle. The query included Buffalo Creek and surrounding USGS 7.5-minute quadrangles (Citrus Heights, Folsom, Clarksville, Carmichael, Folsom SE, Elk Grove, Sloughouse, and Carbondale).

Biologists conducted surveys of the entire BSA. Previous studies were conducted in 2005 and included surveys of the land below the south end of the Folsom South Canal. Reports documenting previous field studies for the Westborough at Easton housing development on [the GenCorp/Aerojet](#) property evaluated biological and wetlands resources on land that includes most of the Rancho Cordova Parkway alignment. These biological study reports are referenced in the NES. Information from these reports was used herein for the BSA south of the Folsom South Canal. This information was field verified by City of Rancho Cordova biologists during field surveys.

All surveys were conducted during daylight hours. Binoculars were used in the identification of birds. All potential wetlands features were inspected and evaluated as habitat for special-status species as well as for characteristics that would include them under state or federal jurisdiction.

Special-status plants and wildlife documented by the CNDDDB, as shown in **Table 2.3.4-1** and on **Figure 2.3.4-1** in Section 2.3.4, “Animal Species,” provide the main sources of information regarding potential threatened and endangered species in the area. Other sources of information include USFWS. Range and habitat information for the special-status wildlife species below was obtained from the California Wildlife Habitat Relationships program version 8 and the CNDDDB.

#### *Summary of Federal and State Consultation Process*

In the context of the proposed project, FESA consultation with USFWS would be initiated if development could result in take of a threatened or endangered species or adversely modify critical habitat of such a species.

Caltrans consultation with USFWS ~~will be~~ necessary with regard to vernal pool fairy shrimp, vernal pool tadpole shrimp, and VELB. To initiate this process, the City ~~has~~ prepared a BA regarding potential effects and proposed measures for these three federally listed species. Caltrans as the lead federal agency ~~has~~ submitted the BA to USFWS and ~~has~~ formally requested USFWS to initiate Section 7 consultation. ~~The BA is currently under review by USFWS.~~

Based on wet season surveys completed for the Westborough Development (ECORP 2009 and 2010), the vernal pools in the proposed project do not support vernal pool fairy shrimp or vernal pool tadpole shrimp; USFWS has concurred with these survey findings. Therefore, the project is not likely to adversely affect vernal pool fairy shrimp and vernal pool tadpole shrimp. The project would, however, likely adversely affect VELB. No critical habitat for these species has been identified within the project ~~site area~~. All effects

to potentially occurring species or their habitat will be minimized and conservation measures will be implemented according to established USFWS guidelines for project-related effects to the species in question. The USFWS has concurred with these effect findings (see BO in Appendix LX). The July 15, 2014, BO includes an incidental take statement for VELB. The USFWS determined that the project's level of anticipated take is not likely to result in jeopardy to VELB.

The CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. The CESA allows CDFW to authorize exceptions to the state’s prohibition against take of a listed species if the take of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC Section 2081).

Consultation with CDFW for the proposed project will likely not be necessary since take is not anticipated for any state-listed species. However, if a tree supporting an active Swainson’s hawk nest could not be avoided and therefore was identified for removal prior to the young fledging, the project would require a California Fish and Game Code Section 2081 Take Permit.

### *Threatened and Endangered Wildlife Species*

Provided below are species accounts for each of the threatened and endangered species that, according to results of database searches, surveys, or historic records, have potential to occur within the BSA.

Based on known regional occurrences and the presence of suitable habitat within the BSA, four federal- and state-listed threatened and endangered species may occur within the BSA: vernal pool fairy shrimp and vernal pool tadpole shrimp (aquatic invertebrates), VELB, and Swainson’s hawk.

### Aquatic Invertebrates

Potential aquatic invertebrate special-status species within the BSA include vernal pool fairy shrimp, a federally threatened species, and vernal pool tadpole shrimp, a federally endangered species. These species are known from the general vicinity of the BSA.

No formal surveys have been conducted for the special-status aquatic invertebrates within the BSA. Since aquatic habitats within the BSA (in the form of a vernal pool and several seasonal wetlands) provide suitable habitat for these species, there is a reasonable

expectation that these aquatic invertebrate species are present within the BSA. A discussion of the potential for each species to occur within the BSA is presented below.

The vernal pool tadpole shrimp is federally listed as endangered and occurs in vernal pools, swales, and various other seasonally ponded habitats in the Sacramento Valley containing clear to highly turbid water. Breeding pools for this species are commonly found in grass-bottomed swales within unplowed grasslands; the pools may be mud-bottomed and highly turbid. Vernal pool tadpole shrimp have been documented at a site within 2 miles of the BSA. There is potential for this species to occur within the vernal pool and other seasonal wetlands located within the BSA.

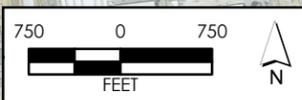
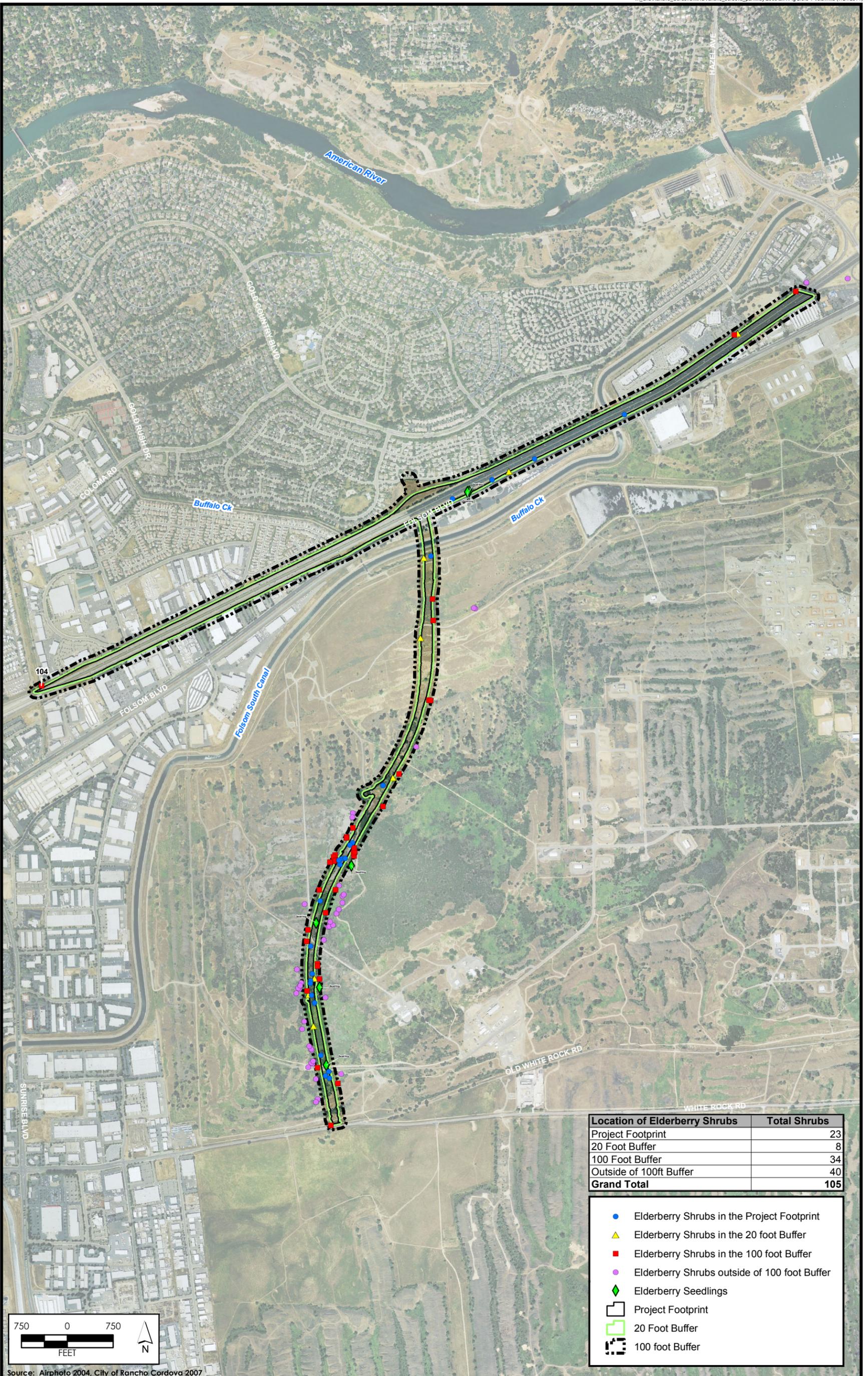
The vernal pool fairy shrimp is federally listed as threatened. It is associated with intermittent swales and vernal pools in grassland communities. Cysts hatch and shrimp become active when pools fill during the winter rainy season. There is potential for vernal pool fairy shrimp to occur within the BSA. This species has been documented at a site within 1 mile of the BSA.

The presence of these threatened and endangered aquatic invertebrates, including midvalley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp, is inferred, since they are known in the vicinity of the BSA and suitable habitat is present within the BSA (see **Figure 2.3.4-2**).

#### Valley Elderberry Longhorn Beetle

The VELB is associated exclusively with the elderberry shrubs in the Central Valley and foothills during its entire life cycle; larvae bore into elderberry stems and feed upon the pith during their two-year life cycle.

Protocol-level surveys for the VELB were completed within a 100-foot radius of the project footprint on May 8, 9, 10, and 16, 2007, and March 3, 2008, in accordance with USFWS Conservation Guidelines. USFWS requires that a minimum setback of at least 20 feet is maintained from the dripline of each elderberry plant. USFWS also requires that the area within a 100-foot buffer is restored and protected during and after construction (USFWS 1999). Therefore, all shrubs or clumps within the project footprint, within a 20-foot radius from the project footprint, and within a 100-foot radius of the project footprint were surveyed. The locations of elderberry shrubs were mapped with a GPS unit with submeter accuracy and digitized onto an aerial photograph (**Figure 2.3.5-1**).



Source: Airphoto 2004, City of Rancho Cordova 2007

Figure 2.3.5-1  
Elderberry Location Map



There are 23 elderberry shrubs or clumps that are within the project footprint (**Figure 2.3.5-1**). A clump includes all the stems or shoots within 10–30 feet of each other. There are eight elderberry shrubs between the project footprint boundary and the 20-foot radius. There are 34 shrubs or clumps that are outside the 20-foot radius but within the 100-foot radius. An additional 40 elderberry shrubs were mapped within the BSA, but outside the 100-foot radius of the project footprint. The USFWS requires the 100-foot radius as a buffer from the project footprint. There were several elderberry shrubs whose stems at ground level were less than 1 inch; although technically this is not considered VELB habitat, the shrubs were noted during the surveys (**Figure 2.3.5-1**). **Table 2.3.5-1** summarizes the elderberry stems greater than 1 inch identified and mapped during the survey as well as their location. Four new exit holes, three 1-year-old exit holes, and 19 old exit holes were observed. The shrubs with observed exit holes are concentrated adjacent to the freeway.

**Table 2.3.5-1  
Summary of Elderberry Stems Mapped During the  
May 2007 and March 2008 Surveys**

Stem Diameter in Inches	Stem Count			
	Within Project Footprint	Within TCZ <sup>1</sup>	Between 20- and 100-foot Buffer	Outside 100-foot Buffer
Stems 1–3 inches	226	65	175	198
Stems 3–5 inches	23	21	34	44
Stems 5+ inches	17	13	9	38
<b>Total</b>	<b>266</b>	<b>99</b>	<b>218</b>	<b>280</b>

Source: City of Rancho Cordova, *Natural Environment Study*, May 2008.

<sup>1</sup> TCZ= Temporary construction azone (area 20 feet from edge of project improvements).

### Swainson’s Hawk

Swainson’s hawk (*Buteo swainsoni*) is listed in California as a threatened species. This species is a spring and summer resident in central California, where it nests in solitary tree stands in the vicinity of open grasslands and agricultural lands.

Swainson’s hawk adults with fledglings have been observed on **GenCorp/Aerojet** property within 0.5 miles of the BSA. Although no active Swainson’s hawk nests or signs of old or previously used nests were observed during field studies, there are numerous trees within the BSA that could serve as nesting habitat. Annual grasslands covering 63.53 acres within the BSA provide foraging habitat for Swainson’s hawk.

## **Environmental Consequences**

### ***No Build Alternative (2037 Conditions without the Project)***

Under the No Build Alternative, because the project would not be implemented, there would be no effects to threatened and endangered species.

### ***Alternative 3 (Proposed Project)***

Alternative 3 (proposed project) would have permanent and temporary direct and indirect effects to four threatened and endangered species, as described below.

#### ***Aquatic Invertebrates***

##### **Direct Effects**

Implementation of the proposed project would result in the direct removal (fill) of approximately 0.58 acres of isolated seasonal wetlands, which may provide habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp (**Figure 2.3.4-2**). The proposed project would result in impacts to these species since the proposed project includes removal of suitable habitat for these species.

The vernal pool will not be filled by implementation of the proposed project, and therefore there will be no direct effects to the vernal pool by the proposed project as defined by USFWS criteria.

##### **Indirect Effects**

Within 250 feet of the project footprint, there are approximately 0.34 acres of vernal pool habitat and 0.23 acres of isolated seasonal wetland habitat (see **Table 2.3.2-1**). These areas will not be removed (filled) by implementation of the proposed project, but according to USFWS guidelines, if suitable habitat is present within 250 feet of the proposed project, then the project would indirectly impact vernal pool fairy shrimp and vernal pool tadpole shrimp; therefore, the proposed project would indirectly impact habitat that supports these threatened and endangered aquatic invertebrate species.

The proposed project has the potential to introduce invasive exotic plant species to the area, causing native plant life to be replaced by exotic species. As native plants are replaced by exotic species, indirect effects to the habitat of listed species would occur, such as modification or degradation of habitat. These indirect impacts are discussed further in Section 2.3.6, “Invasive Species.”

As development occurs, surface water flows normally increase due to an increase in impermeable surfaces through the paving over of permeable surfaces. In addition, surface water flows are modified due to changes in surface flow by point source stormwater infrastructure installed in order to handle greater flows from the increasing impermeable surfaces as well as from the introduction of drainage flows during seasons when waterways and wetland features are typically dry (commonly referred to as “summer nuisance flows”). The vernal pool can be indirectly impacted by such changes. Alteration of current inundation and desiccation regimes due to altered hydrology could substantially alter the characteristics of vernal pool habitat, resulting in loss or degradation of vernal pool habitat.

### *Valley Elderberry Longhorn Beetle*

#### Direct Effects

The proposed project would result in the direct removal of approximately 23 elderberry shrubs, with stems of various sizes. USFWS considers all shrubs with stems greater than 1 inch in diameter as habitat for VELB. Construction of the project could result in direct loss of a VELB through habitat (elderberry shrub) removal. An additional eight elderberry shrubs with stems of various sizes are within the 20-foot radius from the project footprint and would also be directly impacted by the proposed project, according to USFWS guidelines, through possible trimming or pruning to reduce size, or from changes in the quantity and/or nature of stormwater that waters the plants. **Table 2.3.5-2** shows the stem count of elderberry shrubs directly impacted by the proposed project.

**Table 2.3.5-2  
Elderberry Stems Directly Impacted by the Proposed Project**

<b>Location</b>	<b>Stems (maximum diameter at ground level)</b>	<b>Exit Holes on Shrub Yes/No (quantify)</b>	<b>Number of Stems Directly Impacted by Project</b>
Nonriparian	Stems $\geq$ 1 inch and $\leq$ 3 inches	No	223
Nonriparian	Stems $\geq$ 1 inch and $\leq$ 3 inches	Yes	68
Nonriparian	Stems $>$ 3 inches and $<$ 5 inches	No	35
Nonriparian	Stems $>$ 3 inches and $<$ 5 inches	Yes	9

Location	Stems (maximum diameter at ground level)	Exit Holes on Shrub Yes/No (quantify)	Number of Stems Directly Impacted by Project
Nonriparian	Stems $\geq$ 5 inches	No	20
Nonriparian	Stems $\geq$ 5 inches	Yes	10
<b>Total</b>			<b>365</b>

Source: City of Rancho Cordova, Natural Environment Study, May 2008.

### Indirect Effects

Thirty-four elderberry shrubs with stems of various sizes are between 20 feet and 100 feet of the project footprint. These shrubs would not be removed by the project. During construction of the project, habitat degradation could occur as a result of dust fall from grading operations and construction noise.

During operation of the proposed roadway project, the new roadway would be heavily traveled with vehicular traffic and pedestrians, which would result in additional traffic and increased human presence in the area, which could result in degradation of the community in which the elderberry shrub is found.

### *Swainson's Hawk*

#### Direct Effects

The BSA contains several large trees suitable for nesting. Construction of the project would result in the removal of several large trees. If nesting raptors are present during project construction, the proposed project may cause direct mortality of this species or the removal of trees that contain nests actively used by this species. Excessive noise, disturbance, and vibrations can cause nesting raptors to abandon their nests. The loss of active nests or direct mortality is prohibited by the MBTA and California Fish and Game Code Section 3503.5. While the project does not anticipate removing any trees known to serve to Swainson's hawk nest trees, if a nest tree were identified for removal, the project would require a California Fish and Game Code Section 2081 Take Permit from CDFW.

The proposed project would result in the permanent loss of approximately 13.13 acres of suitable Swainson's hawk foraging habitat. Within this area, the project would permanently impact approximately 11.82 acres of nonnative grassland from the construction of the interchange ramps and roadway extension, and the project would also impact approximately 1.51 acres of nonnative grassland that would be shaded by the

overpass and would therefore no longer be suitable Swainson's hawk foraging habitat (see **Figure 2.3.4-3** in Section 2.3.4, "Animal Species"). Additionally, the project would result in the loss of native vegetation associated with the Fremont cottonwood-oak woodland, Fremont cottonwood woodland, and coyote brush scrub habitat. This native vegetation supports wildlife that is an important food source for birds of prey.

Additionally, the project would result in temporary disturbance of approximately 4.05 acres of suitable foraging habitat during project construction.

### Indirect Effects

The proposed project could result in indirect impacts to Swainson's hawk through habitat degradation and removal of trees suitable for nesting, as well as increased disturbance from additional traffic and increased human presence.

Please see Section 3.2.17 for additional information on threatened and endangered species impacts.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Aquatic Invertebrates***

The following measures will be implemented as part of the project to avoid and minimize project effects to aquatic habitat (vernal pools and isolated seasonal wetlands) supporting threatened and endangered aquatic invertebrate species:

- During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.
- ~~Temporary impacts from aquatic habitat disturbance would be avoided by installing protective silt fencing between the aquatic habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the aquatic habitats during construction.~~ Orange Environmentally Sensitive Area (ESA) fencing and silt fencing will be installed between the construction limits and the seasonal wetlands and vernal pool.
- Appropriate hazardous materials management practices will be implemented to reduce the possibility of chemical spills or releases of contaminants.
- Standard BMPs would be implemented during and after construction to protect water quality in sensitive habitat areas during construction, including: - appropriate hazardous materials management practices to reduce the possibility of

chemical spills or releases of contaminants; and standard staging area practices for sediment-tracking reduction such as vehicle washing and street-sweeping.

- A comprehensive plan for avoidance, on-site mitigation, off-site mitigation, or other compensation will be developed in cooperation with relevant state and federal agencies. To compensate for the permanent direct impacts to listed vernal pool crustacean habitat, the City of Rancho Cordova will purchase mitigation credits at a USFWS-approved conservation bank to offset the loss of isolated seasonal wetland habitat as a result of the project at a 3:1 ratio (3 acres of mitigation for every 1 acre lost). Because the project would not directly fill the vernal pool, no direct impacts would occur; therefore, no mitigation would be necessary to compensate for direct impacts to the vernal pool under USFWS guidelines. To compensate for indirect impacts to 0.34 acres of vernal pool and indirect impacts to 0.23 acres of isolated seasonal wetlands, the City of Rancho Cordova will purchase mitigation credits at a USFWS-approved conservation bank to offset the loss of indirectly impacted vernal pool and isolated seasonal wetland habitat as a result of the project at a 2:1 ratio (2 acres of mitigation for every 1 acre indirectly impacted).

### **Valley Elderberry Longhorn Beetle**

Avoidance and minimization efforts for this species ~~will be~~ coordinated with the USFWS during Section 7 Consultation between Caltrans and USFWS, and ~~will likely be~~ in accordance with the July 9, 1999, *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* developed by USFWS. The following measures will be implemented as part of the project prior to construction to avoid and minimize effects to VELB habitat:

- During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.
- Effects from accidental disturbance during construction would be avoided by installing protective fencing between the shrubs identified for preservation and the construction area limits to prevent accidental disturbance during construction. Pursuant to the USFWS VELB conservation guidelines (USFWS 1999), elderberry shrub areas that will not be disturbed within a 100-foot buffer zone from the edge of project construction will be fenced and designated as avoidance areas during project construction. Minimum fence setbacks of 20 feet from the dripline of each elderberry plant may be allowed with USFWS approval.

- Water trucks shall be used to water areas of exposed dirt to control dust from the project site.
- Signs shall be erected along the edge of elderberry avoidance areas noticing construction crews that the area is VELB habitat and must not be disturbed. These signs shall remain for the duration of construction.
- A WEAP shall be implemented to educate construction workers about the presence of VELB habitat in and near the project site area, and to instruct them on proper avoidance.

~~While final~~ The USFWS concurred with the proposed requirements and replacement ratios for elderberry plants removed by the project. ~~will occur during consultation with USFWS, it is anticipated that~~ Mmeasures will be completed as follows:

Transplant Elderberry Plants That Cannot Be Avoided: Elderberry plants must be transplanted if they cannot be avoided by the proposed project. All elderberry plants with one or more stems measuring 1 inch or greater in diameter at ground level, including at a minimum the 23 shrubs within the project footprint, will be transplanted to a USFWS-approved conservation area. At USFWS’s discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, the mitigation ratios in **Table 2.3.5-3** may be increased to offset the additional habitat loss.

Trimming of elderberry plants (e.g., pruning along roadways, bike paths, or trails) with one or more stems 1 inch or greater in diameter at ground level may result in impacts to beetles. Therefore, trimming is subject to appropriate mitigation ratios as outlined in **Table 2.3.5-3**. All transplanting or trimming shall occur in accordance with procedures outlined in the 1999 USFWS VELB Guidelines, and shall be protected and monitored according to the guidelines.

**Table 2.3.5-3  
Mitigation Ratios for Elderberry Shrubs Affected by the Project**

<b>Location</b>	<b>Stems (maximum diameter at ground level)</b>	<b>Exit Holes on Shrub Y/N (quantify)<sup>1</sup></b>	<b>Elderberry Seedling Ratio<sup>2</sup></b>	<b>Associated Native Plant Ratio<sup>3</sup></b>
Nonriparian	Stems $\geq$ 1 inch and $\leq$ 3 inches	No	1:1	1:1
		Yes	2:1	2:1

Nonriparian	Stems > 3 inches and < 5 inches	No	2:1	4:1
		Yes	4:1	2:1
Nonriparian	Stems ≥ 5 inches	No	3:1	4:1
		Yes	6:1	2:1

Source: City of Rancho Cordova, Natural Environment Study, May 2008.

1 All stems measuring 1 inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

2 Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (1 inch or greater in diameter at ground level) affected by the project.

3 Ratios in the Associated Native Plant Ratio column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

Riparian	Elderberry Stem Size	Exit Holes	# of Stems	Seedling Ratio	# of Replacement Elderberries	Associated Native Plant Ratio	# of Associated Seedlings
No	>1" and <3"	No	223	1:1	223	1:1	223
No	>3" and <5"	No	35	2:1	70	1:1	70
No	>5"	No	20	3:1	60	1:1	60
No	>1" and <3"	Yes	68	2:1	136	2:1	272
No	>3" and <5"	Yes	9	4:1	36	2:1	72
No	>5"	Yes	10	6:1	60	2:1	120
Total Stems Affected			365				
Total Replacement Plantings					585		817
Conservation Credits Required for Plantings (total replacement plantings/10)						141	

Source: Biological Assessment 2014

1 All stems measuring 1 inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

2 Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (1 inch or greater in diameter at ground level) affected by the project.

3 Ratios in the Associated Native Plant Ratio column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

**Plant Additional Seedlings or Cuttings:** Each elderberry stem measuring 1 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) must be replaced, in a USFWS-approved conservation area, with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 6:1 (new plantings to affected stems).

Compensation ratios are listed and explained in **Table 2.3.5-3**. If USFWS determines that the elderberry plants on the proposed project site are unsuitable candidates for transplanting, USFWS may allow the City to modify the stated ratios in **Table 2.3.5-3** for each elderberry plant that cannot be transplanted.

A mix of native plants associated with the elderberry plants at the project site or similar sites will be planted at ratios ranging from 1:1 to 2:1 [native tree/plant species to each

elderberry seedling or cutting (see **Table 2.3.5-3**)]. These native plantings must be monitored with the same survival criteria used for the elderberry.

Terms and Conditions: The incidental take of VELB anticipated for this project will result from direct effects to 31 elderberry shrubs with 365 stems ~~one~~ 1 inch or greater in diameter at ground level that will be transplanted. In order to be exempt from the prohibitions of Section 9 of ESA, Caltrans must ensure compliance with the following terms and conditions, which implement the measures described above.

1. Caltrans shall include full implementation and adherence to the avoidance and minimization measures proposed in the BO ~~and~~ re-stated in this document, ~~a-~~As a condition of any permit issued for the project.
2. In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached, Caltrans shall adhere to the following reporting requirement:
  - a. For those components of the action that will result in habitat degradation or modification whereby incidental take will occur, i.e., the removal of elderberry shrubs, Caltrans will notify the USFWS as soon as the removal is completed, providing documentation that the removal did not exceed the 31 elderberry shrubs with 365 stems ~~one~~ 1 inch or greater above ground level anticipated. For the duration of the project construction, Caltrans shall also notify the USFWS if there are any changes in project implementation that result in habitat disturbance not described in the Project Description and ~~not~~ analyzed in the BO.

### *Swainson's Hawk*

During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.

To avoid impacts to nesting habitat, the removal of potential nest trees will be limited to only those necessary to construct the proposed project.

For trees that must be removed to construct the proposed project, the City will target the removal of trees to occur outside the nesting season between September 1 and March 1. If trees cannot be removed outside the nesting season, preconstruction surveys will be conducted prior to tree removal to verify the absence of active raptor nests within 500 feet of construction activities. Two surveys will be conducted, at least one week apart, with the second survey occurring no more than two days prior to tree removal.

If no active nests are found, tree removal may proceed. If active nests are found, CDFW shall be notified, and the tree shall not be removed until the nest is no longer active, as determined by a CDFW-approved biologist. No construction activities shall take place within a 500-foot radius of the active nest (or another distance as determined appropriate during consultation with the CDFW).

Measures to minimize impacts to Swainson's hawk foraging habitat include restoration of foraging habitat temporarily disturbed by project construction activities. After construction is completed, all temporarily disturbed areas will be stabilized with hydroseed and replanted with a mixture of native and nonnative plants (as deemed appropriate by a CDFW-approved biologist).

To compensate for the permanent loss of 13.13 acres of potential foraging habitat, the City will purchase mitigation credits from a CDFW-approved Swainson's Hawk Mitigation Fund at a 1:1 ratio.

### 2.3.6. Invasive Species

#### Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

#### Affected Environment

Several invasive species are common to the BSA. Within the nonnative grasslands, yellow star thistle (*Centaurea solstitialis*), milk thistle (*Silybum marianum*) and fennel (*Foeniculum vulgare*) are introduced, nonnative, invasive species distributed throughout most of the BSA, especially in disturbed areas. Other invasive plant species that are present in areas that retain soil moisture into the spring season include poison hemlock (*Conium maculatum*) and Himalayan blackberry (*Rubus discolor*). Introduced invasive grasses including rip-gut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), and wild oats (*Avena fatua*), as well as yellow star thistle are found along U.S. 50 roadway edges that have been designated as nonnative grassland within the BSA. All

noted species are listed as “invasive plants that threaten California wildlands” by the California Invasive Plant Council (Cal-IPC 2006).

### **Environmental Consequences**

There is the potential to spread these noxious weeds; however, with the avoidance and minimization efforts, the spread of these invasive species will be minimal.

Please see Section 3.2.17 for additional information on invasive species impacts.

### **Avoidance and Minimization Measures**

In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

## **2.4. Cumulative Impacts**

### **Regulatory Setting**

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project **vicinityarea** may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

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

15355 of the CEQA Guidelines. A definition of cumulative impacts, under NEPA, can be found in 40 CFR 1508.7 of the CEQ Regulations.

### **Affected Environment**

The cumulative setting for this EIR/EA assumes that Rancho Cordova builds out in a land use pattern similar to SACOG's Preferred Blueprint Scenario. The Rancho Cordova General Plan (e.g., Land Use Map Book, Land Use Map, and Circulation Plan) is consistent with the basic principles and design strategies of SACOG's Preferred Blueprint Scenario, including increasing compact land use patterns, a mix of residential densities, mixed-use projects, transportation choices, a variety of housing choices and density, encouraging infill, quality design, and natural resource conservation. While the Blueprint Plan would improve the regional transportation system and air quality by reducing the frequency and length of vehicle trips and making efficient use of scarce land resources by providing more dense compact developments, it ultimately would result in greater environmental and cumulatively considerable impacts in many of the technical issue areas than the proposed project (i.e., local transportation impacts, biological resources impacts, loss of farmland, etc.).

### ***Past, Present, and Reasonably Foreseeable Actions***

The portion of the project along the north side of U.S. 50 is outside of the city limits, but within unincorporated Sacramento County and the City of Rancho Cordova Planning Area (as defined in the City of Rancho Cordova General Plan). The portion of the project south of U.S. 50 is within the Rancho Cordova city limits. **Table 2.4-1** lists the current land uses and planned developments within and near the project site. **Table 2.4-2** is a more specific list of development projects in the City of Rancho Cordova. Additionally, **Table 2.4-3** lists major planned roadway projects surrounding the project [sitearea](#). This information is compiled from current data available to the City of Rancho Cordova Planning Department.

**Table 2.4-1  
Land Uses and Planned Developments**

Location (Jurisdiction)	Current Land Uses	Current Zoning	Approved Plans or Planned Developments
North of U.S. 50 (County of Sacramento)	This area consists of low-density residential (Gold River Community) commercial and offices, urban transit-oriented, industrial and warehouse, and office park. Immediately north of the proposed overpass is characterized by a small area of fallow and undeveloped land.	Residential, Industrial/Office Park, Heavy Industrial	Area is primarily built out with no major development or transportation plans, other than the proposed project.
South of U.S. 50, north of White Rock Road (City of Rancho Cordova and Sacramento County)	This area consists of commercial businesses along the Folsom Boulevard corridor, open space including Folsom South Canal and parallel bike path, and vacant land south of the canal owned by GenCorp and formerly utilized for gold mining and dredging operations as evidenced by the presence of mine tailings.	Commercial, Medium-density Residential, Open Space (Folsom South Canal)	The 2006 Rancho Cordova General Plan shows the proposed project will bisect the Westborough Special Planning Area. The General Plan identifies the development potential of this area as 6,078 residential units and commercial development south of U.S. 50 and north of White Rock Road, between Sunrise Boulevard in the west and Hazel Avenue in the east.  The Sacramento County General Plan designates the Glenborough at Easton Community located immediately east of and contiguous to the proposed Westborough development. Glenborough proposes 4,810 residential units and commercial development on 979 acres south of U.S. 50 and north of White Rock Road, between Sunrise Boulevard in the west and Hazel Avenue in the east.
South of U.S. 50, south of White Rock Road (City of Rancho Cordova)	This area consists of a vacant land and areas currently under residential and commercial development.	Residential, Commercial	A number of large projects are approved or proposed that would increase the acreage of residential, commercial, school, and park uses in this area of the city. The Sunrise-Douglas Community Plan/Sunridge Specific Plan (SDCP/SRSP) and the Cordova Community Plan were approved by Sacramento County prior to incorporation of the City of Rancho Cordova. The SDCP/SRSP area is currently under development as provided under the City's General Plan. The approved Rio del Oro Specific Plan proposes 11,601 residential units, commercial development, various parks, and wetland preserve on 3,828 acres located south of White Rock Road, north of Douglas Road, and east of Sunrise Boulevard <sup>36</sup> .

<sup>36</sup> Since incorporation of Rancho Cordova, the City has taken action to unadopt the Sunrise-Douglas Community Plan and the Sunridge Specific Plan. Land uses under these plans have been superceded by the development-specific approvals and the City of Rancho Cordova General Plan. It should be noted that condition TC-28 in the Sunridge Specific Plan (requirement to participate in the construction of a new, ultimate six-lane, south-only roadway to

Location (Jurisdiction)	Current Land Uses	Current Zoning	Approved Plans or Planned Developments
			<p>The approved Anatolia I, II, and III projects include construction of a total of 2,714 residential units and limited commercial development on a total of 736 acres located south of Douglas Road, north of Kiefer Boulevard, and east of Sunrise Boulevard.</p> <p>The approved Montelena development proposes 874 residential units on 252 acres located south of Douglas Road and west of Jaeger Road.</p>

**Table 2.4-2  
City of Rancho Cordova Projects South of U.S. 50**

Project Name	Description	Status	Residential Units	Residential Acreage	Commercial Acreage	Total Acreage
Anatolia I, II, and III (Part of the Sunrise-Douglas Community Plan/ Sunridge Specific Plan) 35	Residential	Approved—Under construction.	2,714	736	N/A	736
Anatolia IV (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) 35	Residential Development	Approved—Improvement plans not approved. Project subject to USACE 404 Permit Cease and Desist Order.	103	25	N/A	25
Arista Del Sol (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) 35	Residential Development	Approved—Improvement plans not approved.	909	133.5	N/A	209.4
Capital Village32	Residential and Commercial Development	Approved—Under construction and residences occupied.	827	75.8	27.6	117
Douglas 103 (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan)35	Residential and Commercial Development	Approved—Improvement plans approved.	301	31.9	15.9	111.5
Douglas 98 (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) 35	Residential Development	Approved—Improvement plans approved. Project subject to USACE 404 Permit Cease and Desist Order.	693	85.5	N/A	105.1

connect Douglas Road to U.S. 50 at the location of the proposed Rancho Cordova Parkway Interchange) has been applied to development projects located within the former Sunridge Specific Plan.

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Project Name	Description	Status	Residential Units	Residential Acreage	Commercial Acreage	Total Acreage
Grantline 208 (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) <sup>35</sup>	Residential Development	Approved—Improvement plans not approved. Project subject to USACE 404 Permit Cease and Desist Order.	724	101.8	N/A	210.6
Heritage Falls <sup>32</sup>	Residential Development	Pending—Application received.	960	172.4	N/A	238
Mather East (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) <sup>35</sup>	Commercial Development	Approved—Improvement plans not approved.	N/A	N/A	51	51
Montelena (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) <sup>35</sup>	Residential Development	Approved—Improvement plans approved. Project subject to USACE 404 Permit Cease and Desist Order.	874	143.9	N/A	252
North Douglas (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) <sup>35</sup>	Residential Development	Approved—Improvement plans approved. Project subject to USACE 404 Permit Cease and Desist Order.	666	121.3	N/A	130
North Douglas II	Residential Development	Pending—CEQA review complete. Project awaiting public hearing.	153	17.7	N/A	41.5
Rio del Oro Specific Plan	Residential and Commercial Development	Approved—No development activity.	11,610	1,889	447	3,828
Suncreek Specific Plan	Residential and Commercial Development	Pending—Early stage of EIR preparation.	5,602	800	306	1,253
Sunridge Lot J (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) <sup>35</sup>	Residential Development	Approved—Improvement plans approved. Project subject to USACE 404 Permit Cease and Desist Order.	369	64.8	N/A	81.1
Sunridge Park (Part of the Sunrise-Douglas Community Plan/Sunridge Specific Plan) <sup>35</sup>	Residential and Commercial Development	Approved—Under construction and residence occupied.	953	203.4	32.2	244
The Arboretum	Residential and Commercial Development	Pending—application received.	5,119	587	53	1,349

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<b>Project Name</b>	<b>Description</b>	<b>Status</b>	<b>Residential Units</b>	<b>Residential Acreage</b>	<b>Commercial Acreage</b>	<b>Total Acreage</b>
The Ranch at Sunridge	Residential and Commercial Development	Pending—application received.	1,982	178	13	530.1
Villages of Zinfandel	Residential and Commercial Development	Approved by Sacramento County prior to City incorporation. Under construction and residences occupied.	1,833	527	18	823
Westborough at Easton	Residential and Commercial Development	Pending—Application received. NOP released on October 15, 2007.	5,100	524.4	177	1,137

**Table 2.4-3  
Planned Roadway Projects near the Project SiteArea**

Project Name	Description	Estimated Completion
Hazel Avenue Widening	Widen to six lanes on American River Bridge and approaches and Hazel Avenue from American River Bridge to Madison Avenue	2013
U.S. 50 HOV Lanes	Extension of HOV lanes on U.S. 50 in each direction from Sunrise Boulevard to Watt Avenue	2012
Easton Valley Parkway	New 4-lane road from Rancho Cordova Pkwy. to Hazel Ave. (Includes intersection improvements) (Phase I)	2016
Hazel Avenue	New 4-lane road from Easton Valley Parkway to U.S. 50	2015
Hazel Avenue/Folsom Boulevard to U.S. 50	Improvements from Folsom Boulevard to U.S. 50; multimodal corridor improvements and interchange improvements	2017
U.S. 50 Auxiliary Lane Project	Construct auxiliary lanes on U.S. 50 from Sunrise Boulevard to Scott Road in the eastbound and westbound directions with the exception of the westbound segment of U.S. 50 between Hazel Avenue and Folsom Boulevard	2022

### Environmental Consequences

As discussed in Section 2.1, “Human Environment,” the project is consistent with several regional and local plans, including the Rancho Cordova General Plan. As part of the approval of the Rancho Cordova General Plan, an EIR was prepared to assess the potential environmental impacts resulting from implementation of the General Plan and to offer mitigation measures to minimize those impacts (City of Rancho Cordova 2006a). Because the proposed project was included as an element of the Rancho Cordova General Plan, the project’s potential cumulative impacts were previously identified as part of the General Plan EIR. The Rancho Cordova General Plan and its EIR is available here: <http://www.cityofranhocordova.org/Index.aspx?page=104>. The Rancho Cordova General Plan and its EIR is hereby incorporated by reference.

Identified below is a compilation of the cumulative impacts that would result from the implementation of the project and future development in the vicinity. As described above, cumulative impacts are two or more effects, that, when combined, are considerable or compound other environmental effects. The cumulative impact discussion for each issue area is provided below. Each cumulative impact is determined to have one of the following effects: less than cumulatively considerable or cumulatively considerable. The reader is also referred to Section 5.0 of the Rancho Cordova General Plan Draft EIR and Sections 2.1 through 2.3 of this EIR/EA for additional discussion of the project’s impacts.

## **Land Use**

### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not directly result in any cumulative land use impacts. However, without the proposed project, development in areas that would be served by the project would be constrained, as discussed in Section 2.1.1, “Land Use,” and Section 2.1.3, “Growth.” This could result in changes in land use patterns associated with displacement of development to other areas that are not planned for development under current local and regional planning documents. Future development in other areas within and outside the city along the U.S. 50 corridor would lead to potentially severe environmental effects to resources of concern, including water and sewer service, conversion of open space to urban uses, conversion of agricultural space to non-agricultural use, increased vehicle emissions resulting from residents driving further distances to reach employment and commercial centers, impacts to biological resources, and impacts to visual resources. Thus, cumulatively considerable indirect effects to land use are possible under the No Build alternative.

### *Alternative 3 (Proposed Project)*

As discussed in Section 2.1.1, “Land Use,” the proposed project is identified on regional and local planning documents, and is consistent with regional and local land use plans. The project would not divide an established community, nor would it conflict with an applicable land use plan, policy, regulation, or applicable habitat conservation plan.

While land use within and around the project sitearea is changing and will continue to urbanize during the City of Rancho Cordova General Plan planning horizon (2030), the project is consistent with land use plans.

Based on the information above, the project would not contribute to cumulatively considerable impacts to land use changes or result in inconsistencies in planned land use patterns in and around the city.

## **Park and Recreational Facilities**

### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not directly result in any cumulative impacts to parks and recreational facilities. However, without the proposed project, development in areas that would be served by the project would be constrained, as discussed in Section 2.1.1, “Land Use,” and Section 2.1.3, “Growth,” resulting in changes in land use patterns associated with displacement of

development to other areas that are not planned for development under current local and regional planning documents. Because it is not known where future development may occur if the project is not built, cumulative effects on parks and recreational facilities due to any such development cannot be estimated. Thus, while there may be indirect cumulative impacts from the No Build alternative, these impacts would not be cumulatively considerable.

### *Alternative 3 (Proposed Project)*

As discussed in Section 2.1.2, “Parks and Recreational Facilities,” the proposed project would involve temporary closure [Section 4(f) *de minimis* use] of the Folsom South Canal and Citrus Road bicycle trails during construction. This project alternative would not affect Prospect Hill Park or Gold Station Park; actual construction is not within the limits of the parks boundaries.

Because bicycle activities are not typically of a nature that causes substantial wear and tear of pavement materials, the effects of increased trail use are not expected to be appreciably different from those resulting from the use of current bicycle/pedestrian routes on Coloma Road, Gold Express Drive, and Gold River Drive compared to conditions without construction of the project.

The project would extend the interchange bridge structure south over Folsom Boulevard and the Folsom South Canal, in order to provide clearance over the public bicycle trail that runs parallel to the Folsom South Canal. Bridge support columns would need to be installed in or near the right-of-way of the Folsom South Canal. These bridge support columns, however, would not encroach on the bicycle trail or its operation once the construction is complete.

Because no parks or other recreational facilities, including bicycle facilities, will be permanently affected by the project and there are no other reasonably foreseeable impacts to such facilities by the proposed project, no cumulatively considerable negative impacts would occur.

### **Growth**

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in any direct cumulative growth impacts.

The No Build alternative could result in inadequate levels of service and traffic congestion on area roadways, which could constrain growth in the City of Rancho Cordova, and result in the displacement of growth to other areas in the region that are not planned for growth. Without the new Rancho Cordova Parkway Interchange access to U.S. 50, land development served by the interchange would be less intense, causing some amount of development to occur elsewhere. Thus, the No Build alternative could result in indirect cumulatively considerable growth effects.

### *Alternative 3 (Proposed Project)*

The proposed project would support planned growth allowed for by the City of Rancho Cordova General Plan. The proposed project would not result in a change in the location, rate, type, or amount of growth planned for under regional and local plans. The location and rate of future growth would continue to be controlled by the City's General Plan and land use planning agencies as guided by local land use plans. Growth approved and planned for the area is, in part, facilitated by the proposed project. Impacts associated with such residential and commercial growth, however, were addressed and analyzed at the time the City of Rancho Cordova adopted its General Plan and certified its General Plan EIR in June 2006.

Based on the information above, the project would not contribute to cumulatively considerable growth inducement impacts other than what is currently planned.

### **Community Impacts**

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in any cumulative community impacts.

#### *Alternative 3 (Proposed Project)*

As discussed in Section 2.1.4, "Community Impacts," the proposed project would not add to the physical and perceived division of the area surrounding the project site along U.S. 50, but rather would provide for improved circulation throughout the community and region, which could encourage community cohesion.

The project would provide a new connection to and from U.S. 50 through an area where there is currently no development, and it would not divide an established neighborhood. The proposed roadway facilities are part of the future circulation and land use plans for the area and would be consistent with land uses planned for the area. No community

services or public facilities would be removed or constructed in association with this proposed alternative that would affect nearby residents.

Construction of the project would have no impact on social values in the community, nor would it affect a community landmark or social gathering place, cause changes in population that are not already foreseen, or cause certain people to be separated or set apart from others. The project would not be expected to result in any adverse effects to any minority, low income, disadvantaged, or low mobility groups in the vicinity of the project. The project will only require relocation of one commercial business; the relocation would be performed in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act.

Based on information above, the proposed project would not contribute to cumulatively considerable impacts to existing or planned communities in ~~the project vicinity and around the project area.~~

### ***Utilities and Emergency Services***

#### ***No Build Alternative (2037 Conditions without the Project)***

The No Build alternative would not involve construction of the project and therefore would not result in any cumulative utility and emergency service impacts.

#### ***Alternative 3 (Proposed Project)***

Relatively small amounts of electricity and water would be required for the project that could be supplied without compromising service to existing and future customers. Additionally, the project would tie in to existing nearby utility transmission lines, and no new transmission facilities would be required to supply the project with electricity or water. The project would contribute an incremental increase in the amount of stormwater that would need to be conveyed by existing stormwater facilities, and it is not expected that the addition of the project's stormwater would result in the need for construction of or expansion of existing stormwater facilities to convey the additional water contributed by the project based on the results of the U.S. Highway 50 Sunrise Boulevard to Hazel Avenue Preliminary Hydrology and Hydraulics Report (2011). During project construction, the City and its contractors would coordinate potential utility relocations with utility companies to avoid or minimize service disruptions. The City will use waste disposal facilities with adequate capacity to handle the small volume of solid waste expected to be generated during project construction.

During project operation, disruption of emergency services is not likely to occur within the project [vicinityarea](#) as a result of the proposed project. The parkway interchange, bicycle path, and roadway extension would improve circulation facilities and help to provide adequate traffic levels of service in the area, which would help to provide adequate emergency vehicle response times. Impacts to emergency vehicle access during project construction would be lessened by measures set forth in Section 2.1.7, “Utilities/Emergency Services.”

Based on the information above, and the fact that the overall purpose and need for the project is to relieve existing traffic congestion on U.S. 50 and nearby freeway interchanges and major arterial streets that should reduce emergency response times, the project would not contribute to cumulatively considerable impacts to utilities/emergency services.

### ***Traffic and Transportation/Pedestrian and Bicycle System***

#### ***No Build Alternative (2037 Conditions without the Project)***

The No Build alternative would not involve construction of the project and would not provide facilities to relieve projected traffic congestion in 2037 for Sunrise Boulevard, Hazel Avenue, and the U.S. 50 corridor.

#### ***Alternative 3 (Proposed Project)***

##### **Resource Study Area**

Although the study area for this project extends from the Sunrise Boulevard to the Hazel Avenue intersection, the traffic analysis performed for this EIR/EA also considers volume and capacity effects from the project on U.S. 50 between Zinfandel Drive and Folsom Boulevard, beyond the project limits, to account for known bottlenecks that exist upstream/downstream of the study area on U.S. 50. In general, these bottlenecks constrain the volume of traffic entering the project [sitearea](#).

The Resource Study Area (RSA) for Traffic and Transportation/Pedestrian and Bicycle System Impacts includes the general area of the City of Rancho Cordova east of Sunrise Boulevard and south of U.S. 50. Specific roadways of concern include Sunrise Boulevard from U.S. 50 south to Grant Line Road and U.S. 50 between Zinfandel Drive in the west and Folsom Boulevard in the east.

## Current Status and Historical Context

As defined by the Traffic Operations Report (Fehr & Peers 2010), and as described in Section 2.1.8, “Traffic and Transportation/Pedestrian and Bicycle Facilities,” and other sections of this EIR/EA, the current status of this portion of the City of Rancho Cordova is one of a rapidly growing urban area that is experiencing growth in both residential and commercial development in areas south of U.S. 50 and east of Sunrise Boulevard.

Sunrise Boulevard is a major north-south arterial for the eastern part of Sacramento County and Placer County, and it is one of only three<sup>37</sup> roadways that provides access across the American River through the roughly 12-mile stretch between the City of Sacramento and the City of Folsom. Sunrise Boulevard currently provides the primary route for local traffic access between U.S. 50 and existing or planned large residential and commercial developments in the southern portion of the City of Rancho Cordova.

U.S. 50 is a regional connector and is the primary travel corridor for vehicles traveling in an east–west direction through the center of Sacramento County. Local traffic generally consists of vehicles traveling between the cities of Sacramento, Rancho Cordova, and Folsom, and unincorporated areas of El Dorado County, although U.S. 50 also conveys regional traffic from where the highway splits from U.S. 80 to recreational areas in the Sierra Nevada and Lake Tahoe area. While some east–west routes, like Folsom Boulevard, offer alternatives to travel on U.S. 50, the alternative east–west routes through the RSA are very limited, and vehicles wishing to travel in an east–west direction must rely heavily on U.S. 50.

Based on field observations as part of the development of the Traffic Operations Report (Fehr & Peers 2010) prepared for the project, the following traffic bottlenecks and locations exhibit excessive vehicle queues during the AM and PM peak hours within the study area.

### AM Peak Hour

- Westbound U.S. 50 mainline traffic at Folsom Boulevard interchange (as traffic merges in from the westbound on-ramp)
- Southbound traffic on Hazel Avenue north of Gold Country Boulevard
- Southbound traffic on Hazel Avenue at Folsom Boulevard (queues back to eastbound off-ramp)

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<sup>37</sup> These crossings include Watt Avenue, Sunrise Boulevard, and Hazel Avenue.

- Northbound left-turn traffic on Hazel Avenue at Tributary Point Drive
- Traffic on westbound slip on-ramp at Sunrise Boulevard
- Southbound traffic on Sunrise Boulevard at Folsom Boulevard (queues back to eastbound off-ramp)

### PM Peak Hour

- Northbound/southbound traffic on Sunrise Boulevard between Zinfandel Drive and Trade Center Drive
- Northbound traffic on Hazel Avenue from Folsom Boulevard to Gold Country Boulevard
- U.S. 50 eastbound off-ramp at Sunrise Boulevard (to light rail Folsom Boulevard overcrossing)
- U.S. 50 eastbound off-ramp at Hazel Avenue approximately one-half mile upstream of interchange
- U.S. 50 westbound off-ramp at Hazel Avenue (queues back to beginning of ramp)

### Direct and Indirect Impacts

The proposed project is intended to accommodate traffic growth resulting from planned and approved development in the City of Rancho Cordova and surrounding area.

Implementation of the proposed project could improve travel time through U.S. 50 between Zinfandel Drive and Folsom Boulevard as noted in Table 24 of the Traffic Operations Report, U.S. 50/Rancho Cordova Parkway Interchange (August 2010).

Regardless of the effects of possible redistribution of local traffic patterns, the project would provide improved traffic operations at the majority of roadways, intersections, and vehicle queue areas, compared to conditions without the project. Where congestion would remain in excess of level of service D after project construction, it is generally a result of traffic (existing or planned) from development in the area that would be present regardless of implementation of the project, and would be remedied by construction of other planned improvements, such as the Hazel Avenue/U.S. 50 Interchange project, or it would be infeasible to construct further improvements that would achieve levels of service D or better.

As shown in **Table 2.1.8-16**, the average freeway speeds improve or remain virtually unchanged between the 2037 No Project and 2037 With Project conditions in both

directions, and further improve or remain virtually unchanged under the 2037 With Project and Operational Improvements scenario.

As shown on **Table 2.1.8-17**, the U.S. 50 mainline under No Build conditions would operate at oversaturated LOS F conditions in the eastbound direction of Zinfandel Drive to Sunrise Boulevard under Design Year (2037) conditions, but the density and associated congestion would decrease (improve) under Alternative 3 conditions. The eastbound segment of U.S. 50, from Rancho Cordova Parkway to Hazel Avenue, would operate at LOS F under Alternative 3 conditions. This is the result of localized congestion along Hazel Avenue, which is the result of a shift in an existing bottleneck from the Sunrise Boulevard on-ramp to the Sunrise Boulevard off-ramp resulting from the project. This would be due to the added capacity with the new auxiliary lane from Sunrise Boulevard to Rancho Cordova Parkway. The added capacity results in more cars reaching the Hazel Avenue off-ramp causing queuing on the off-ramp, which results in localized congestion on Hazel Avenue, and the resulting queues would extend from the Hazel Avenue off-ramp onto eastbound U.S. 50. However, the MTP-planned improvements to the U.S. 50/Hazel Avenue interchange, including the grade separation of Hazel Avenue and Folsom Boulevard (estimated to be completed by 2017) are expected to address this impact.

**Table 2.1.8-18** shows the level of service and density for the ramp junctions and illustrates the following information:

- The proposed project would improve operations at the eastbound and westbound Sunrise Boulevard on-ramp from LOS F under No Build conditions during both peak hours to LOS D or better during both peak hours under Build conditions.
- The eastbound Sunrise Boulevard off-ramp would operate at LOS F conditions under both No Build and Build conditions during both peak hours, although the densities would decrease and improve with the project.
- The eastbound Hazel Avenue off-ramp would operate at LOS F conditions under Build conditions during both peak hours. However, the MTP-planned improvements to the U.S. 50/Hazel Avenue interchange (estimated to be completed by 2017) are expected to improve this operation.
- The westbound Hazel Avenue off-ramp would operate at LOS F under Build conditions during the PM peak hour. However, the MTP-planned improvements to the U.S. 50/Hazel Avenue interchange (estimated to be completed by 2017) are expected to improve this operation.

- All remaining ramp junctions would operate at acceptable levels of service under both Build and No Build conditions during both AM and PM peak hours.

As shown in **Table 2.1.8-19**, many of the study intersections are projected to operate unacceptably at LOS F; however, the proposed project is expected to improve operations from LOS F to acceptable LOS D conditions during PM peak hour conditions at the Sunrise Boulevard/westbound U.S. 50 ramps.

In addition, the project would improve operations (i.e., decrease delays) at the Sunrise Boulevard/Folsom Boulevard intersection during the AM peak hour compared to No Project conditions, although it would continue to operate at LOS F. The delay at this intersection would remain virtually unchanged during PM peak hour conditions with the proposed project (less than 5 seconds).

The project would worsen operations during the PM peak hour at the Hazel Avenue/westbound ramps intersection during the PM peak hour and the Hazel Avenue/Folsom Boulevard intersection during both peak hours. However, the MTP-planned improvements to the U.S. 50/Hazel Avenue interchange (estimated to be completed by 2017) are expected to improve this operation. The U.S. 50/Hazel Avenue interchange improvement project is currently in the Project Study Report development stage.

The LOS F operations at the Rancho Cordova Parkway/eastbound on-ramp intersection is a function of congestion on the northbound approach as vehicles waiting to make a right turn onto the eastbound on-ramp queue back due to the effect of metering planned for the on-ramp. This projected queue will not affect other southbound, eastbound, or northbound movements at the intersection because the project provides a dedicated northbound lane with storage for vehicles waiting to enter the eastbound on-ramp. The extent of the queue could be reduced by increasing the metering rate (i.e., number of vehicles allowed to enter the freeway per hour) for the on-ramp, but this may have an adverse impact on the eastbound section of U.S. 50 between Rancho Cordova Parkway and Hazel Avenue. No other feasible measures have been identified to address the LOS F conditions at the Rancho Cordova Parkway/eastbound off-ramps intersection because a two-lane off-ramp will already be provided with a full auxiliary lane on U.S. 50 between the Sunrise Boulevard and Hazel Avenue interchanges.

**Table 2.1.8-16** provides a summary of the freeway average speed for the Design Year (2037). A ramp metering management strategy was included to determine the benefits of constraining the total ramp metering flow rates for interchange ramps along the corridor

to the No Project ramp metering total for the Design Year (2037). The analysis indicates that implementation of Alternative 3 (proposed project) and operational improvements either maintains or improves the projected average freeway speed for the study corridor for the Design Year (2037).

The proposed project would provide for an overall improvement of traffic conditions along Sunrise Boulevard south of U.S. 50 and through the U.S. 50 corridor between Sunrise Boulevard and Hazel Avenue.

Because traffic operations and congestion would largely improve with construction of the project, as compared to without construction of the project at the majority of key intersections and freeway ramps, the project would not have a cumulatively considerable contribution to traffic impacts.

Bicycle and pedestrian facilities associated with the proposed project are designed to conform to the Bicycle and Trails Plan and policies outlined in the Rancho Cordova General Plan and would result in no cumulative impacts.

Construction activities for the project could temporarily increase the amount of traffic on surrounding area roadways. The construction equipment and personnel to be used for the project are not known at this time; however, substantial construction traffic is expected during the construction period. Construction traffic could also temporarily adversely affect emergency vehicle access through the project [site and surrounding](#) area and is not considered a cumulative condition.

### Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable future actions that affect traffic in the project [vicinityarea](#) include both roadway and other transportation improvements, as well as residential and commercial developments planned under the City of Rancho Cordova General Plan. Planned transportation improvements and residential and commercial developments are summarized in **Tables 2.4-1** through **2.4-3**. Additionally, because U.S. 50 is also a regional connector in addition to serving local traffic, regional development plans that affect development in Sacramento County and El Dorado County are also considered under current and reasonably foreseeable future actions.

### **Current Actions**

Current actions in the project [vicinityarea](#) include primarily residential and commercial development in areas south of U.S. 50 and east of Sunrise Boulevard. In 2002, prior to incorporation of the City of Rancho Cordova, Sacramento County approved the Sunridge

Specific Plan (SRSP) for an area located south of Douglas Road and east of Sunrise Boulevard. The SRSP designated 2,605 acres of land for urban land uses within what became the incorporated city limits of the City of Rancho Cordova. At total buildout, the SRSP was approved for a maximum of approximately 10,000 residential units at various densities, 173 acres of commercial uses, 78 acres of parks, 44 acres of school uses, drainage basins, and open-space areas; however, upon more detailed development of individual development plans proposed within the SRSP area, it is now expected that, at buildout, the SRSP will contain approximately 8,700 residential units. Since incorporation of Rancho Cordova, the City has taken action to unadopt the Sunrise-Douglas Community Plan (SDCP) and the SRSP. Land uses under these plans have been superseded by the development-specific approvals and the City of Rancho Cordova General Plan. It should be noted that condition TC-28 in the SRSP (requirement to participate in the construction of a new, ultimate six-lane, south-only roadway to connect Douglas Road to U.S. 50 at the location of the proposed Rancho Cordova Parkway Interchange) has been applied to development projects located within the former SRSP.

Individual residential and commercial developments within the former SRSP area are in various states of development. Some, such as the Anatolia I, II, and III developments, are at completion of construction. Others, such as Anatolia IV and Montelena, are in the midst of construction activities, which are soon to be completed. Each individual development project that is completed continues to contribute traffic to the Sunrise Boulevard corridor.

Outside the project [vicinityarea](#), substantial development is currently occurring in the areas of the City of Folsom, Sacramento County, and western El Dorado County. While these areas lie outside of the project [vicinityarea](#), development in these areas contributes to traffic along the U.S. 50 corridor, as people travel between primarily residential areas in Folsom and western El Dorado County and employment centers in Rancho Cordova and the City of Sacramento.

Current roadway improvement actions include improvements that would provide improved roadway capacity in an east–west direction, which would help relieve traffic on U.S. 50 for local traffic through the City of Rancho Cordova. Projects currently in the active planning and development stages within the City include the extension of Zinfandel Drive from its current terminus near Mather Field airport to Douglas Road (which would provide additional north–south access) and the widening of Douglas Road from the future Zinfandel Drive intersection to Sunrise Boulevard; the widening of Douglas Road from Sunrise Boulevard to Grant Line Road; the extension of International Drive from Kilgore Road to Sunrise Boulevard; and the widening of White Rock Road

from Sunrise Boulevard to the eastern city limits. Additionally, Sacramento County is pursuing the widening of White Rock Road in the unincorporated county area from the eastern Rancho Cordova city limit to Prairie City Road. Finally, the widening of Sunrise Boulevard from two to five lanes between Douglas Road and Kiefer Road is fully complete with all five traffic lanes open and operating as of fall 2007, and the City is pursuing the widening of Sunrise Boulevard from two to four lanes from Kiefer Road to State Route 16 (Jackson Highway).

### **Reasonably Foreseeable Actions**

Reasonably foreseeable actions [at/n](#) and around the project [sitearea](#) include the development of the Westborough at Easton residential development, which is located within the Westborough Planning Area south of Folsom Boulevard and east of Sunrise Boulevard, and which would be bisected by the Rancho Cordova Parkway roadway proposed as part of the Rancho Cordova Parkway Interchange project. Other reasonably foreseeable actions include the development of the Rio del Oro Specific Plan area, which would provide for the mixed-use development of approximately 3,828 acres of what is primarily currently undeveloped land. Additionally, continued development of residential and commercial developments approved under the City's General Plan, as well as additional developments located south of Douglas Road and east of Sunrise Boulevard, are also reasonably foreseeable actions [at/nat](#) and around the project [site-area](#). Each of these areas is identified by the City of Rancho Cordova General Plan as planning areas that are anticipated for mixed-use development as the City builds out under the provisions of the General Plan. With each new development, additional traffic will be generated that will require adequate access from areas south of U.S. 50 and east of Sunrise Boulevard to commercial and employment centers located in central City of Rancho Cordova, as well as in the City of Sacramento and unincorporated Sacramento and El Dorado counties.

For reasonably foreseeable roadway improvements, the City of Rancho Cordova General Plan calls for the phased development of the Rancho Cordova Parkway corridor, beginning at U.S. 50 with the proposed Rancho Cordova Parkway Interchange project and continuing south to Douglas Road, where it will connect to Jaeger Road, which is planned to provide connectivity through to Grant Line Road in the south. With the implementation of the Rancho Cordova Parkway/Jaeger Road corridor, substantial additional traffic access will be provided in a north-south direction, resulting in some relief of traffic pressures on Sunrise Boulevard.

To mitigate for the increased traffic that would result from the development of the plan area, mitigation TC-28 in the SDCP/SRSP Final Environmental Impact Report required developers within the plan area to contribute funding for the construction of a new, ultimate six-lane, south-only roadway to connect Douglas Road to U.S. 50 at the location of the proposed Rancho Cordova Parkway Interchange. The SDCP/SRSP Final EIR identified this future roadway as “Jaeger Road.” The name of this proposed roadway has since been changed to “Rancho Cordova Parkway.” This plan is no longer in effect and has been superceded by the City’s adoption of its General Plan and development-specific approvals. SRSP Zoning Condition 48 associated with the timing of the proposed project has been applied to development projects.

Additionally, the Circulation Element of the City of Rancho Cordova General Plan calls for the construction of Easton Valley Parkway as a four- to six-lane arterial between the future Rancho Cordova Parkway and Prairie City Road, the extension of six lanes of Hazel Avenue from Folsom Boulevard to the future Easton Valley Parkway, and the extension of International Drive from Sunrise Boulevard to the future Rancho Cordova Parkway. These improvements would provide additional east–west connectivity in the northeastern portion of the City of Rancho Cordova south of U.S. 50 and would provide additional north–south access south of Folsom Boulevard on Hazel Avenue.

Sacramento County has recently initiated the Hazel Avenue Interchange Reconstruction Project, which would improve the U.S. 50/Hazel Avenue interchange. Implementation of this project would serve to improve traffic levels of service at the Hazel Avenue/U.S. 50 freeway ramps to acceptable levels. This project is currently in the preliminary (Project Study Report) stage of development.

The Capital Southeast Connector Project (Connector) is a proposed multimodal transportation project within a 35-mile service area (“corridor”) that spans Sacramento and El Dorado counties and would link the cities of Elk Grove, Rancho Cordova, and Folsom, and the community of El Dorado Hills. While the improvements would primarily be outside the project area, some discussion of the project is included here because the project is a significant regional connector project that would affect traffic circulation patterns throughout eastern Sacramento County.

The underlying purpose of the Connector is to link residential areas and employment centers in the corridor, serve both local and regional travel, and relieve congestion on the heavily congested existing two-lane roadways, all while preserving open space and habitat. The Connector would provide new options for bicycle, pedestrian, transit, and automobile mobility throughout the corridor to address increased travel demand.

The Connector project was initiated by SACOG in 2002, and preliminary studies to identify project constraints and alternatives have been initiated. Currently, four conceptual alignment alternatives have been identified. Each of these would provide connectivity from the area of Elk Grove, through Rancho Cordova, and into western El Dorado County. While it is too early in the project development to identify what effects the project would have on traffic levels of service and congestion relief within the project area, it is anticipated that the increased roadway capacity and improved vehicle access through the Connector corridor would alleviate some of the traffic pressures currently and anticipated to be experienced on Sunrise Boulevard and U.S. 50 within the project area.

### Potential Cumulative Impacts

It is possible that the proposed project's temporary construction-related traffic, combined with construction-related traffic from other simultaneous development projects occurring in the area, have the potential to contribute to a cumulative, although temporary, impact on local traffic volumes and congestion on nearby roadways and intersections. Implementation of avoidance, minimization, and/or mitigation measures, discussed in Section 2.1.8, "Traffic and Transportation/Pedestrian and Bicycle Facilities," would reduce construction-related traffic by limiting large truck hauling to off-peak hours, while avoidance, minimization, and/or mitigation measures, outlined in Section 2.1.7, "Utilities/Emergency Services," would require the project's Traffic Management Plan to consider traffic routes from other local construction projects during coordination with emergency service providers (i.e., fire and police) during plan development to ensure that traffic control measures proposed in the plan would meet the needs of the service providers and that the measures would provide adequate emergency access throughout project construction.

Operation of the project would provide improved traffic levels of service at the majority of roadways, intersections, and vehicle queue areas in the project area, compared to conditions without the project. Where congestion would remain in excess of acceptable levels of service after project construction, it would generally be a result of traffic existing from development in and around the area that would be present regardless of implementation of the project. The proposed project would serve to improve the LOS at the described areas to the greatest extent feasible and would not, in itself, cause a worsening of levels of service in the area.

With implementation of the above measures, the project would have a less than cumulatively considerable contribution to construction traffic impacts.

Because traffic operations and congestion would largely improve with construction of the project, as compared to without construction of the project, at the majority of key intersections and freeway ramps, the project would not result in a cumulatively considerable contribution to traffic impacts.

Because the project would not result in cumulatively considerable impacts to traffic, no additional measures would be required.

### ***Visual Resources/Aesthetics***

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative visual impacts.

#### *Alternative 3 (Proposed Project)*

##### Resource Study Area

The cumulative study area for visual resources encompasses the viewsheds for people traveling along the U.S. 50/Folsom Boulevard corridor and Folsom South Canal recreational trail users, as well as viewsheds for future motorists and pedestrians using the proposed segment of Rancho Cordova Parkway from the proposed interchange to White Rock Road. Views of the proposed project from existing homes in the Gold River community and predicted views from future planned development in the area that may look on to elements of the proposed project (i.e., the planned Westborough and Glenborough at Easton developments) are also included in the cumulative study area. The segment of the U.S. 50/Folsom Boulevard corridor where there will be views of the proposed project elements include the Sunrise Boulevard interchange in the west to the Hazel Avenue interchange to the east.

The project area is located partially in the northeastern portion of Rancho Cordova and partially within unincorporated Sacramento County. Views in the project area include the U.S. 50 corridor and the mountains beyond (east-facing view), residential land uses to the north, open space and industrial uses to the south (Aerojet property), and a variety of commercial uses along the Folsom Boulevard corridor.

##### Current Status and Historical Context

Within the project area, the U.S. 50/Folsom Boulevard corridors are primarily developed with commercial, residential, transportation (rail), and industrial uses. The residential development is mainly to the north of U.S. 50, while the commercial and industrial areas are south of U.S. 50 and on either side of Folsom Boulevard. There is some mixed

vegetation along these corridors, including several large oak trees. Placement of the commercial and industrial buildings is not in any uniform manner, and there is no apparent organization of land uses. Overall, the visual character is highly urban and developed. This corridor has been slowly developed into its current mixed uses since the 1960s.

The open space area south of the U.S. 50/Folsom Boulevard corridor is part of the buffer area used for the Aerojet [testing and manufacturing](#) facility operations, and this land has not been developed or used since the area was mined for gold in the early 20th century. The vegetation ranges from grassy to dense vegetated areas covered by large trees, and the only sign of development is several dirt access roads that cross through the area and a railroad track that passes through near White Rock Road. From some vantage points, surrounding urban development is visible, as well as the Aerojet [testing and manufacturing](#) facility; however, the overall character of the site is rural. The concrete-lined Folsom South Canal and associated bike trail was built in the 1970s by USBR, which currently maintains it. The overall character of the corridor is mixed urban/rural, since the canal is concrete-lined but no other urban development is visible.

Buffalo Creek, which runs through the project area just south of the Folsom South Canal, is an ephemeral creek that flows from east to west through the Aerojet property, flowing through a flume over Folsom South Canal and a culvert beneath U.S. 50 to the American River. Buffalo Creek originates southeast of the project area and runs through the northern portion of the project area. Buffalo Creek was modified historically to accommodate storm events on the Aerojet property and receives much of the effluent surface discharge from the Aerojet [testing and manufacturing](#) facility.

The areas within and north of the U.S. 50/Folsom Boulevard corridor through Rancho Cordova and east to Folsom have exhibited mixed use, but primarily commercial, development over the last 20 years, while the large parcels of land owned and operated by [GenCorp/Aerojet/GenCorp](#) south of the corridor have remained mostly grassland/scrub/oak woodlands interspersed with limited industrial buildings and structures since the late 1950s.

### Direct and Indirect Impacts

Implementation of the proposed interchange structure would create a new visually dominant feature within the U.S. 50/Folsom Boulevard corridor, a primarily urban area. The undeveloped [GenCorp/Aerojet-owned/GenCorp](#) land south of this corridor is not easily visible from this corridor or the residences north of it due to the railroad tracks and Folsom South Canal adjacent to the south of Folsom Boulevard. The project would

require the removal of trees and other mature vegetation within the project footprint and along the U.S. 50/Folsom Boulevard corridor. Several large oak trees would be removed for construction of the overcrossing structure and the eastbound on-ramp, including one very large oak tree that is considered to be an important visual resource by local agencies and area residents. In addition, natural vegetation existing within the Rancho Cordova Parkway footprint would be permanently impacted.

The interchange structure would be highly visible as viewers approach the interchange structure, although exposure would be brief. Distant scattered and diffused views of the El Dorado County foothills and Sierra Nevada range would be blocked for brief periods of time as viewers approach and pass under the overcrossing. Diffused or scattered views are those views that are partially obstructed and limited by distance, trees, existing structures, intervening topography or vegetation, air quality conditions, and weather conditions. Although the new interchange and Rancho Cordova Parkway may provide additional access to the area and thus more opportunities for distant views of the Sierra Nevada, future development and associated landscaping will further obstruct and scatter opportunities for diffused views of the Sierras.

Implementation of the proposed interchange structure would result in additional lighting and glare within the project area, some of which could extend into the adjacent properties, particularly at night.

### Current and Reasonably Foreseeable Future Actions

The Westborough and Glenborough at Easton mixed-use developments identified in the Rancho Cordova General Plan will substantially alter the visual landscape of the area south of the U.S. 50/Folsom Boulevard corridor to White Rock Road from predominantly rural to urban. In addition, most of the land within the City of Rancho Cordova south of White Rock Road is either under current development or is planned for development within the next 20 years.

### Potential Cumulative Impacts

The open Aerojet/~~GenCorp~~ land property is mainly flat, with small hills and mounds created by historic mine tailings vegetated with interspersed oak trees and low-lying scrub brush, and does not constitute a scenic vista. Due to the distance from the Sierras and the existing diffused and scattered nature of the available views, opportunities to view the foothills and Sierra Nevada are currently limited, and the implementation of the proposed project would not have a substantial effect on views of this vista.

The portion of Rancho Cordova Parkway south of the bridge overcrossing to White Rock Road is in an undeveloped area currently having very limited visibility to bicyclists and pedestrians using the Folsom South Canal trail and businesses east of Sunrise Boulevard. Although the new interchange would be highly visible from viewpoints along the U.S. 50/Folsom Boulevard corridor and the Folsom South Canal bicycle/pedestrian trail, viewer response from these viewpoints is anticipated to be low to moderate due to the short duration of exposure. Views of the interchange from nearby residences in the Gold River community north of U.S. 50 would be partially obstructed by existing landscaping redwood trees and concrete sound walls, and by an 8-foot-high sound wall along the westbound auxiliary lane, including the proposed ramps, on the north side of the freeway. The sound walls would also provide some shielding of the headlight glare caused by vehicles. The aesthetic impact of the new interchange will ultimately be reduced after buildout of the surrounding mixed-use Westborough development south of the Folsom South Canal, creating a larger urban area surrounding the interchange.

Based on the information above, while some localized impacts to visual resources from the project may be substantial, the project's location within a primarily urban setting planned for future urban development would not result in a cumulatively considerable impact on visual resources as the overall urban appearance of the project area would occur regardless of the project.

Avoidance, minimization, and/or mitigation measures, outlined in Section 2.1.9, "Visual/Aesthetics," would reduce visual impacts and light and glare impacts. The future Westborough development will be responsible for landscaping and incorporating aesthetic design elements around Rancho Cordova Parkway within the proposed project area to visually integrate it into the adjacent development. Until this occurs, the roadway segment will have no landscaping or specific aesthetic design treatments other than directional lighting to reduce nighttime glare.

Recommendations and suggestions from the Community Advisory Committee for reducing visual impacts from the proposed project will also be considered. The committee was initiated by the City of Rancho Cordova to provide a forum for representative community members to provide input on aspects of the project design, including aesthetic treatments, landscaping, lighting treatments, and other design features at an early stage of project design where inclusion of these features can be most readily completed.

## **Cultural and Historic Resources**

### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative cultural or historic impacts.

### *Alternative 3 (Proposed Project)*

As discussed in Section 2.1.10, “Cultural Resources,” the Historic Property Survey Report prepared for the proposed project indicates the proposed project is not within the vertical Area of Potential Effects (APE) of the historic railroad site CA-Sac-428-H listed on the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR), and that other cultural resources within and adjacent to the APE are not eligible for NRHP or CRHR listing. No unique archeological resources as defined under CEQA were identified, and, based on responses from local Native American groups, there is no evidence suggesting a high potential for human remains to be buried in the project APE. Implementation of avoidance and minimization measures outlined in Section 2.1.10 would reduce the potential for harm due to the possibility for the late discovery of historical resources during ground-disturbing activities.

Because the project is not anticipated to have substantial effects to historic resources in the area, and because of the limited potential for the project to disturb important cultural resources, the project would not contribute to cumulatively considerable impacts to cultural or historical resources.

## **Hydrology and Flooding**

### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative hydrologic or flooding impacts.

### *Alternative 3 (Proposed Project)*

As discussed in Section 2.2.1, “Hydrology and Floodplain,” the project interchange and roadways are designed to clear span the surface water bodies in the project area; thus no stream bed alterations will be made. However, temporary disturbance to stream banks of Buffalo Creek just north of U.S. 50 is likely to occur to accommodate modification of the culvert headwall to install guardrails and other safety features. The project would result in minor changes in the hydrology of the immediate project area. The project would not result in effects to the larger hydrologic patterns of the American River, the Folsom South Canal, or Buffalo Creek. Site improvements associated with the proposed project

would not appreciably change the general drainage pattern in the project area. Slightly more urban stormwater would result from the increase in impervious surfaces constructed by the project. These additional urban stormwater flows would be directed into newly installed cross drainages to control water flows and to provide adequate drainage and water quality protection through the project area and in areas downstream of the project.

The project would include a new drainage system designed to collect runoff water from the interchange facility and infiltrate it into the ground. The drainage system would be designed to accommodate anticipated flows, and on- or off-site flooding is not anticipated.

Based on the lack of the project's encroachment on the 100-year floodplain and the project's incorporation of sufficient drainage facilities, the proposed overcrossing of Rancho Cordova Parkway would not result in a cumulatively considerable impact on regional hydrology and the 100-year floodplain.

### ***Water Quality and Stormwater Runoff***

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative water quality or stormwater runoff impacts.

#### *Alternative 3 (Proposed Project)*

##### Resource Study Area

The surface water resources within the project area include ephemeral Buffalo Creek that drains into the American River. Buffalo Creek is an ephemeral creek that flows from east to west through the Aerojet property, flowing through a flume over Folsom South Canal and a culvert beneath U.S. 50 to the American River. Buffalo Creek originates southeast of the project area and runs through the northern portion of the project area. Buffalo Creek was modified historically to accommodate storm events on the Aerojet property and receives much of the effluent surface discharge from the Aerojet [testing and manufacturing](#) facility.

The American River watershed (from Nimbus Dam to the confluence with the Sacramento River) drains into the Sacramento River in the City of Sacramento. Folsom Reservoir is the principal reservoir in the basin. Nimbus Dam impounds Lake Natoma downstream of Folsom Dam and regulates releases from Folsom Reservoir to the lower American River. The City of Rancho Cordova, American River, and Sacramento River are within the Central Valley RWQCB's Water Quality Control Plan for the Sacramento

and San Joaquin river basins. The American River, located on the northern edge of Rancho Cordova, represents one of the major hydrological surface features in Rancho Cordova.

A portion of the Folsom South Canal, maintained by USBR, runs through the project area. The canal originates at the Nimbus Dam just northeast of the project area and extends southward for approximately 27 miles past the community of Wilton near the City of Elk Grove. The right-of-way for the canal has been developed to provide trails for horseback riding, bicycling, and hiking. The partially completed Folsom South Canal supplies water for irrigation and municipal and industrial use in Sacramento and San Joaquin counties.

The City of Rancho Cordova, along with the County of Sacramento and cities of Citrus Heights, Folsom, Galt, and Sacramento, are co-permittees under NDPES permit #CAS082597 covering the Sacramento County Area-Wide Municipal MS4.

The groundwater resource study area includes the entire Central Valley basin-fill aquifer system. The project area is located within the South American subbasin aquifer system, which comprises continental deposits of Late Tertiary to Quaternary age. The South American subbasin is bounded on the east by the Sierra Nevada, on the west by the Sacramento River, on the north by the American River, and on the south by the Cosumnes and Mokelumne rivers. As part of the South American subbasin, the Rancho Cordova area covers a shallow unconfined aquifer system, known as the water table aquifer, approximately 200 feet or less below ground surface, and a deeper confined groundwater aquifer system ranging from a few hundred feet to over 2,000 feet below ground surface. The deeper aquifer system that becomes confined with depth is separated from the shallow aquifer by a discontinuous clay layer, not completely impermeable.

### Current Status and Historical Context

Land uses within and surrounding the project area impact the existing water quality, with both point-source and nonpoint-source discharges contributing contaminants to existing surface waters and groundwater. The project site is currently surrounded by urban, residential, and commercial land uses. Pollutant sources in urban areas typically include parking lots and streets, rooftops, disturbed soils at construction sites, and landscaped areas. Other contaminants in urban runoff include sediment, hydrocarbons, metals, pesticides, bacteria, and trash.

The surface water quality of the American River watershed (from Nimbus Dam to the confluence with the Sacramento River) can be characterized by excessive sediment

inflow from development in local runoff, mercury bioaccumulation in fish from abandoned mining tailings, bacterial contamination of waters heavily frequented by waterfowl, and occasional sewage spills in the watershed from wastewater treatment plants. The American River is listed as an impaired waterway under Section 303(d) of the CWA for mercury and an unknown toxicity along an estimated affected area of approximately 27 miles; however, the SWRCB has identified the river as having a low priority for identifications of TMDLs. Neither Buffalo Creek nor Folsom South Canal is listed as impaired for any pollutants, although Folsom South Canal receives water from the American River via Lake Natoma.

Under its NPDES permit, the City of Rancho Cordova has discharge and monitoring requirements for stormwaters and a target pollutant reduction strategy for diazinon, chlorpyrifos, copper, lead, mercury, and coliform/pathogens.

Since 1953, Aerojet and its subsidiaries disposed of unknown quantities of hazardous waste chemicals, including TCE and other chemicals associated with rocket propellants, as well as various chemical processing wastes onto the property.

Groundwater beneath the project area is impacted by perchlorate, TCE, and NDMA. The impacted groundwater, which originated at the ~~off-site~~ Aerojet testing and manufacturing facility off the project area, has migrated beneath the project area. The depth to groundwater is generally greater than 100 feet below ground surface. Groundwater extraction wells are located throughout the Aerojet property. Aerojet extracts and discharges groundwater under requirements set forth in an NPDES Permit (Order No. R5-2006-0013, NPDES No. CA0083861).

### Direct and Indirect Impacts

Construction of the project would include vegetation removal, grading, and excavation activities within the project area, which could result in increased sedimentation and erosion. The need for streambed diversion during construction is not anticipated; however, temporary disturbance to stream banks of Buffalo Creek just north of U.S. 50 is likely to occur. If not properly controlled, these pollutants could reach waterways such as Buffalo Creek or the Folsom South Canal, which could result in impacts to water quality. Because water in the Folsom South Canal is used for downstream water supply, impacts to water quality within this waterway would be of particular concern. BMPs would be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved project SWPPP. The project SWPPP would also require the contractor to

identify the location of designated staging areas and would include specific requirements for equipment fueling, maintenance, and storage processes.

Measures outlined in Section 2.2.2, “Water Quality and Stormwater Runoff,” would minimize the risk of encountering, managing, and disposing of potentially contaminated groundwater during project construction activities.

Operation of the project would result in minor amounts of additional stormwater runoff, due to increases in impervious surfaces in the area. The project would be designed to adequately convey this stormwater runoff from the project site. Additionally, the project would introduce motor vehicles to areas where currently none travel. This could result in introduction of polluted stormwater runoff to local waterways; however, the project design would include treatment BMPs, as necessary per required permits, which would minimize stormwater pollution entering waterways. A drainage system would be designed as part of the project that would collect all stormwater runoff and infiltrate it into the ground, and no polluted stormwater would be expected to impact the Folsom South Canal.

Treatment BMPs would be implemented as required by NPDES permits to remove pollutants from runoff water.

Finally, the proposed project would not require the use of drinking water and would use only a minimal amount of water for irrigation. Potentially contaminated local groundwater will not be used for landscape irrigation. The proposed project could contribute to disruption of groundwater monitoring activities through the temporary disruption of monitoring wells located on Aerojet property; however, implementation of avoidance, minimization, and/or mitigation measures, outlined in Section 2.2.2, “Water Quality and Stormwater Runoff,” would reduce the potential for harm from disruption of monitoring wells.

### Current and Reasonably Foreseeable Future Actions

The entire area around the proposed project that is currently undeveloped south of U.S. 50 is planned for mixed-use urban development over the next 20 years according to the Rancho Cordova General Plan and Sacramento County General Plan. The area immediately surrounding the proposed project area, the Westborough Planning Area, is scheduled for development over the next five years. Potential development of these planning areas would include substantial grading, site preparation, and an increase in urbanized development. These future projects will increase the area of impervious

surfaces, and new drainage systems would be designed to accommodate all collected runoff water flow.

### Potential Cumulative Impacts

The proposed project has a relatively small footprint compared with future planned development projects and will not substantially modify any creeks or channels. Potential temporary water quality impacts from erosion, sedimentation, materials storage and use, and possibly encountering contaminated groundwater during construction, would be reduced by implementing BMPs in compliance with local and state water quality permits and regulations, and through the measures identified in Section 2.2.2, “Water Quality and Stormwater Runoff.” The proposed project’s drainage system is designed to accommodate permanent increases in stormwater runoff, and treatment BMPs would be implemented as required by NPDES permits to remove pollutants from runoff water.

Although increased development associated with the Rancho Cordova General Plan would contribute to cumulative water quality impacts and is considered cumulatively considerable in the Rancho Cordova General Plan Draft EIR, it is anticipated that the proposed project itself would have a less than cumulatively considerable contribution to water quality and stormwater runoff given that its impacts are limited to the project area and would be mitigated to offset its impact.

Because the project would not contribute to a cumulatively considerable impact to water quality and stormwater runoff, no measures or recommendations are included for cumulative water quality and stormwater runoff impacts.

### ***Geology and Soil***

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative geologic or soil impacts.

#### *Alternative 3 (Proposed Project)*

Construction of the project would result in disturbance of localized soils, which could lead to the erosion or loss of topsoil. The project, however, would be required to implement BMPs designed to retain topsoil, prevent erosion, and protect water quality (primarily to Buffalo Creek) during construction.

All soil disturbance and measures to reduce impacts to water quality and potential structural damage from differential settlement associated with expansive soils found at

the site would be localized and site-specific and would not permanently affect other areas or future development.

Based on the information above, the project would not contribute to cumulatively considerable impacts to geology and soils.

### ***Hazardous Waste/Materials***

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative hazardous waste/material impacts.

#### *Alternative 3 (Proposed Project)*

##### Resource Study Area

The resources potentially affected by releases or contact with hazardous materials from the proposed project include construction workers, nearby residents in the Gold River community adjacent to the north side of the proposed project, and the local biological environment. Contaminants have the potential to impact Buffalo Creek and all waterways downstream of this creek, including the American River and Sacramento River below its confluence with the American River. Other potentially impacted environmental resources include the Folsom South Canal throughout its length downstream of the project site, and local isolated seasonal wetlands and historic drainage areas.

The transport of hazardous materials and wastes to and from the proposed project site could affect people and the environment in the local areas and regions where the chemicals are potentially released or disposed. It is not anticipated that the project would involve the use of hazardous gases or chemicals that, if released, could affect the region or air basin. There is a low risk that smoke from a wildland fire in the undeveloped fields around the proposed project site could temporarily affect the air basin and other surrounding basins

##### Current Status and Historical Context

Although soils have not been affected, groundwater beneath the project area is impacted with perchlorate, TCE, and NDMA. The impacted groundwater, which originated at the off-site Aerojet testing and manufacturing facility, has migrated beneath the project area. The depth to groundwater beneath the project area is generally greater than 100 feet below ground surface, although there may be areas of shallower perched groundwater near the southern portion of the proposed Rancho Cordova Parkway Interchange

alignment due to previous discharging of treated groundwater to the ground surface. Groundwater extraction wells are located throughout the Aerojet property. Aerojet extracts and discharges groundwater under requirements set forth in an NPDES Permit (Order No. R5-2006-0013, NPDES No. CA0083861).

Other hazardous materials identified within the project site, discussed in Section 2.2.4, “Hazardous Waste/Materials,” include aerially deposited lead (ADL) in shallow soils along U.S. 50 and Folsom Boulevard, yellow thermoplastic street striping, lead-based paint in structures to be demolished, and potential PCBs in five pole-mounted transformers along the north side of U.S. 50.

Other than the regionally contaminated groundwater beneath the project site, there are no other known large-scale hazardous material or waste issues associated with the project vicinity.

#### Direct and Indirect Impacts

No substantial impacts from hazardous materials are anticipated from operation of the proposed project other than adding traffic into a previously undeveloped area, according to the Rancho Cordova General Plan. The proposed interchange and roadway segment are not anticipated to substantially increase hazardous materials transportation through the area. Rail transport through the proposed project site will not be impacted by traffic on the roadway designed to span over the existing railroad tracks.

Dewatering may be required during construction of the CIDH piles, if pile-driving activities reach a sufficient depth as to encounter groundwater. Groundwater beneath the project area is contaminated with perchlorate, TCE, and NDMA, and is considered hazardous; therefore, accidental contact with contaminated groundwater during dewatering activities could pose a risk to construction personnel. If not handled properly, release of this water on-site or into adjacent waterways could impact water quality. In addition, depending on the final alignment of the interchange structure and Rancho Cordova Parkway, construction activities could temporarily impact Aerojet’s existing extraction wells and monitoring wells required for sampling and monitoring of contaminated groundwater, which could affect Aerojet’s ability to monitor water quality.

Appropriate BMPs would be incorporated into project plans to protect worker safety, and applicable hazardous materials regulations pertaining to collection, testing, and disposal of contaminated groundwater would be followed. Avoidance, minimization, and/or mitigation measures outlined in Section 2.2.4, “Hazardous Waste/Materials,” will be implemented to further reduce the potential for accidental contact with, or release of,

contaminated groundwater or soils, reduce impacts from lead-based materials, reduce potential impacts from PCBs, and reduce impacts from construction activities associated with the project including refueling and minor maintenance of construction equipment on location, which could lead to minor fuel and oil spills.

### Current and Reasonably Foreseeable Future Actions

The area around the proposed project on the south side of U.S. 50 is planned for development over the next 20 years as mixed use (primarily residential). According to the Rancho Cordova General Plan land use element, no heavy industrial development is planned for this area that could cause an associated substantial increase in hazardous materials transport or exposure to people or the environment.

### Potential Cumulative Impacts

No substantial impacts from hazardous materials are anticipated from operation of the proposed project other than adding traffic into a previously undeveloped area; BMPs and measures will be implemented to reduce potential impacts from possible release and contact of hazardous materials and contaminated groundwater during construction.

Based on the information above, the project would not contribute to cumulatively considerable impacts from hazardous waste/materials.

Because the project would not contribute to a cumulatively considerable impact from hazardous waste or materials, no measures or recommendations are applicable to cumulative hazardous waste/ materials impacts.

### ***Air Quality***

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in direct cumulative air quality impacts.

#### *Alternative 3 (Proposed Project)*

### Resource Study Area

The project is within the SMAQMD, which is part of the Sacramento Valley Air Basin. The Sacramento Valley Air Basin has been further divided into planning areas called the Northern Sacramento Valley Air Basin and the Greater Sacramento Air region, designated by USEPA as the Sacramento federal ozone nonattainment area. The nonattainment area consists of all of Sacramento and Yolo counties and parts of El

Dorado, Solano, Placer, and Sutter counties. For the purposes of defining the RSA to analyze the project's contribution to cumulatively considerable impacts to air quality, the RSA shall consist of the Sacramento federal ozone nonattainment area.

### Current Status and Historical Context

Federal and state air quality laws require identification of areas not meeting the ambient air quality standards. These areas must develop regional air quality plans to eventually attain the standards. With two exceptions, the Sacramento federal ozone nonattainment area is in attainment for all NAAQS and state ambient air quality standards. Under the federal Clean Air Act, the area is a nonattainment area for ozone and PM<sub>10</sub>, a maintenance area for carbon monoxide, and unclassified or attainment for other federal standards. Under the California Clean Air Act, the area is a nonattainment area for ozone and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>).

### Federal Clean Air Act

The federal Clean Air Act Amendments of 1990 set deadlines for attaining the ozone standard. The Sacramento area was classified as a "serious" nonattainment area and given a date of 1999 by which to achieve attainment. Because achieving attainment by this date was later found to be infeasible, the region was "bumped up" to "severe" classification and an attainment date of 2005 was designated. The Clean Air Act Amendments also set specific planning requirements to ensure that the attainment goal would be met. In 1994, CARB, in cooperation with the air districts of the Sacramento nonattainment area, fulfilled one of these requirements by preparing the 1994 Sacramento Area Regional Ozone Attainment Plan. The plan identified a detailed comprehensive strategy for reducing emissions to the level needed for attainment and showed how the region would make expeditious progress toward meeting this goal.

On April 15, 2004, USEPA designated the Sacramento region as a "serious" nonattainment area for the federal 8-hour ozone standard. The 8-hour ozone standard, 0.08 ppm, averaged over 8 hours, replaces the 1-hour standard that had been in place since 1979. The region has been given an attainment date of June 15, 2013.

This classification was based on the 8-hour ozone design value of 107 parts per billion at Cool, calculated from ozone concentrations monitored from 2001 to 2003. However, since the Sacramento region needs to rely on the longer term emissions reduction strategies from state and federal mobile source control programs, the 2013 attainment date could not be met. Consequently, on February 14, 2008, CARB, on behalf of the air districts in the Sacramento region, submitted a letter to USEPA requesting a voluntary

reclassification (bump-up) of the Sacramento federal nonattainment area from a “serious” to a “severe” 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019.

The *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* was adopted in December 2008. This plan includes the information and analyses to fulfill the federal Clean Air Act requirements for demonstrating reasonable further progress and attainment of the 1997 8-hour ozone NAAQS for the Sacramento region. In addition, this plan establishes an updated emissions inventory, provides photochemical modeling results, proposes the implementation of reasonably available control measures, and sets new motor vehicle emission budgets for transportation conformity purposes.

The most important local criteria pollutant is carbon monoxide. Sacramento County and the Sacramento Valley Air Basin are considered an attainment area for this pollutant, meaning that the state and federal ambient air quality standards are met. Concentrations of this pollutant have been falling for the last 25 years and are forecast to continue falling in the future, despite increased traffic, due to the gradual reduction in per-mile emissions as older cars are retired and replaced with newer cars with more stringent emission controls.

### California Clean Air Act

The California Clean Air Act (CCAA) of 1988 required nonattainment areas to achieve and maintain the state ambient air quality standards by the earliest practicable date and local air districts to develop plans for attaining the state ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide standards. In compliance with the CCAA, SMAQMD prepared and submitted the 1991 Air Quality Attainment Plan to mainly address Sacramento County’s nonattainment status for ozone and carbon monoxide (CO), and although not required, particulate matter (PM<sub>10</sub>). The 1991 Air Quality Attainment Plan was designed to make expeditious progress toward attaining the state ozone standard and contained preliminary implementation schedules for control programs on stationary sources, transportation, and indirect sources, and a vehicle/fuels program. Sacramento County has met the ambient air quality standards for sulfur dioxide and nitrogen dioxide.

### Direct and Indirect Impacts

#### *Construction*

**Particulate Matter**—Implementation of the proposed project would result in temporarily increased particulate matter levels in the immediate vicinity during construction. Implementation of avoidance, minimization, and/or mitigation measures, outlined in

Section 3.2.11, “Air Quality,” would reduce fugitive dust emissions by over 80 percent and exhaust particulate emissions by 45 percent.

**Construction Toxic Air Contaminants (TAC)**—Implementation of the proposed project would result in temporarily increased TAC levels in the immediate vicinity during construction. Implementation of avoidance, minimization, and/or mitigation measures, outlined in Section 3.2.11, “Air Quality,” would reduce exhaust particulate emissions a minimum of 45 percent. However, due to the proximity of the sensitive land uses and exposure of these land uses to freeway TACs, TAC emissions during construction remain a concern to adjacent land uses.

**Nitrogen Oxides**—Implementation of the proposed project could result in temporary construction emissions of nitrogen oxides. Avoidance, minimization, and/or mitigation measures, outlined in Section 3.2.11, “Air Quality,” would be implemented to reduce impacts resulting from nitrogen oxide emissions. While this measure would be expected to reduce project construction NO<sub>x</sub> emissions by 20 percent, emissions would still exceed the threshold of 85 pounds per day.

**Construction Odors**—The project may subject sensitive receptors to short-term, temporary construction emissions. However, no odor-producing uses are proposed on the project site.

#### *Operation*

**Mobile Source Air Toxics (MSAT)**—It is possible that localized increases and decreases in MSAT emissions may occur as a result of the project. However, if these increases do occur, they would be substantially reduced in the future due to implementation of state and federal vehicle and fuel regulations that will cause region-wide MSAT levels to be substantially lower than today (please see **Figure 2.2.5-1**).

**Pollutant Concentrations**—The proposed project would not cause any exceedances of national or state ambient air quality standards for ozone, carbon monoxide, particulate matter, nitrogen dioxide, sulfur dioxide or lead. “Hot spot” or more localized analyses for carbon monoxide and particulate matter were also conducted. While the project would lead to higher concentrations of carbon monoxide within the project area, the concentrations would remain well below applicable state and federal standards and the project would not contribute to any exceedances of the state or federal standards. Concentrations of CO have been steadily falling despite increased traffic due to the gradual reduction in per-mile emissions as vehicles are subject to more stringent emission controls. The project was not found to be a project of air quality concern for particulate

matter during interagency consultation with SMAQMD, USEPA and others; this determination means that those agencies decided that the potential particulate matter impacts of the project were so minimal that qualitative particulate matter analyses were not warranted.

### Current and Reasonably Foreseeable Future Actions

Because air quality is a resource of regional concern, current and reasonably foreseeable future actions include current and future transportation projects identified in SACOG's 2035 MTP developed for the area. The current 2035 MTP includes over 500 local and regional projects that are planned for construction through 2035. The list of 2035 MTP projects can be found here: <http://www.sacog.org/mtp/2035/final-mtp/>

### Potential Cumulative Impacts

To analyze a transportation project's cumulative impacts to air quality, one must examine the project's effects to regional air quality conformity. Regional level conformity is concerned with how well the region is meeting the standards set for the various pollutants that may affect air quality. At the regional level, transportation plans are developed that include all of the transportation projects planned for a region over a period of years, usually 20. Based on the projects included in the transportation plan, an air quality model is run to determine whether or not the implementation of those projects would result in a violation of the Clean Air Act, including non-federal regionally significant projects. If no violations would occur, then the regional planning organization (in this case, SACOG) and the appropriate federal agencies, such as FHWA, make the determination that the MTP is in conformity with the Clean Air Act, and all projects that are part of the MTP are deemed to be in conformity at the regional level.

The current transportation plan is the 2035 MTP. On March 20, 2008, SACOG made a determination that the 2035 MTP conformed with the State Implementation Plan. The proposed project was part of the 2035 MTP, and thus was found to also be in conformity.

Because the proposed project would not lead to any permanent regional or local air quality standard exceedances, the project would not contribute to any increase in cumulative air quality impacts. However, it is acknowledged that growth under the City's General Plan would result in cumulatively considerable air pollutant emissions as identified under the General Plan EIR.

See Section 3.2.11, "Air Quality," for additional information.

## **Noise**

### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative noise impacts.

### *Alternative 3 (Proposed Project)*

#### Resource Study Area

The RSA for cumulative noise are the portions within the City of Rancho Cordova and unincorporated areas of Sacramento County within sound range of the U.S. 50/Folsom Boulevard corridor, from approximately Sunrise Boulevard to the west to Hazel Avenue to the east. Traffic on U.S. 50 is the predominant source of noise in and around this area. The only other major industrial sources of noise in the area are periodic jet plane flights at Mather Field airport approximately 2 miles southwest of the project location and infrequent (a few hours per year) testing of rocket engines at the Aerojet [testing and manufacturing/GenCorp](#) facility approximately 1–2 miles southeast of the project location.

#### Current Status and Historical Context

The U.S. 50/Folsom Boulevard corridor through the RSA has been developed with mixed commercial/industrial/residential uses since the 1970s. The Gold River low-density residential community, the only noise-sensitive receptor identified in the Noise Analysis conducted for this EIR (see Section 2.2.6, “Noise”), was constructed in the late 1980s. Aerospace development and occasional rocket engine testing has occurred on the Aerojet/[GenCorp](#) property south of the U.S. 50/Folsom Boulevard corridor since the late 1950s and has gradually decreased over time. Mather Field airport traffic has also decreased over the last few years following its transition from an active air force base to its current primary use as an airport for air freight flights and the California Air National Guard.

Traffic from U.S. 50 is the predominant source of noise in and around the project area and is anticipated to increase as a result in development in and around the project area. Noise levels in and around the project area will continue to increase over time commensurate with increases in traffic in the area.

#### Direct and Indirect Impacts

The noise-sensitive receptors in the project area consist of single-family residences along the north side of U.S. 50. As discussed in Section 2.2.6, “Noise,” the proposed project

would not cause a substantial noise increase in terms of  $L_{eq}(h)$  based on the Caltrans definition of “substantial increase.” However, predicted design year (2037) noise levels approach or exceed the noise abatement criteria (NAC) of 67 dBA established by FHWA for residences at Receivers R1 and R7 with Alternative 3. Construction of the proposed project would require the use of heavy equipment that could increase noise levels in the immediate project area. Also, heavy equipment traffic using the completed interchange and roadway could increase during construction of future development projects in the area south of the U.S. 50/Folsom Boulevard corridor. However, any increase in the background noise level due to construction of the proposed project and other projects in the vicinity using the interchange for access would be temporary. Therefore, substantial cumulative noise impacts from construction activities are not predicted.

### Current and Reasonably Foreseeable Future Actions

In accordance with the City of Rancho Cordova and Sacramento County General Plan Land Use diagrams, future development within the cumulative noise study area is expected to be mixed commercial/light industrial/residential. There are no industrial uses planned that would be expected to generate substantial operational noise to the area. Forecast Design Year (2037) potential traffic noise impacts were identified in the Noise Analysis using the criteria established in the Caltrans protocol, City of Rancho Cordova General Plan, and the Sacramento County General Plan.

### Potential Cumulative Impacts

Although noise attenuation would not be feasible under FHWA 23 CFR 772, the City is proposing to construct an 8-foot-high sound wall along the westbound auxiliary lane, including the ramps, on the north side of U.S. 50. With the construction of the sound wall and with the shielding provided to the other receivers by the ramp structures themselves, the predicted future noise levels at all receivers would be less than existing noise levels. Therefore, the proposed project would not have a cumulatively considerable contribution to noise.

### ***Biological Resources***

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative would not involve construction of the project and therefore would not result in cumulative biological resource impacts.

### *Alternative 3 (Proposed Project)*

#### Resource Study Area

For the purposes of this analysis, the cumulative setting includes the cities of Rancho Cordova, Elk Grove, Galt and Folsom, as well as unincorporated areas of Sacramento, El Dorado, Sutter, and Placer counties.

A variety of unique and valuable habitats are found within the RSA, including but not limited to oak and cottonwood woodlands, various grasslands, vernal pool areas, and open water and rivers. The habitats of the RSA contain numerous special status plant and animal species.

Wetlands and creeks in the RSA provide a variety of functions to the community. Creeks provide important ecosystem functions. The riparian habitat associated with creeks supports diverse and abundant plant and animal life and provides movement corridors for animals. Wetlands in the project area also have important ecological functions in that they support unique assemblages of specially adapted biota.

The viability of species populations as well as quality and functions of habitat are dependent on the conditions of these resources in a regional and often statewide context. Thus, the cumulative setting takes into account impacts that are locally related to the Rancho Cordova General Plan (e.g., vernal pool, intermittent creek, and associated biological resources) as well as biological resource impacts for the larger region (e.g., oak tree loss and Swainson's hawk impacts).

#### Current Status and Historical Context

As identified in Section 2.3, "Biological Environment," several biological resources within the RSA are in serious decline in terms of population numbers and ecosystem function, including wetland and other waters, raptors (including Swainson's hawk), vernal pool obligate species, VELB, and oak trees.

#### **Swainson's hawk**

There has been a dramatic statewide decline in the Swainson's hawk population, and subsequent reduction of the breeding range. The reasons for this decline are not completely understood. Probable causes include elimination of nesting and foraging habitat destruction, pesticide poisoning, and direct shooting.

Within the RSA, the loss of foraging and nesting habitat are the prime threats to the species. Specific crops are vital foraging habitat for Swainson's hawk. Agricultural

conversions from crops that provide foraging habitat to crops are not regulated. For example, major changes that have greatly affected Swainson's hawks are the complete loss of sugar beets as a foraging habitat and the recent dramatic increase in vineyards. In Sacramento County, vineyards have increased in acreage by 263 percent in the period 1987 to 1997 (DWR 2002).

### **Valley Elderberry Longhorn Beetle**

It has been estimated that 90 percent of California riparian habitat has been lost over the last century and a half. Since this is a primary habitat for the elderberry shrub, the VELB host plant, it is reasonable to assume a similar loss of VELB habitat. This species is recovering following protection provided through FESA. When the species was listed as endangered in 1980, it was only known to occur in 10 locations. As of 2006, the beetle is known to occur in 190 locations and 50,000 acres of riparian habitat and 5,100 acres of beetle habitat that have been protected. Due to these reasons, USFWS has recommended that the beetle be removed from the endangered species list (USFWS 2006).

### **Western Pond Turtle**

The population status and trends of western pond turtle in the RSA is unknown. The western pond turtle is believed to have been abundant in the area when it supported extensive wetlands (Hays et al. 1999), but conversion of former wetlands to agricultural lands and urban development has likely resulted in local declines of these populations.

### **Western Burrowing Owl**

The burrowing owl is declining throughout most of the western United States and has disappeared from much of its historical range in California. Nearly 60 percent of California burrowing owl colonies that existed in the 1980s had disappeared by the early 1990s. In the San Francisco Bay Area and the central portion of the Central Valley (from Yolo and Sacramento Counties to Merced County), the burrowing owl population has declined by at least 65 percent since 1986.

Burrowing owls remain throughout nearly all of their Central Valley range. Approximately half of all breeding groups known to occur in the Central Valley during the 1980s disappeared by the early 1990s (DeSante and Ruhlen 1995). Due to severe losses of habitat suitable for burrowing owls over the past several decades, as a result of development and certain agricultural conversions, it is assumed that western burrowing owl populations in the RSA have declined substantially over recent decades.

## **Vernal Pool and Vernal Pool Obligates (Invertebrates and Western Spadefoot)**

From historical conditions, there has been a substantial loss to vernal pools throughout California. Vernal pool habitats have been lost primarily as a result of widespread urbanization and agricultural conversion. Between 1994 and 2003, the Sacramento Field Office of the USFWS conducted Section 7 consultations on impacts to almost 50,000 acres of vernal pool habitats across California. Over half of this loss of habitat, 25,000 acres, was the result of residential, commercial, and industrial development projects. In addition to urbanization, conversion of California's Central Valley to intensive agricultural uses continues to contribute to the decline of vernal pool habitat. From 1992 to 1998, 125,591 acres of grazing land were converted to other agricultural uses in the Central Valley of California. It is likely that much of this land supported vernal pools. Holland (1998) estimated that more than 32,000 acres of vernal pool habitats were lost in the San Joaquin Valley vernal pool region from the late 1980s through 1997, mostly as a result of agricultural conversion. Since 1994, the Sacramento USFWS office has reviewed projects converting more than 15,000 acres of vernal pool habitats to intensive agricultural uses via Section 7 of FESA (USFWS 2005).

## **Wetlands and Other Waters**

Prior to the Gold Rush of the mid-1800s, the Central Valley contained more than 4 million acres of wetland habitat, most of which were bordered by grassland and riparian habitats. Many wetlands were seasonal and resulted from over-bank flooding of rivers and streams that inundated large areas of the valley during winter and spring. More than 95 percent of historic Central Valley wetlands and 98 percent of all riparian habitats have been destroyed or modified. Today, just over 205,000 acres of managed wetlands now exist in the Central Valley, two-thirds of which are in private ownership.

## **Native Trees**

Although there are no statistics on total quantities of oak tree loss in the RSA, the Sacramento County Tree Preservation and Protection Ordinance (Title 19.12) describes its purpose and intent and provides a general historical background regarding the importance of preserving oak trees in California: *“For at least several centuries prior to the arrival of the first Spanish explorers in California, native oak trees existed as dominant and magnificent features in the landscape of the Central Valley of California. These trees provided a predominant food staple for original Indian inhabitants, and a major source of firewood and building material for early explorers and settlers. Over the*

*years, the vast majority of these trees have been cleared to accommodate agriculture, burned as firewood, and removed to facilitate urban development. Only a small vestige of the original oak woodland forests remains today. The removal of oak trees continues to the present time and occurs at a much faster pace than natural regeneration.”*

Thus, Rancho Cordova, Sacramento County and other jurisdictions in the RSA have established ordinances to preserve and protect remaining native oak trees as significant, integral, and outstanding examples of the historical heritage of Sacramento County and throughout the state.

### Direct and Indirect Impacts

Sections 2.3.1 through 2.3.5 in this EIR/EA indicate that where direct or indirect impacts from the proposed project occur to natural communities (including northern hardpan vernal pool habitat, isolated seasonal wetlands, historic water drainage areas, and intermittent creek described in Section 2.3.2, “Wetlands and Other Waters,” and nonnative grasslands described in Section 2.3.1, “Natural Communities”) and special-status and threatened and endangered species potentially occurring in these habitats (including vernal pool invertebrate species, VELB, western spadefoot toad, western pond turtle, burrowing owl, Swainson’s hawk, other special-status species raptors, and nesting birds under the MBTA described in Section 2.3.4, “Animal Species,” and Section 2.3.5, “Threatened and Endangered Species”), implementation of proposed measures would be effective to minimize the project’s impacts on each species.

The proposed project would permanently and directly remove up to 11.82 acres of nonnative grassland and temporarily disturb approximately 5.56 acres<sup>38</sup> of nonnative grassland, which many species may inhabit and use for foraging. The proposed project would directly remove thin segments of Fremont cottonwood-oak, Fremont-cottonwood, and coyote brush scrub communities that provide wildlife habitat.

The construction of Rancho Cordova Parkway south of Folsom South Canal would create a north-south barrier for terrestrial wildlife migration across these natural communities, fragmenting an approximately 547-acre section of undeveloped land west of the roadway from the remainder of the larger ~~GenCorp/Aerojet~~ property to the east. An approximately 800-foot long segment of Rancho Cordova Parkway just south of Buffalo Creek would be elevated aboveground, thus preserving a terrestrial wildlife corridor linking these two areas of ~~GenCorp/Aerojet-owned/GenCorp~~ land after project completion.

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<sup>38</sup> The temporarily disturbed area comprises 4.05 acres adjacent to the roadway corridor, plus 1.51 acres under the future overpass area.

### Current and Reasonably Foreseeable Future Actions

Current and planned development within the City of Rancho Cordova, and within the Sacramento region (cities and unincorporated areas within the counties of Sacramento, Placer, El Dorado, Yolo, Yuba, and Sutter) will contribute to the cumulative reduction of mature oak and other native trees, whose ecological functions and benefits cannot be replaced until smaller trees of the same species planted grow to maturity.

As identified in the City's General Plan, buildout of the General Plan would result in direct and indirect impacts to sensitive species and, including wetlands and other waters, raptors (including Swainson's hawk), vernal pool obligate species, the VELB and oak trees. Further development under way in areas such as the City of Elk Grove, Galt and Folsom as well as unincorporated areas of Sacramento, El Dorado, Sutter, and Placer counties would increase indirect impacts on the cumulative area. The contribution to these impacts by development of the General Plan would be cumulatively considerable.

### Potential Cumulative Impacts

Comprehensive plans for avoidance, on-site mitigation, off-site mitigation, or other compensation will be developed in cooperation with relevant state and federal agencies for each species affected. The acreages of habitat impacted (waters of the U.S. as well as isolated wetland features) and compensated at a "no net loss" basis for this proposed project and/or the impact to the resource is relatively small. The proposed project would not impact large interconnected areas of habitat that have been identified as critical to the maintenance of plant and wildlife species in the region (as compared to planned specific plan areas south of the project in the city—Rio del Oro Specific Plan, Sun creek Specific Plan, and the Arboretum Specific Plan).

The project would result in the removal of mature oak trees qualifying for protection under the Sacramento County Tree Protection Ordinance and Rancho Cordova General Plan as well as other mature trees that do not meet the criteria for protection. While implementation of replacement oak trees would result in no net loss of protected trees on an inch-for-inch basis, since many mature native trees within the BSA are over 100 years old, they cannot be easily replaced. The removal of large, mature trees due to the project would result in a loss of canopy cover and other beneficial ecological contributions that mature trees make to the environment, until such time that the replacement trees can grow to maturity. The continual removal of mature native trees within the vicinity of the proposed project has and continues to irreversibly change the landscape of the area.

The removal of mature oak trees qualifying for protection under the Rancho Cordova Tree Protection Ordinance and other mature trees that do not meet the criteria for protection would be a cumulatively considerable impact.

Avoidance, minimization, and/or mitigation measures, outlined in Section 2.3.3, “Plant Species,” pursuant to the Sacramento County Tree Protection Ordinance and City of Rancho Cordova General Plan policies would mitigate impacts to trees during construction. However, there are no feasible mitigation measures to fully offset the loss of mature native trees.

The project will result in impacts to vernal pool obligates, Swainson’s hawk, the VELB, western burrowing owl, wetlands and other waters, and other biological resources. Avoidance, minimization, and/or mitigation measures, outlined in Sections 2.3.1 through 2.3.5, would mitigate these impacts. As a result, the project would not be considered to contribute to a cumulatively considerable impact to these resources. However, it is acknowledged that growth under the City’s General Plan would result in cumulatively considerable impacts to these resources as disclosed in the City’s General Plan EIR.

# Chapter 3. California Environmental Quality Act Evaluation

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## 3.1. Determining Significance under CEQA

The project is subject to federal as well as City of Rancho Cordova (City) and state environmental review requirements because the City proposes the use of federal funds and/or the project requires a federal approval action. This Environmental Impact Report/Environmental Assessment (EIR/EA), therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The City of Rancho Cordova is the project proponent and the lead agency under CEQA. The Federal Highway Administration's (FHWA) responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation (Caltrans) under its assumption of responsibility pursuant to 23 U.S. Code (USC) 327.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an environmental impact statement (EIS), or some lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the lead agency to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

A Notice of Preparation (NOP) for the Rancho Cordova Parkway Interchange Project was mailed on September 9, 2005, to elected officials, government and other resource agencies, and all individuals and department entities that may have a concern or interest in the project. According to CEQA Guideline 15125, an EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the NOP is published; that description serves as the baseline for determining the significance of the project's impacts. Field reconnaissance and aerial imagery reveal that existing conditions in the project area have not changed substantially since 2005. The project area itself remains undeveloped as the Westborough development has been delayed because of the recent economic downturn. The project's cumulative impact analysis was updated to incorporate the current (2013) status of past, present, and reasonably foreseeable future projects.

### **3.2. Discussion of Significance of Impacts**

The following are CEQA impact determinations for the technical analysis provided in Chapter 2 and focuses on Alternative 3 (proposed project). The reader is referred to Chapter 2 for descriptions of regulatory setting, affected environment (environmental setting) and environmental analysis details. Cross-references to the specific location of additional information in Chapter 2 are given at the end of each technical subsection of Chapter 3. It should be noted that the mitigation measures listed below are the same as avoidance, minimization, and/or mitigation measures identified in Chapter 2. For impacts that are identified as potentially significant, mitigation is offered to reduce the impact. For less than-significant-impacts or no impact, no mitigation is required. The analysis and conclusions for cumulative impacts are presented in Section 2.4; the only environmental impact that was found to be cumulatively considerable was the removal of mature oak trees and other mature trees. For traffic, noise, and air quality cumulative impact analyses, cumulative impacts were captured in the modeling of the future year (2037) conditions based on the Sacramento Area Council of Governments (SACOG) regional models and projections. **Table 3.1-1** provides a summary of the CEQA significance determinations by issue area.

**Table 3.1-1  
Summary of Potential Impacts under CEQA**

	<b>Impact</b>	<b>Level of Significance</b>
Land Use	3.2.1-1: Consistency with state, regional, and local plans and programs.	Less Than Significant
Land Use	3.2.1-1: Physically divide an existing established community.	No Impact
Parks and Recreational Facilities	3.2.2-1: Temporary closure of the bike trails along the Folsom South Canal and Citrus Road during project construction.	Less Than Significant After Mitigation
Utilities and Emergency Services	3.2.3-1 and 3.2.3-2: Adequate capacity and conveyance of stormwater from the project site and disruption of emergency services.	Less Than Significant
Utilities and Emergency Services	3.2.3-3: During the construction, temporary delays to emergency vehicles along existing roadways, including U.S. 50, Folsom Boulevard, and White Rock Road, due to roadway detours and additional congestion caused by construction equipment and activities.	Less Than Significant After Mitigation
Traffic and Transportation	3.2.4-1: Temporary increase in traffic on surrounding area roadways through the use of trucks used for the delivery and hauling of construction materials to and from the project site.	Less Than Significant After Mitigation
Traffic and Transportation	3.2.4-2 through 3.2.4-12: Impacts to freeway speeds, freeway mainline operations, freeway ramp operations, and intersection levels of service under existing, 2016 (construction year), and 2037 (design year) conditions.	Less Than Significant
Traffic and Transportation	3.2.4-13: The Rancho Cordova Parkway/eastbound off-ramp intersection would operate at LOS F during both AM and PM peak hours.	Significant and Unavoidable
Visual/Aesthetics	3.2.5-1 and 3.2.5-2: Temporary construction impacts including nighttime “spillover” lighting and on-site storage of construction materials and debris that would be visible to viewers in the area.	Less Than Significant After Mitigation
Visual/Aesthetics	3.2.5-3, 3.2.5-4, and 3.2.5-6: Removal of trees and other mature vegetation, nighttime “spillover” lighting onto adjacent residential properties, and a new visually dominant feature within the U.S. 50/Folsom Boulevard corridor.	Significant and Unavoidable
Visual/Aesthetics	3.2.5-5: Structures on the proposed interchange could result in daytime glare.	Less Than Significant After Mitigation
Cultural Resources	3.2.6-1: Impacts to archaeological and cultural resources.	Less Than Significant
Cultural Resources	3.2.6-2: Disturbance of previously unidentified archaeological resources during project construction.	Less Than Significant After Mitigation
Hydrology and Floodplain	3.2.7-1, 3.2.7-2, and 3.2.7-3: Depletion of groundwater supplies. Existing drainage of the project area and capacity of stormwater drainage system designed for the project.	Less Than Significant
Water Quality & Stormwater Runoff	3.2.8-1 and 3.2.8-5: Increased sedimentation and erosion resulting in impacts to water quality and introduction of polluted stormwater runoff to local waterways.	Less Than Significant After Mitigation

	<b>Impact</b>	<b>Level of Significance</b>
Water Quality & Stormwater Runoff	3.2.8-2 and 3.2.8-3: Accidental contact with contaminated groundwater during dewatering activities or disruption of groundwater monitoring activities through the temporary disruption of monitoring wells located on Aerojet property.	Less Than Significant After Mitigation
Water Quality & Stormwater Runoff	3.2.8-4: Operations may result in additional volumes of stormwater runoff.	Less Than Significant
Geology/Soils/Seismic/Topography	3.2.9-1 and 3.2.9-2: Impacts related to seismic events, erosion, or loss of topsoil.	Less Than Significant
Geology/Soils/Seismic/Topography	3.2.9-3: Structure settlement and potential damage from differential settlement.	Less Than Significant After Mitigation
Hazardous Waste/Materials	3.2.10-1: Impacts associated with contaminated groundwater and monitoring wells.	Less Than Significant After Mitigation
Hazardous Waste/Materials	3.2.10-2: and 3.2.10-3: Expose persons to airborne lead material and PCBs.	Less Than Significant After Mitigation
Hazardous Waste/Materials	3.2.10-4 and 3.2.10-5: Fuel and oil spills during project construction and unidentified contaminated soils.	Less Than Significant After Mitigation
Hazardous Waste/Materials	3.2.10-6 and 3.2.10-7: Impacts to emergency access and response and increased risk of fire in the project area.	Less Than Significant After Mitigation
Air Quality	3.2.11-1: Exceedance of the state and SMAQMD threshold of 50 µg/m <sup>3</sup> over a 24-hour period of PM <sub>10</sub> .	Less Than Significant After Mitigation
Air Quality	3.2.11-2 and 3.2.11-4: Temporarily increased TAC levels in the immediate vicinity during construction and construction emissions of NO <sub>x</sub> that would exceed the SMAQMD threshold of 85 pounds per day.	Significant and Unavoidable
Air Quality	3.2.11-3 and 3.2.11-5: Impact from naturally occurring asbestos (NOA) and odor emissions during project construction.	Less Than Significant
Air Quality	3.2.11-6 and 3.2.11-7: Impacts to air quality compared to baseline conditions. Impacts to carbon monoxide emissions under baseline conditions.	Less Than Significant
Air Quality	3.2.11-8: Impacts to carbon monoxide and air pollutant emissions under 2037 conditions.	Less Than Significant
Air Quality	3.2.11-9 and 3.2.11-10: Increases in regional emissions of ROG, NO <sub>x</sub> , and PM <sub>10</sub> .	Less Than Significant
Noise	3.2.12-1: Impacts to baseline condition noise levels.	Less Than Significant
Noise	3.2.12-2 and 3.2.12-3: Impacts to changes in noise levels under 2037 conditions including those associated with compliance with Sacramento County noise standards.	Less Than Significant
Noise	3.2.12-4: Impact associated with groundborne vibration.	No Impact
Noise	3.2.12-5: Impacts associated with noise levels during project construction.	Significant and Unavoidable
Natural Communities	3.2.13-1: Impacts to natural communities would potentially impact sensitive species.	Less Than Significant After Mitigation
Wetlands and Other Waters	3.2.14-1 and 3.2.14-7: Impacts to vernal pools as defined by U.S. Army Corps of Engineers criteria. Impacts to the Folsom South Canal.	No Impact
Wetlands and Other Waters	3.2.14-2, 3.2.14-3, 3.2.14-4, and 3.2.14-6: Impacts to vernal pools, isolated seasonal wetlands, and Buffalo	Less Than Significant After Mitigation

	<b>Impact</b>	<b>Level of Significance</b>
	Creek during construction activities. Discharge of roadway pollutants into intermittent creeks.	
Wetlands and Other Waters	3.2.14-5: Change in the nature or density of vegetative cover of intermittent creek habitat.	Less Than Significant
Plant Species	3.2.15-1: Impacts to special-status plant species.	No Impact
Plant Species	3.2.15-2 and 3.2.15-3: Impacts to trees identified for preservation through encroachment of construction activities within the tree driplines. Impact of removing or indirectly impacting mature oak and other native tree species.	Less Than Significant After Mitigation
Animal Species	3.2.16-1, 3.2.16-2, and 3.2.16-3: Degradation or direct removal of habitat for midvalley fairy shrimp. Indirectly impact vernal pool and seasonal wetland habitat that supports special-status invertebrate species.	Less Than Significant After Mitigation
Animal Species	3.2.16-4 and 3.2.16-5: Impacts to the western spadefoot toad or their habitat.	Less Than Significant After Mitigation
Animal Species	3.2.16-6 and 3.2.16-7: Impact to the western pond turtle or the isolated seasonal wetland, which may provide habitat for the western pond turtle.	Less Than Significant After Mitigation
Animal Species	3.2.16-8 and 3.2.16-9: Impacts to the western burrowing owl or nonnative grassland, which may provide habitat for western burrowing owls.	Less Than Significant
Animal Species	3.2.16-10 and 3.2.16-11: Impacts to other raptor species.	Less Than Significant After Mitigation
Threatened and Endangered Species	3.2.17-1, 3.2.17 -2, and 3.2.17-3: Degradation of habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. Direct and indirect impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp and their habitat.	Less Than Significant After Mitigation
Threatened and Endangered Species	3.2.17-4 and 3.2.17-5: Habitat degradation for the valley elderberry longhorn beetle (VELB) during project construction. VELB mortality through habitat removal.	Less Than Significant After Mitigation
Threatened and Endangered Species	3.2.17-6, 3.2.17-7, and 3.2.17-8: Possible disturbance of active Swainson's hawk nests during project construction. Temporary disturbance of or permanent loss of suitable Swainson's hawk foraging habitat.	Less Than Significant After Mitigation
Threatened and Endangered Species	3.2.90: Spread of noxious weeds.	Less Than Significant
Population and Housing/Growth Inducement	3.2.18-1: New change in the anticipated growth under the City's General Plan.	Less Than Significant
Population and Housing/Growth Inducement	3.2.18-2: Displace existing housing or substantial numbers of people.	No Impact
Climate Change	Increase in GHG operational emissions.	Less Than Significant
Climate Change	Increase the consumption of energy associated with vehicle fuel.	Less Than Significant

### 3.2.1. Land Use

#### Impact Statements and Mitigation Measures

The impact statements included below are based on the information presented in Section 2.1.1, “Land Use.”

CEQA identifies that a project would have a significant impact to consistency with state, regional, and local plans and programs if it would 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. Additionally, CEQA identifies that a project may have a significant impact if it would conflict with any applicable habitat conservation plan or natural community conservation plan or physically divide an established community.

**Impact 3.2.1-1:** Alternative 3 (proposed project) is consistent with all applicable land use plans, policies, and agency regulations, and as such, would have **less than significant** impacts to consistency with state, regional, and local plans and programs. Alternative 3 (proposed project) would not physically divide an existing established community. **No impact** would occur.

Because Alternative 3 would have less than significant impacts to consistency with state, regional, and local plans and programs and no impact associated with the physical division of an established community, no mitigation is required.

### 3.2.2. Parks and Recreational Facilities

#### Impact Statements and Mitigation Measures

The impact statements included below are based on the information presented in Section 2.1.2, “Parks and Recreational Facilities.”

CEQA identifies that a project would have a significant impact to recreation or recreational facilities if the project would 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. Additionally, CEQA considers if the project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

**Impact 3.2.2-1:** Alternative 3 would cause a temporary adverse impact to bike trails along Folsom South Canal or Citrus Road due to temporary closures during construction. The temporary closure of the bike trails along the Folsom South Canal and Citrus Road would be considered a **potentially significant impact**.

**Mitigation Measures**

**MM 3.2.2-1** The construction contractor will minimize the duration of the closures of the Folsom South Canal and Citrus Road bicycle trails to the shortest period necessary to complete construction activities. The trails will remain open during regular trail hours (daytime hours) unless construction activities are occurring that require closure of the trails for either physical or public safety reasons. Signage will be placed at the entrances to the Folsom South Canal trail at Hazel Avenue and Sunrise Boulevard and at Folsom Boulevard and Sunrise Boulevard for the Citrus Road bicycle trail to notify users of the closures. This signage will also advise the users of alternative trail routes that they may use. On behalf of Caltrans, the City will notify local bicycling groups and associations prior to the trail closures and notify them of the reopening in an effort to disseminate the information to their members. The features and attributes of the bicycle trail will be fully restored once the construction of the project is complete.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

Implementation of the above mitigation measure would ensure that construction activities do not adversely impact trail use and would mitigate the impact to **less than significant after mitigation**.

**3.2.3. Utilities/Emergency Services**

**Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.1.7, “Utilities/Emergency Services.”

Under CEQA Guidelines Appendix G, the proposed project may result in significant impacts associated with utilities or emergency services if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB).
- 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.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.
- 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.
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Comply with federal, state, and local statutes and regulations related to solid waste.
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

In the Initial Study prepared for the project in September 2005, the following impacts were identified as having either a less than significant impact or no impact and will not be further discussed in this EIR/EA.

- Disrupt utility services to customers within or surrounding the project sitearea (i.e., disruption of water, sewer, electric, gas, or telephone services).
- Exceed wastewater treatment requirements of the applicable RWQCB.
- 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.

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.
- 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.
- Landfill capacity impacts.
- Conflicts with federal, state, and local statutes and regulations related to solid waste.

The City is coordinating with all utility providers in the project site and surrounding area and would ensure that any utility relocations occurring during project construction would avoid or minimize service disruptions. Alternative 3 would not result in the need for wastewater treatment and would require minor amounts of water for irrigation of roadside landscaping. Small amounts of solid waste would be generated during construction and area landfills are anticipated to have adequate capacity to accommodate this waste.

**Impact 3.2.3-1:** Alternative 3 (proposed project) would require the construction of new stormwater drainage facilities to collect and convey stormwater runoff from the project site. The construction of these new stormwater facilities would follow all applicable federal, state, and local design requirements to ensure adequate capacity and conveyance of stormwater from the project site. By providing adequate capacity and conveyance of stormwater from the project site, the project would result in a **less than significant impact** associated with stormwater facilities and no mitigation measures would be required.

Because Alternative 3 would have less than significant impacts to stormwater drainage facilities, no mitigation is required.

**Impact 3.2.3-2:** During project operation, disruption of emergency services is not likely to occur within the project site and surrounding area as a result of the proposed project. The interchange and roadway extension would improve circulation and help to provide adequate traffic levels of service in the area, which would help to provide adequate emergency vehicle response times. Operation of the proposed project would have a **less than significant** impact on emergency services.

Because Alternative 3 would have less than significant impacts to emergency access and response, no mitigation is required.

**Impact 3.2.3-3:** During the construction phase of the project site, temporary delays to emergency vehicles may occur along existing roadways, including U.S. Highway 50 (U.S. 50), Folsom Boulevard, and White Rock Road, due to roadway detours and additional congestion caused by construction equipment and activities. This is a **potentially significant impact**.

**Mitigation Measures**

**MM 3.2.3-3a** During construction, emergency access on public roadways shall be available at all times to maintain emergency vehicle access through the area. At no time during the construction period will the entire width of a public roadway be closed to emergency vehicle traffic.

*Timing/Implementation:* During project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.3-3b** Prior to the start of construction, a Traffic Management Plan shall be developed that would reduce delays and obstructions caused by construction detours to the greatest extent possible. The plan developers shall coordinate with emergency service providers (i.e., fire and police) during plan development to ensure that traffic control measures proposed in the plan would meet the needs of the service providers. These detours shall be provided to all emergency service entities that service the area prior to their implementation to avoid impacts to emergency response times.

*Timing/Implementation:* Prior to and during project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

Mitigation measures MM 3.2.3-3a and MM 3.2.3-3b would serve to reduce these potential impacts to **less than significant after mitigation**. Specifically, these mitigation measures would ensure that emergency access during construction is maintained.

### **3.2.4. Traffic and Transportation/Pedestrian and Bicycle Facilities**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.1.8, “Traffic and Transportation/Pedestrian and Bicycle Facilities.”

Under CEQA Guidelines Appendix G, a transportation/circulation impact may be considered significant if implementation of the proposed project would:

- 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 nonmotorized 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.
- 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.
- 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.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The Initial Study released for the project in September 2005 determined that the project would result in less than significant impacts or no impacts resulting from a change in air traffic patterns, increases in hazards due to design features or incompatible uses, or result in inadequate parking; therefore, these issues will not be further addressed in this EIR/EA.

## **Construction**

**Impact 3.2.4-1:** Construction activities for the project would temporarily increase the amount of traffic on surrounding area roadways through the use of trucks used for the delivery and hauling of construction materials to and from the site, the hauling of dirt, the daily use of heavy earth-moving and other construction equipment, and the travel to and from the site by construction workers and inspectors. Construction activities creating the most traffic would involve heavy haul trucks importing fill. If traffic increases resulting from construction of the project result in increased traffic congestion during peak travel hours, this would be considered a **potentially significant impact**.

## **Mitigation Measures**

**MM 3.2.4-1a** A Traffic Management Plan will be prepared and submitted to Caltrans and the City for review and approval before starting construction work. This plan will include such elements as public information/public awareness, the designation of haul routes for construction-related trucks, the location of access to the construction site, any driveway turn restrictions, temporary traffic control devices or flagmen, and designated parking and staging areas for workers and equipment. The Traffic Management Plan will also include measures to prohibit lane closures on U.S. 50 during peak and daytime hours and on holidays. During construction, at least one high-occupancy vehicle lane and three general purpose lanes will remain in operation on U.S. 50 in both directions at peak periods. Full closure of U.S. 50 may be allowed during late evening to early morning hours to construct crossover lanes. Lane closure locations and approval will be coordinated with Caltrans District 3 Traffic Manager prior to performing any lane closures. Construction traffic involving heavy haulers (defined as vehicles with three or more axles) moving fill to and leaving the project site shall operate outside of AM and PM peak traffic hours (defined as between the hours of 7:00 a.m. and 10:00 a.m. and 3:00 p.m. and 6:00 p.m. Monday through Friday). This requirement shall be included in the construction contract. The Traffic Management Plan Data Sheet (April 2010) recommendations are consistent with the above list of measures.

*Timing/Implementation:*                      *Prior to and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova  
Development Services*

**MM 3.2.4-1b**      A Construction Zone Enhanced Enforcement Program may be appropriate during portions of this project. The program involves the presence at all times of the California Highway Patrol in construction zones to remind motorists to slow down and use caution when traveling through work areas. The Caltrans North Region Construction Division would be consulted to decide whether the program is warranted for this project.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova  
Development Services*

Mitigation measures MM 3.2.4-1a and MM3.2.4-1b would serve to reduce potential construction-related traffic impacts to **less than significant after mitigation**. Specifically, these mitigation measures would establish a Traffic Management Plan to provide traffic control to minimize traffic operation impacts from construction activities as well as prohibit hauling activities from occurring during the AM and PM peak hour traffic conditions.

***Baseline Year (2005) Conditions***

**Impact 3.2.4-2:** Under the Existing Plus Alternative 3 conditions, traffic levels of service and delay would improve at all intersections in both the AM and PM peak hours as compared to the Existing condition, with the exception of the Hazel Avenue/westbound U.S. 50 ramps in the AM peak hour, where level of service (LOS) would slightly worsen from LOS D to LOS E, and delay would increase by 2 seconds per vehicle. This intersection, however, would still operate acceptably at LOS E. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to intersection traffic levels of service under the existing condition, no mitigation is required.

**Impact 3.2.4-3:** Under the Existing Plus Alternative 3 conditions, freeway levels of service and density in the eastbound direction would improve at all locations in both the AM and PM peak hour as compared to the Existing condition, with the exception of the Zinfandel Drive to Sunrise Boulevard freeway segment, where density would increase (worsen) slightly by one vehicle per lane per mile. This represents a negligible change from the existing condition, and would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to freeway operations in the eastbound direction under the existing condition, no mitigation is required.

**Impact 3.2.4-4:** Under the Existing Plus Alternative 3 conditions, freeway levels of service and density in the westbound direction would improve at all locations in both the AM and PM peak hours compared to the existing condition. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to freeway operations in the westbound direction under the existing condition, no mitigation is required.

### ***Construction Year (2016) Conditions***

**Impact 3.2.4-5:** Alternative 3 would result in either no change or improvements in average freeway speeds in both the eastbound and westbound direction, as compared to the 2016 No Build alternative. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to freeway speeds under the 2016 condition, no mitigation is required.

**Impact 3.2.4-6:** Alternative 3 would result in all freeway mainline segments operating acceptably under 2016 conditions. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to freeway mainline operations under the 2016 condition, no mitigation is required.

**Impact 3.2.4-7:** With Alternative 3, the eastbound Sunrise Boulevard on-ramp would operate acceptably during both AM and PM peak hours. The westbound on-ramp would operate unacceptably under both AM and PM peak hours with the existing lanes on U.S. 50, but would operate at

acceptable conditions upon completion of the carpool lanes that are currently under construction. The eastbound Sunrise Boulevard off-ramp would operate unacceptably at LOS F during the PM peak hour under No Project conditions as well as with Alternative 3; however, delay would be substantially improved with Alternative 3 compared to No Build conditions. Finally, the eastbound Hazel Avenue to Aerojet Road weave section would operate acceptably under Alternative 3 in the PM peak hour with operational improvements. Based on this, the proposed project would result in **less than significant impacts** to traffic under 2016 conditions.

Because Alternative 3 would have less than significant impacts to freeway ramp operations under the 2016 condition, no mitigation is required.

**Impact 3.2.4-8:** With Alternative 3, all study intersections would operate at acceptable levels of service during both peak hours under 2016 conditions. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to intersection levels of service under the 2016 condition, no mitigation is required.

### ***Design Year (2037) Conditions***

**Impact 3.2.4-9:** The average freeway speeds improve or remain virtually unchanged between the 2037 No Project and 2037 with Alternative 3 conditions in both directions, and further improve or remain virtually unchanged under 2037 with Alternative 3. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to freeway speeds under the 2037 condition, no mitigation is required.

**Impact 3.2.4-10:** With construction of Alternative 3, freeway mainline operations would either operate acceptably, or improve as compared to the No Build scenario, with the exception of the eastbound segment of U.S. 50, from Rancho Cordova Parkway to Hazel Avenue, which would operate at LOS F under Alternative 3 conditions. This is the result of localized congestion along Hazel, which is the result of a shift in an existing bottleneck from the Sunrise Boulevard on-ramp to the Sunrise Boulevard off-ramp resulting from the project. This would be due to the added capacity with the new auxiliary lane from Sunrise Boulevard

to Rancho Cordova Parkway. The added capacity results in more cars reaching the Hazel off-ramp causing queuing on the off-ramp which results in localized congestion on Hazel Avenue, and the resulting queues would extend from the Hazel Avenue off-ramp onto eastbound U.S. 50. However, improvements to the U.S. 50/Hazel Avenue Interchange identified in the Metropolitan Transportation Plan (MTP), including the grade separation of Hazel Avenue and Folsom Boulevard (estimated to be completed by 2017), are expected to address this queue. Therefore, this would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to freeway mainline operations under the 2037 condition, no mitigation is required.

**Impact 3.2.4-11:** Alternative 3 would improve operations at the eastbound Sunrise Boulevard on-ramp during both peak hours as compared to the No Build scenario. The eastbound Sunrise Boulevard off-ramp would operate at LOS F conditions under both No Build and Alternative 3 conditions during both peak hours, although the densities would decrease and improve with the project. The eastbound Hazel Avenue off-ramps would operate at LOS F conditions under Build conditions during both peak hours. However, the MTP-planned improvements to the U.S. 50/Hazel Avenue Interchange (estimated to be completed by 2017) are expected to improve this operation. The westbound Hazel Avenue off-ramp would operate at LOS F under Build conditions during the PM peak hour. However, the MTP-planned improvements to the U.S. 50/Hazel Avenue Interchange (estimated to be completed by 2017) are expected to also improve this operation. All remaining ramp junctions would operate at acceptable levels of service under both Alternative 3 and No Build conditions during both AM and PM peak hours. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to freeway ramp operations under the 2037 condition, no mitigation is required.

**Impact 3.2.4-12:** Under 2037 conditions, many of the study intersections are projected to operate unacceptably at LOS F; however, Alternative 3 is expected to improve operations from LOS F to acceptable LOS D conditions during PM peak hour conditions at the Sunrise Boulevard/westbound

U.S. 50 ramps. The project would improve operations at the Sunrise Boulevard/Folsom Boulevard intersection during the AM peak hour compared to No Build conditions, although it would continue to operate at LOS F. The delay at this intersection would remain virtually unchanged during PM peak hour conditions with Alternative 3. The project would worsen operations during the PM peak hour at the Hazel Avenue/westbound ramps intersection during the PM peak hour and the Hazel Avenue/Folsom Boulevard intersection during both peak hours. However, the MTP-planned improvements to the U.S. 50/Hazel Avenue Interchange (estimated to be completed by 2017) are expected to improve this operation. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to these intersection levels of service under the 2037 condition, no mitigation is required.

**Impact 3.2.4-13:** Under Alternative 3, the Rancho Cordova Parkway/eastbound off-ramp intersection would operate at LOS F during both AM and PM peak hours. This is a function of congestion on the northbound approach as vehicles waiting to make a right turn onto the eastbound on-ramp queue back due to the effect of metering planned for the on-ramp. This projected queue will not affect other southbound, eastbound, or northbound movements at the intersection because the project provides a dedicated northbound lane with storage for vehicles waiting to enter the eastbound on-ramp. This would be considered a **significant and unavoidable impact**.

The extent of the queue could be reduced by increasing the metering rate (i.e., number of vehicles allowed to enter the freeway per hour) for the on-ramp, but this may have an adverse impact on the eastbound section of U.S. 50 between Rancho Cordova Parkway and Hazel Avenue. No other feasible mitigation measures have been identified to address the LOS F conditions at the Rancho Cordova Parkway/eastbound off-ramps intersection since a two-lane off-ramp will already be provided with a full auxiliary lane on U.S. 50 between the Sunrise Boulevard and Hazel Avenue interchanges. As such, this impact would remain **significant and unavoidable**.

### 3.2.5. Visual/Aesthetics

#### Impact Statements and Mitigation Measures

The impact statements included below are based on the information presented in Section 2.1.9, “Visual/Aesthetics.”

Pursuant to CEQA Guidelines Appendix G, the project may have a significant impact to aesthetics if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

As identified in the Initial Study prepared for the project in September 2005, it was determined that the project would not have a substantial adverse effect on a scenic vista.

#### **Construction Impacts**

**Impact 3.2.5-1:** Construction of Alternative 3 could result in temporary visual impacts associated with on-site storage of construction materials and debris, removal of vegetation, and other construction activities that would be visible to viewers in the area. This would be a **potentially significant impact**.

#### **Mitigation Measures**

**MM 3.2.5-1** Wherever feasible, construction materials and debris shall be stored away from highly visible areas, which shall include but not be limited to the U.S. 50 corridor, the Folsom South Canal corridor, and the vacant parcel located north of U.S. 50 adjacent to Tenderfoot Drive. Storage areas shall be fenced and/or covered so as to minimize visibility of these areas to potential viewers.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova  
Development Services*

After implementation of MM 3.2.5-1, this impact would be considered **less than significant after mitigation**. This mitigation measure would ensure that construction materials and debris are not clearly visible along project site and surrounding area roadways.

### ***Construction Lighting Impacts***

**Impact 3.2.5-2:** Construction of the project could result in nighttime “spillover” lighting from construction equipment onto adjacent properties or disturbance to drivers passing by these construction activities. This would be a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.5-2**                      Construction lighting shall be designed to face downward and away from adjacent properties to the extent feasible. In addition, lighting shall be directed away from traffic lanes and areas where lighting could disturb passing drivers and/or pedestrians. Adjacent residents shall be provided with a City contact number to call in case nighttime lighting becomes disruptive.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova  
Development Services*

After implementation of MM 3.2.5-2, this impact would be considered **less than significant after mitigation**. This mitigation measure would direct and shield construction lighting in a manner that would avoid spillover lighting impacts.

### ***Tree Removal***

**Impact 3.2.5-3:** Alternative 3 would result in the removal of trees and other mature vegetation within the project footprint and along the U.S. 50 corridor. This would be a **potentially significant impact**.

### **Mitigation Measures**

**MM 3.2.5-3a** The project shall be designed to incorporate tree protection during construction as provided in City, County, and other applicable tree protection ordinances. Where feasible, existing trees shall be preserved in place, and protection measures shall be incorporated to minimize disturbance around preserved trees during construction.

*Timing/Implementation:*                      *During project design and construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova  
Development Services*

**MM 3.2.5-3b** Where removal is unavoidable, oak and other protected trees shall be relocated or replaced according to City, County, and other applicable tree protection ordinances. Replacement trees shall be planted within the project site area to maintain visual quality. Planting of trees within Caltrans right-of-way shall be conducted in coordination with Caltrans biologists and landscape architects.

*Timing/Implementation:*                      *During and after project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova  
Development Services*

**MM 3.2.5-3c** Where vegetation removal is unavoidable, this vegetation shall be replaced in accordance with City, County, and Caltrans landscaping requirements. In addition, sensitive habitats, such as wetland and riparian habitat, shall be replaced in accordance with applicable regulatory requirements.

*Timing/Implementation:*                      *During and after project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova  
Development Services*

With implementation of mitigation measures MM 3.2.5-3a through c, visual impacts would be reduced; however, due to the size of trees to be removed, as well as the large

area of vegetation removed for Rancho Cordova Parkway, visual impacts resulting from tree and vegetation removal would be considered **significant and unavoidable**.

### ***Change in Visual Character***

**Impact 3.2.5-4:** The proposed interchange structure would create a new visually dominant feature within the U.S. 50/Folsom Boulevard corridor. Also, the structure would be partially visible from several residences. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.5-4a** Design features shall be incorporated to soften the visual appearance of the interchange structure and to blend in to the surrounding visual setting. This shall be accomplished using landscaping techniques and aesthetic treatments on the hardscape elements of the project, including the overcrossing structure, ramps, retaining walls, and sound walls. The following options shall be studied and implemented:

- Incorporating planting as a component of noise barrier design.
- Using stamped concrete or other aesthetic treatments on sound walls.
- Replacing concrete sound walls with earthen noise berms.

During consideration and design of potential aesthetic treatments, public outreach efforts shall be conducted with affected viewer groups and other stakeholders. In addition, design options for the remaining right-of-way north of the interchange shall incorporate features, where feasible, to shield the surrounding land uses from views of the interchange and enhance the aesthetics of the area.

*Timing/Implementation:*                      *During project design*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Planning  
and Public Works Departments*

**MM 3.2.5-4b** The railing and lighting design for the project shall incorporate features that are consistent with City, County, and Caltrans policies and that meet the desired visual character of the area. To the extent

feasible, an unobtrusive railing design should be chosen that minimizes obstruction of existing views. During consideration and design of potential aesthetic treatments, public outreach efforts shall be conducted with affected viewer groups and other stakeholders.

*Timing/Implementation:*                      *During project design*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Planning  
and Public Works Departments*

**MM 3.2.5-4c**

During project design, the City shall coordinate with Caltrans landscape architects and the project development team to ensure that chosen aesthetic treatments and landscaping components are incorporated into the plans, specifications, and estimates. This should include making final decisions on:

- Type, treatment, and color for barriers and walls.
- Architectural styles for bridge structures and miscellaneous hardware.
- Contour grading plans that incorporate slope rounding.
- Landscape treatment (e.g., planting for screening, revegetation).

During identification of final design details, public outreach efforts shall be conducted with affected viewer groups and other stakeholders.

*Timing/Implementation:*                      *During project design*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Planning  
and Public Works Departments*

With implementation of mitigation measures MM 3.2.5-4a through c, visual impacts would be reduced; however, due to the large scale of the interchange structure, visual impacts resulting from the interchange structure profile would be considered **significant and unavoidable**.

***Daytime Glare***

**Impact 3.2.5-5:** Structures on the proposed interchange could result in daytime glare. Additionally, vehicles using the interchange structure could act as

reflective surfaces that could cause daytime glare. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.5-5** Lighting poles and signs shall be designed to minimize reflection to the extent feasible. All surfaces shall be painted with an antireflective coating or otherwise treated to reduce light reflection.

*Timing/Implementation:*                      *During project design*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Planning  
and Public Works Departments*

With implementation of mitigation measure MM 3.2.5-5, visual impacts from daytime glare would be considered **less than significant after mitigation**. This mitigation measure would ensure that interchange structure features do not contain any reflective materials.

### ***Lighting Impacts***

**Impact 3.2.5-6:** The proposed interchange could result in nighttime “spillover” lighting onto adjacent residential properties. Additionally, headlights from vehicles using the overcrossing structure could add to the overall nighttime glare. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.5-6a** The City shall conduct a photometric study to identify the potential for the lightshed of the project to affect adjacent residential properties. Because it is difficult to measure the lightshed of the project until specific lighting types and measurements have been identified, the study shall be conducted during final project design. Based on the results of the study, lighting types and shading methods shall be incorporated into the project to ensure that lighting impacts are reduced. Methods shall include focusing lighting away from residential properties, using hooded lighting, and reducing the height of the lighting to the extent feasible, in addition to other feasible methods.

*Timing/Implementation:*                      *During project design*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Planning  
and Public Works Departments*

**MM 3.2.5-6b**      The City shall also include landscape features that will shield adjacent residential properties from “spillover” lighting and overall nighttime glare from vehicles using the overcrossing structure to the greatest extent feasible. Shielding landscaping may include additional tall tree or vegetation planting in areas between the overcrossing structure and adjacent residential properties. During identification of final design details, the City shall conduct public outreach efforts with affected residents and stakeholders to obtain input on desired shielding landscaping materials and techniques.

*Timing/Implementation:*                      *During project design*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Planning  
and Public Works Departments*

With implementation of mitigation measures MM 3.2.5-6a and MM 3.2.5-6b, visual impacts would be reduced; however, due to the potential for remaining spillover lighting into adjacent residences, this impact would be considered **significant and unavoidable**.

### **3.2.6. Cultural Resources**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.1.10, “Cultural Resources.”

Under CEQA Guidelines Appendix G, impacts to cultural resources may be considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

- Disturb any human remains, including those interred outside of formal cemeteries.

**Impact 3.2.6-1:** No archaeological resources or cultural resources eligible for inclusion in the National Register of Historic Places or California Register of Historic Places were identified within the project area. Therefore, the project would have **less than significant** impacts to archaeological and cultural resources.

Because Alternative 3 would have less than significant impacts to archaeological and cultural resources eligible for inclusion in the National Register of Historic Places or California Register of Historic Places, no mitigation is required.

**Impact 3.2.6-2:** No archeological or unique paleontological resources as defined under CEQA have been identified in the project area, and, based on responses from local Native American groups, there is no evidence suggesting a significant potential for human remains to be buried in the project area. However, due to the depth of excavation activities associated with project construction, there is the potential for the disturbance of previously unidentified archaeological resources during project construction. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.6-2a** If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area shall be discontinued and diverted until a qualified archaeologist can assess the nature and significance of the find. Caltrans shall be notified of any discoveries made within the Caltrans right-of-way. If the archeologist determines that the discovered resource is significant, the resource shall be either avoided or any impacts on the resource mitigated to less than significant in accordance with CEQA standards (see Public Resources Code section 21083.2 and CEQA Guidelines section 15064.5).

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.6-2b** If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and that the County Coroner shall be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant. At this time, the person who discovered the remains will contact the City’s Environmental Monitoring staff so that they and City cultural resources staff may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable. Caltrans will be notified if cultural remains or human remains are found within Caltrans’ right-of-way.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

Implementation of mitigation measures MM 3.2.6-2a and b would reduce the potential for harm to cultural resources to **less than significant after mitigation**. Specifically, these mitigation measures would ensure that resources discovered during construction are addressed and mitigated to avoid accidental damage.

### **3.2.7. Hydrology and Floodplain**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.2.1, “Hydrology and Floodplain.”

Under CEQA Guidelines Appendix G, the proposed project may result in significant impacts associated with hydrology and flooding if it would:

- 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.

- 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.
- 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.
- Create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- 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.
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- 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.
- Inundation by seiche, tsunami, or mudflow.

As identified in the Initial Study prepared for the project in September 2005, the project would have no impact from placement of housing within a 100-year flood hazard area and would have a less than significant impact from exposure of people or structures to flooding. In addition, the Initial Study identified that the project would result in no impact associated with seiches, tsunamis, or mudflows.

**Impact 3.2.7-1:** While Alternative 3 would create additional impervious surfaces, the increase in impervious surfaces would not be substantial enough to affect groundwater percolation or interfere with groundwater recharge. Additionally, the project would not draw on groundwater resources to serve its needs. Because of this, the project would have a **less than significant** impact associated with depletion of groundwater supplies.

Because Alternative 3 would have less than significant impacts to groundwater supplies, no mitigation is required.

**Impact 3.2.7-2:** Alternative 3 would create additional impervious surfaces and would thus alter drainage patterns ~~in the project area~~ at the project site and surrounding area; however, the project would install sufficient drainage facilities as part of the project design to convey excess water flows away from the project ~~site~~ area. Temporary changes to drainage patterns during construction, if not properly controlled, could result in erosion and/or flooding on- or off-site. Specific best management practices (BMPs) to be used during construction would be identified within the project Storm Water Pollution Prevention Plan (SWPPP); these measures would be designed to prevent erosion and accommodate drainage requirements to avoid on- and off-site flooding. With implementation of BMPs required for National Pollutant Discharge Elimination System (NPDES) Construction General Permit, the project would not substantially increase amounts surface runoff in a manner which would result in flooding or erosion on- or off-site. Therefore, impacts to the existing drainage of the project site and surrounding area are considered **less than significant**.

Because Alternative 3 would have less than significant impacts to drainage, no mitigation is required.

**Impact 3.2.7-3:** Alternative 3 would result in minor amounts of additional stormwater runoff due to increases in impervious surfaces. The additional stormwater would not exceed the capacity of stormwater drainage system designed for the project, and the project would result **in less than significant** impacts.

### **3.2.8. Water Quality and Stormwater Runoff**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.2.2, “Water Quality and Stormwater Runoff.”

Under CEQA Guidelines Appendix G, the proposed project may have a significant water quality impact if it would:

- Violate any water quality standards or waste discharge requirements.

- 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.
- Otherwise substantially degrade water quality.

### **Construction Water Quality Impacts**

**Impact 3.2.8-1:** Construction of Alternative 3 would include vegetation removal, grading, and excavation activities within the project [site area](#), which could result in increased sedimentation and erosion. If not properly controlled, these pollutants could reach waterways such as Buffalo Creek or the Folsom South Canal, which could result in impacts to water quality. This would be considered a **potentially significant impact**.

### **Mitigation Measures**

**MM 3.2.8-1a** Any dewatering activities during construction would be in compliance with applicable NPDES permits and other water quality regulations.

Construction BMPs would be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved project SWPPPs; however, these measures would be designed to accommodate drainage requirements and avoid on- and off-site flooding. With implementation of BMPs required for NPDES Construction General Permit and other applicable water quality regulations (joint NPDES permit for MS4s in their municipal jurisdictions [NPDES No. CAS082597]), effects from short-term flooding during project construction would be negligible.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.8-1b** Construction BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality

regulations to minimize impacts to water quality. The project SWPPP will require the contractor to identify the location of designated staging areas, would include specific requirements for equipment fueling, maintenance, and storage processes, and will include stormwater BMPs to prevent the release of polluted stormwater into adjacent waterways. With adherence to the NPDES requirements and implementation of applicable BMPs, short-term impacts to water quality related to materials discharge will be adequately controlled during construction.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.8-1c**

BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and are finalized within the approved project SWPPP based on the Risk Level determined under the NPDES General Construction Permit guidelines; however, temporary concrete washouts, stabilized construction entrance/exits, silt fencing, sand bag barriers, gravel bag berms, and fiber rolls have been identified as potential construction site BMPs to control increased erosion and sedimentation and to prevent construction site runoff from entering adjacent waterways. In addition, ground disturbance within Buffalo Creek Channel associated with the culvert extension will occur during the dry season to minimize siltation impacts to flowing water. The General Construction Permit lists the following requirements for Risk Level 2, the most likely risk level for this project, for minimizing sediment, erosion, and water quality impacts:

- Good Site “Housekeeping”
- Sediment Controls
- Run-on and Run-off Controls
- Inspection, Maintenance, and Repair of BMPs

- Numeric Action Levels
  - Turbidity: 250 Nephelometric Turbidity Units
  - pH: 6.5–8.5
- Rain Event Action Plan
- Effluent Monitoring

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public  
Works Department*

As part of the NPDES requirements, the contractor will be required to identify and implement BMPs that would ensure no debris or other pollutants from the construction of the overhead structures and potential culvert widening enter Buffalo Creek or the Folsom South Canal. Appropriate BMPs would also be incorporated into project plans to protect worker safety, and applicable hazardous materials regulations pertaining to collection, testing, and disposal of contaminated groundwater would be followed.

After implementation of mitigation measure MM 3.2.8-1c, the project's impacts to water quality during construction would be considered **less than significant after mitigation**.

### ***Groundwater Quality***

**Impact 3.2.8-2:** Accidental contact with contaminated groundwater during dewatering activities could pose a risk to construction personnel and adjacent waterways. This would be considered a **potentially significant impact**.

**Impact 3.2.8-3:** Alternative 3 could contribute to disruption of groundwater monitoring activities through the temporary disruption of monitoring wells located on Aerojet property. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.8-2**                      A geotechnical analysis shall be completed to identify the existing depth to groundwater in locations where cast-in-drilled-hole piles would be required or where other activities with the potential to

contact groundwater would occur. If encounters with groundwater are anticipated, measures shall be incorporated into the construction specifications in compliance with applicable regulations that shall ensure worker safety and ensure that groundwater contact with adjacent waterways is avoided.

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.8-3a**

Prior to project construction, the City shall coordinate with Aerojet and applicable regulatory agencies to identify any effects to groundwater extraction wells or monitoring wells that would occur during construction. If it is found that project construction would disrupt groundwater monitoring or extraction activities, the City and Aerojet shall identify and implement measures in the construction plans and specifications that will ensure that necessary extraction and monitoring activities can be maintained at all times during project construction. Any dewatering activities during construction would be in compliance with applicable NPDES permits and other water quality regulations.

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.8-3b**

Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and would be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required by NPDES permits, and with adherence to other applicable water quality regulations, pollutant levels in stormwater runoff would not be expected to exceed applicable water quality standards.

If any existing extraction or monitoring wells must be permanently relocated as a result of the project, the City shall coordinate with

Aerojet and applicable regulatory agencies to design and install these wells in a manner that ensures that required extraction and monitoring activities are maintained at all times.

*Timing/Implementation:*                      *During project design and construction*

*Responsible Agency:*                      *City of Rancho Cordova Public Works Department*

After implementation of mitigation measures MM 3.2.8-2, MM 3.2.8-3a, and MM 3.2.8-3b, the project's impacts would be considered **less than significant after mitigation**. These mitigation measures would ensure that any encountered groundwater has been handled in an appropriate manner to avoid water quality impacts and contamination, and that current groundwater remediation activities are not adversely impacted.

### ***Operational Water Quality Impacts***

**Impact 3.2.8-4:** Operation of Alternative 3 may result in additional volumes of stormwater runoff, due to increases in impervious surfaces in the area. The project would be designed to adequately convey stormwater runoff from the project site. As such, the project would have a **less than significant impact** to stormwater drainage system capacity.

Because Alternative 3 would have less than significant impacts to stormwater drainage capacity, no mitigation is required.

**Impact 3.2.8-5:** Alternative 3 would introduce motor vehicles to areas where there are currently no paved public roads, such as between U.S. 50 and White Rock Road, and at the proposed interchange on-ramps and overpass structure over Buffalo Creek and Folsom South Canal. This could result in the introduction of polluted stormwater runoff to local waterways. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.8-5a** Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and would be identified in final design plans; however, detention basins, swales, and other on-site

measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required by NPDES permits, and with adherence to other applicable water quality regulations, pollutant levels in stormwater runoff would not be expected to exceed applicable water quality standards.

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.8-5b**      To accommodate the additional runoff, the project will include a new drainage system that will collect runoff water from the interchange facility and infiltrate it into the ground. The new drainage system will be designed to accommodate all collected runoff and will ensure that the runoff would not enter the Folsom South Canal. Design measures will be incorporated into slopes, benching, rounding, and terraces to minimize concentrated flows. Where feasible, 4:1 slopes will be included in the project design to minimize the potential for concentrated flows. Revegetation and landscaping would also be incorporated into design to reduce water flow and erosion potential.

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.8-5c**      The proposed project would implement Low Impact Development (LID) methods and features where possible. Emphasis to date on BMP selection has been focused on the siting of BMPs at specific locations to provide direct source control or end-of-pipe treatment. Trends in sustainability have shown that an integrated system of decentralized, small-scale control measures that encourages infiltration, filtration, storage, evaporation, and detention of runoff to mimic natural hydrology can be more efficient in reducing the volume and rate of stormwater runoff. Some potential LID methods include grassy swales along U.S. 50 adjacent to the freeway and bioretention cells along the overcrossing structure where trees are located. A portion of the pavement runoff could also be directed to tree boxes to provide irrigation and filtration. Permeable pavers could also be used for

sidewalks and bike paths on embankment fills to allow water infiltration. The design team will continue to look at other LID opportunities during the design process.

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public  
Works Department*

With implementation of MM 3.2.8-5a and MM 3.2.8-5c to remove pollutants from runoff water, impacts to receiving waters would be considered **less than significant after mitigation**.

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

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.2.3, “Geology/Soils/Seismic/Topography.”

Under CEQA Guidelines Appendix G, the proposed project may result in substantial geology and soil impacts if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - 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
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Result in substantial soil erosion or the loss of topsoil.
- 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.

- Be located on expansive soil, as defined in Table 18-1-B of the 1994 Uniform Building Code creating substantial risks to life or property.
- 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 wastewater.

In the Initial Study prepared for the project in September 2005, the following impacts were identified as having either a less than significant impact or no impact and will not be further discussed in this EIR/EA.

- Seismic impacts
- Landslides and mudflows
- Septic systems

**Impact 3.2.9-1:** The project site is not located in a seismically active region, is not located in an area with high risk for liquefaction, and is not located in an area that is geologically unstable. Alternative 3 would be designed in conformance with applicable standards and codes. Therefore, seismically related impacts are considered **less than significant**.

Because Alternative 3 would have less than significant impacts to geologic stability, no mitigation is required.

**Impact 3.2.9-2:** Construction of Alternative 3 would result in disturbance of soils, which could lead to the erosion or loss of topsoil. The project, however, would be required to implement BMPs designed to protect ensure that soil erosion is minimized and impacts would be **less than significant**.

Because Alternative 3 would have less than significant impacts to soil erosion, no mitigation is required.

**Impact 3.2.9-3:** According to the USDA Soil Conservation Service, Soil Survey of Sacramento County, California, 1993, the project site is located in an area with a moderate shrink-swell potential (expansive soils) and could result in structure settlement and potential damage from differential settlement. This would be considered a **potentially significant impact**.

### **Mitigation Measures**

**MM 3.2.9-3** Prior to approval of grading or improvement plans, whichever occurs first, the City of Rancho Cordova shall conduct a soil sample and laboratory test to determine the expansion potential and stability of the soil for development of the project site. If it is determined that the area contains expansive soils, one or more of the following mitigation measures shall be employed to stabilize the area affected by expansive soils:

- Expansive soils shall be excavated and replaced with nonexpansive materials. The required depth of excavation shall be specified by a registered civil engineer based on actual soil conditions.
- Expansive soils shall be treated in place by mixing them with lime. Lime treatment alters the chemical composition of the expansive clay minerals such that the soil becomes nonexpansive.
- Other engineering practices for mitigation of expansive soil conditions considered appropriate by Caltrans and the City of Rancho Cordova Public Works Department shall be implemented.

*Timing/Implementation:* Prior to approval of grading plans

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

Implementation of mitigation measure MM 3.2.9-3 would reduce the risks associated with expansive soils to **less than significant after mitigation**.

### **3.2.10. Hazardous Waste/Materials**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.2.4, “Hazardous Waste/Materials.”

Pursuant to CEQA Guidelines Appendix G, the proposed project may result in significant impacts from hazardous waste or materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- 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.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within a quarter-mile of an existing or proposed school.
- 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, create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- 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.

The Initial Study prepared for the project in September 2005 identified that as state law mandates that no schools be constructed within a quarter-mile of a hazardous materials site and there are no existing schools within a quarter-mile of the project, the project would have no impact related to hazardous materials adjacent to schools. In addition, the Initial Study identified that the project is not located within an airport planning area or within 2 miles of a public use or private airport; therefore, the project would have no impact related to airports.

### ***Groundwater Contamination***

**Impact 3.2.10-1:** Alternative 3 could result in accidental contact with contaminated groundwater during dewatering activities, which could pose a risk to construction personnel. In addition, construction activities could temporarily impact Aerojet's existing extraction wells and monitoring wells required for sampling and monitoring of contaminated

groundwater. Impacts associated with contaminated groundwater and monitoring wells ~~and~~ are considered **potentially significant**.

### **Mitigation Measures**

**MM 3.2.10-1** Appropriate BMPs will be incorporated into project plans to protect worker safety, and applicable hazardous materials regulations pertaining to collection, testing, and disposal of contaminated groundwater will be followed. Avoidance, minimization, and mitigation measures outlined in Section 2.2.2, “Water Quality and Stormwater Runoff,” will be implemented to further reduce the potential for accidental contact with, or release of, contaminated groundwater or soils.

In addition, as discussed in Section 2.2.2, measures shall be incorporated into the construction plans that comply with applicable regulations that shall ensure worker safety and ensure that groundwater contact with adjacent waterways is avoided.

*Timing/Implementation:* Prior to approval of grading plans

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

After implementation of mitigation measure MM 3.2.10-1, the project’s impacts would be considered **less than significant after mitigation**.

### **Construction Disposal Hazards**

**Impact 3.2.10-2:** During demolition, removal, construction, and grading activities, construction within the project area could result in the disturbance of lead-based materials and expose persons to airborne lead material. In addition, removal of yellow thermoplastic striping during construction could expose workers to lead. This impact would be considered **potentially significant**.

### **Mitigation Measures**

**MM 3.2.10-2a** During ~~project~~ development/final design of the project, Phase II soil sampling shall be conducted within areas of potential aerially deposited lead. If lead is detected in the soil at concentrations that could pose a health hazard and/or violate local, state, or federal health

standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Rancho Cordova, Sacramento County, and Caltrans. Project construction shall not commence until the site has been remediated and is cleared for construction. If signs of potential contamination (e.g., odors, discolored soil) are observed during construction activity in areas where Phase II sampling was not conducted, sampling and analysis and appropriate remediation shall be conducted.

*Timing/Implementation:*                      *During project design and construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

**MM 3.2.10-2b** If yellow thermoplastic striping is to be removed separately from pavement during construction, the City shall require the construction contractor to prepare a project-specific Lead Compliance Plan to prevent or minimize worker exposure to lead while handling removed yellow thermoplastic and yellow paint residue. The plan shall be in accordance with City of Rancho Cordova, Sacramento County, and Caltrans requirements.

Before submission to the City, the plan shall be approved by an industrial hygienist certified in comprehensive practice by the American Board of Industrial Hygiene. The plan shall be submitted to the City for approval at least seven days prior to beginning removal of yellow thermoplastic and yellow paint. The yellow thermoplastic striping shall be removed and disposed of in accordance with the Caltrans Standard Specifications Standard Special Provisions for removal of yellow traffic stripe and pavement markings.

*Timing/Implementation:*                      *During project design and construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

Implementation of mitigation measures MM 3.2.10-2a and MM 3.2.10-2b would reduce impacts to **less than significant after mitigation**. Specifically, these mitigation measures

would ensure that contaminated soil and yellow thermoplastic striping are handled appropriately to avoid any public health hazards.

### **PCB Hazards**

**Impact 3.2.10-3** Removal or relocation of existing transformer poles during construction could result in exposure and disposal of polychlorinated biphenyls (PCBs). This impact would be considered **potentially significant**.

### **Mitigation Measures**

**MM 3.2.10-3** If existing transformers are removed as part of the proposed project, the City shall coordinate with the utility companies during final design and ensure that transformers are tested in accordance with applicable regulations. If PCBs are detected in materials to be removed, these materials shall be disposed of in accordance with applicable regulations.

*Timing/Implementation:*                      *During project design*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

Implementation of mitigation measure MM 3.2.10-3 would reduce impacts to **less than significant after mitigation**. Specifically, this mitigation measure would ensure that removed transformers are disposed of properly to avoid public health impacts.

### **Construction Activity Hazards**

**Impact 3.2.10-4:** Construction activities associated with Alternative 3 would include refueling and minor maintenance of construction equipment on location, which could lead to minor fuel and oil spills. While the use of handling of hazardous materials during construction would be in accordance with applicable federal, state, and local laws, this impact would be considered **potentially significant**.

### **Mitigation Measures**

**MM 3.2.10-4** The use of and handling of hazardous materials during construction would be in accordance with applicable federal, state, and local laws

including California Occupational Safety and Health Administration requirements.

Prior to start of construction, the construction contractor shall designate staging areas where fueling and oil-changing activities will take place. The staging areas shall be reviewed and approved by the City's Environmental Mitigation Monitor and the Storm Water Pollution and Prevention Manager prior to the start of construction. No fueling or oil-changing activities shall be permitted outside the designated staging areas. The staging areas, as much as practicable, shall be located on level terrain and away from sensitive land uses such as residences, day care facilities, and schools. Staging areas shall not be located near any stream, channel, wetlands, or other sensitive biological or water resources. The proposed staging areas shall be identified in the SWPPP.

*Timing/Implementation:*                      *Prior to start of construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public  
Works Department*

Implementation of mitigation measure MM 3.2.10-4 would reduce impacts to **less than significant after mitigation**. This mitigation measure would ensure that the handling of fuel and oils as well as the construction staging area is handled in a manner that addresses potential construction contamination.

### ***Soil Contamination***

**Impact 3.2.10-5:** While contaminated soil is not identified within the project area, the potential remains for the project to disturb previously unidentified contaminated soils during project construction. This impact would be considered **potentially significant**.

### ***Mitigation Measures***

**MM 3.2.10-5**      If contaminated soil is encountered during excavation or grading, the construction contractor shall stop work and contact an environmental hazardous materials professional to conduct an on-site assessment. If the materials are determined to pose a risk to the public or construction workers, the construction contractor shall prepare and submit a

remediation plan to the appropriate agency and comply with all federal, state, and local laws. Soil remediation methods could include excavation and on-site treatment, excavation and off-site treatment or disposal, and/or treatment without excavation. Construction plans shall be modified or postponed to ensure that construction will not inhibit remediation activities and will not expose the public or construction workers to hazardous conditions.

*Timing/Implementation:*                      *During project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public  
Works Department*

Implementation of mitigation measure MM 3.2.10-5 would reduce impacts to **less than significant after mitigation**. Specifically this mitigation measure would require that any discovered soil contamination be evaluated and remediated to protect construction worker and public health.

### ***Emergency Response and Wildfire***

**Impact 3.2.10-6:** Alternative 3 would not impede or conflict with the objectives or policies of the identified emergency response plans and evacuation plans. However, traffic within the project vicinity area, including Folsom Boulevard and U.S. 50, may be affected for periods of time during construction. Plans for alternative emergency access would be provided to the City by the construction contractor for approval prior to the start of construction through the creation of a Traffic Management Plan (see mitigation measure **MM 3.2.3-3b**). The contractor would be required to submit an emergency access plan to accommodate emergency traffic during the construction period, and this plan would be provided to emergency agencies (i.e., fire and police departments) prior to the start of construction. Therefore, project impacts are considered **less than significant after mitigation**.

Because Alternative 3 would have less than significant impacts to emergency access and response, no additional mitigation (after **MM 3.2.3-3b**) is required.

**Impact 3.2.10-7:** Alternative 3 would include a new concrete interchange structure and roadway, the operation of which would not result in additional fire risk. However, temporary construction activities involving the use of

combustion engines could result in increased risk of fire in the area. This impact would be **potentially significant**.

**Mitigation Measures**

**MM 3.2.10-7a** Plans for alternative emergency access would be provided to the City for approval prior to the start of construction through the creation of a Traffic Management Plan. The contractor would be required to submit an emergency access plan to accommodate emergency traffic during the construction period, and this plan would be provided to emergency agencies (i.e., fire and police departments) prior to the start of construction.

*Timing/Implementation:* Prior to the start of construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.10-7b** The City will require the construction contractor to clear the staging and development areas of the project site of all dried vegetation or other materials that could serve as fire fuel and require that construction equipment be equipped with spark arresters.

*Timing/Implementation:* During project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

Implementation of the above mitigation measures would ensure that potential accident fires from construction are reduced to **less than significant after mitigation**.

**3.2.11. Air Quality**

**Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.2.5, “Air Quality.”

The Sacramento Metropolitan Air Quality Management District (SMAQMD) has published a guidance document for the preparation of the air quality portions of CEQA documents that includes thresholds of significance to be used in evaluating land use proposals. Several types of thresholds are recommended:

- **Ozone Precursors Significance Thresholds** – SMAQMD considers increases in emissions of nitrogen oxides (NO<sub>x</sub>) greater than 85 pounds per day as significant during construction. For operation of a project, SMAQMD’s threshold of significance is 65 pounds per day of either NO<sub>x</sub> or reactive organic gases (ROG).
- **Other Criteria Pollutant Significance Thresholds** – A project that may cause an exceedance of a state air quality standard or may make a substantial contribution to an existing exceedance of an air quality standard will have a significant adverse air quality impact. “Substantial” is defined as making measurably worse, which is 5 percent or more of an existing exceedance of a state ambient air quality standard.
- **Offensive Odors Significance Threshold** – A qualitative assessment indicating that a project may reasonably be expected to generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property will have a significant adverse air quality impact.
- **Toxic Air Contaminants Significance Thresholds<sup>1</sup>** – The recommended significance thresholds for toxic air contaminants (TACs) are a lifetime probability of contracting cancer greater than 10 in 1 million and a ground-level concentration of noncarcinogenic toxic air pollutants that would result in a Hazard Index of greater than 1.

### ***Construction Air Quality Impacts for Particulate Matter***

The SMAQMD’s Road Construction Emissions Model (Version 6.3-2) was used to estimate emissions from construction. The model is a spreadsheet that estimates emissions based on numerous parameters regarding the type of construction, area to be disturbed, the period of construction, and year of construction. Inputs were the length of the improvement, the type of improvement (new roadway or road widening), the year of construction, and area of construction. Separate model runs were made for the

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<sup>1</sup>Note that this toxic air contaminants significance threshold is a threshold developed by SMAQMD under the purview of CEQA, and differs substantially from the guidance for examining health effects from TACs and mobile source air toxics (MSATs) set forth by FHWA under NEPA. While FHWA has identified that shortcomings in current techniques for exposure assessment and risk analysis preclude meaningful conclusions about project-specific health impacts, and therefore, this type of analysis is not offered above in the TAC and MSAT effects analysis conducted to meet NEPA requirements, SMAQMD maintains a project-specific health impacts significance threshold under the authority of CEQA.

construction of the interchange, the Rancho Cordova Parkway, and the U.S. 50 auxiliary lanes.

The roadway construction emissions model estimates emissions from vehicle and equipment exhausts, fugitive dust, and construction worker trips for all phases of construction. **Table 3.2.11-1** shows model results for ROG, NO<sub>x</sub>, particulate matter 10 micrometers in diameter or smaller (PM<sub>10</sub>), particulate matter 2.5 micrometers in diameter or smaller (PM<sub>2.5</sub>), and carbon dioxide (CO<sub>2</sub>). The fugitive PM<sub>10</sub> emissions shown in **Table 3.2.11-1** reflect PM<sub>10</sub> reductions resulting from twice-daily watering for dust control. The emissions in **Table 3.2.11-1** reflect the maximum emissions that would occur at any time during construction.

**Table 3.2.11-1  
Maximum Construction Emissions, in Pounds per Day**

Project Component	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Rancho Cordova Interchange	32.4	284.3	333.8	79.1	30,325
Rancho Cordova Parkway	17.2	146.6	126.3	30.7	14,314
U.S. 50 Auxiliary Lanes	6.5	39.4	32.3	6.2	4,950
SMAQMD Threshold of Significance	--	85	--	--	--

Source: Ballanti, *Air Quality Evaluation for the Rancho Cordova Parkway Interchange Project*, August 2010

As recommended in SMAQMD’s *Guide to Air Quality Assessment in Sacramento County*, the ISCST-3 dispersion model was used to quantify PM<sub>10</sub> impacts during project construction. Because the bulk of emissions shown in **Table 3.2.11-1** are associated with interchange construction and because the interchange would be constructed adjacent to existing residences, the analysis focused on impacts on residences north of U.S. 50 during interchange construction. The PM<sub>10</sub> emissions shown in **Table 3.2.11-1** were modeled as being released by 106 equally spaced point sources covering the roughly 48-acre interchange construction site.

The ISCST-3 program calculated concentrations for 720 receptors located on a polar grid at 10-meter intervals out to a distance of 200 meters (556 feet) into the residential neighborhood north of the interchange site. The ISCST-3 program generated an estimate of 24-hour average concentrations using a 1-year data file of hourly weather observations provided by the SMAQMD. The model sequentially predicts concentrations for 8,760 hours of the year using the hourly observations of wind speed, wind direction, temperature, and stability.

The model results were compared to the SMAQMD significance threshold for PM<sub>10</sub> construction dust. Concentrations within the adjacent neighborhood exceeded the threshold of 50 micrograms per cubic meter  $\mu\text{g}/\text{m}^3$  over a 24-hour period (state and SMAQMD threshold). Because PM<sub>2.5</sub> is a subset of PM<sub>10</sub>, SMAQMD assumes that construction projects that generate concentrations of PM<sub>10</sub> that exceed SMAQMD's concentration-based threshold of significance would also be considered significant for PM<sub>2.5</sub> impacts.

**Impact 3.2.11-1** During construction, Alternative 3 would result in an exceedance of the state and SMAQMD threshold of 50  $\mu\text{g}/\text{m}^3$  over a 24-hour period of PM<sub>10</sub>. Because PM<sub>2.5</sub> is a subset of PM<sub>10</sub>, SMAQMD methodology indicates that the project would also result in concentrations of PM<sub>2.5</sub> that exceed acceptable levels. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.11-1a** The following measures shall be incorporated into all construction contract documents with respect to control of fugitive dust:

- Strict compliance with SMAQMD's Rule 403 shall be written into construction contracts.
- Water all exposed surfaces two times daily, or as necessary to maintain continued moist soil. Exposed surfaces include but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.

*Timing/Implementation:*                      *During completion of project specification and during project construction*

*Enforcement/Monitoring:*                *City of Rancho Cordova Public Works Department*

**MM 3.2.11-1b**    The following measures shall be incorporated into all construction contract documents with respect to control of equipment/vehicle particulate emissions:

- Contractors shall minimize idling time either by shuttling equipment off when not in use or reducing the time of idling to five minutes (as required by the state airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Contractors shall maintain all construction equipment in proper working condition according to the manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
- Contractors shall ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and SMAQMD shall be notified within 48 hours of identification of noncompliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted to City Planning and SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure shall supersede other SMAQMD or state rules or regulations.

- Contractors shall provide a plan for approval by SMAQMD demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet average 20 percent NO<sub>x</sub> reduction and 45 percent particulate reduction<sup>2</sup> compared to the most recent California Air Resources Board (CARB) fleet average at time of construction. The contractor shall submit to the SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. On or after January 1, 2015, require all off-road diesel-powered construction equipment greater than 50 hp to meet the Tier 3 emission standards, where available. In addition, require all construction equipment to be outfitted with control technologies certified by California-ARB. Require any emissions control device used by the contractor to achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by California ARB regulations. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the SMAQMD with the anticipated construction timeline including start date and name and phone number of the project manager and on-site foreman.

If at the time of construction, the SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with

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<sup>2</sup> Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. However, this requirement is neither supported by Caltrans nor FHWA due to the state's obligations under the California Public Contract Code regarding restraint of competitive bidding process resulting from the requirement that newer equipment be used, thereby creating a potential disadvantage in bidding opportunities for smaller businesses that do not have inventories of such equipment.

SMAQMD prior to construction will be necessary to make this determination.

*Timing/Implementation:*                      *During completion of project specifications and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

Implementation of these measures would reduce fugitive dust emissions by more than 80 percent and exhaust particulate emissions by 45 percent. Based on the ISCST-3 modeling, this would be sufficient to reduce project impacts to less than the SMAQMD significance threshold. The impact would be considered **less than significant after mitigation**.

### **Construction Toxic Air Contaminants**

**Impact 3.2.11-2:** During construction, the proposed project would result in temporarily increased TAC levels in the immediate vicinity during construction. This would be considered a **potentially significant impact**.

### **Mitigation Measures**

Implementation of mitigation measure **MM 3.2.11-1b** would serve to reduce the project's emission of TACs during project construction. Additionally, the following measure shall be implemented.

**MM 3.2.11-2**      Implementation of measures outlined above to reduce the project's exhaust particulate matter emissions would also serve to reduce the project's emission of TACs during project construction. Additionally, the following measure shall be implemented:

The following measures shall be incorporated into all construction contract documents with respect to control of equipment/vehicle particulate emissions:

- ~~Any pre-1996 off-road vehicles or equipment shall be fueled with emulsified fuel designed to reduce emissions.~~

- Where feasible, electrical or non-diesel-powered equipment will be used.

The above measures would reduce exhaust particulate emissions by a minimum of 45 percent.

*Timing/Implementation:*                      *During completion of project specifications and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

The above mitigation measures would reduce exhaust particulate emissions by at least 45 percent. However, because the sensitive receptors located adjacent to the project [sitearea](#) already experience high levels of existing ambient TACs due to their proximity to the freeway mainline, the temporary addition of TACs resulting from project construction would remain a **significant and unavoidable impact**.

### ***Naturally Occurring Asbestos Exposure***

**Impact 3.2.11-3:** Areas of serpentine and ultramafic rock in Sacramento County are located outside the project [sitearea](#) in the Sierra Foothills east of the project [sitearea](#). The impact from naturally occurring asbestos (NOA) during project construction would be considered **less than significant**.

Because Alternative 3 would have less than significant impacts associated with exposure to serpentine and ultramafic rock, no mitigation is required.

### ***Construction Air Quality Impact for Nitrogen Oxide (NOx) Emissions***

**Impact 3.2.11-4:** Implementation of Alternative 3 could result in temporary construction emissions of nitrogen oxide (NOx) that would exceed the SMAQMD threshold of 85 pounds per day. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.11-4**      Implementation of the measures above identified to reduce the project's fugitive dust particular matter and exhaust particulate matter would also serve to reduce impacts resulting from NOx emissions by

approximately 20 percent. After mitigation, emissions would still exceed the SMAQMD threshold of 85 pounds per day.

SMAQMD has instituted a voluntary program for off-site mitigation for construction NOx impacts. The project's construction emissions could be reduced to less than 85 pounds per day through the purchase of an offset created by the SMAQMD. Fees collected in the program are used to reduce emissions within the region through engine repowers, retrofits of existing equipment with new emission control technology, and development of cleaner fuel alternatives for construction equipment. As of this writing, the mitigation fee rate was \$16,640 per ton of emissions.

SMAQMD has developed a mitigation fee calculator to estimate the necessary mitigation fee necessary for a construction project. The mitigation fee calculator has been applied to Alternative 3 under the worst-case assumption that interchange construction and construction of the Rancho Cordova Parkway would occur simultaneously. Based on an estimated 15-month construction period and emissions estimates generated by SMAQMD's Road Construction Emissions Model, the estimated fee to reduce this impact to a less than significant level is roughly \$503,000. This estimate is based on current knowledge of project scheduling and current mitigation fee. The Lead Agency will consult with the SMAQMD prior to the start of construction activities to recalculate the mitigation fee. The Lead Agency shall pay the recalculated fee amount.

*Timing/Implementation:*                      *During completion of project specifications and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

After implementation of this mitigation measure, the project's impacts from construction-related air quality emissions would remain **significant and unavoidable**. While the application of this mitigation measure would serve to substantially reduce construction-related emissions, emissions would still remain above established thresholds after mitigation. ~~The payment of offset fees, as outlined in this mitigation measure, is not~~

~~currently considered reasonable or feasible mitigation due to the extraordinarily high cost associated with the fees.~~ As such, no feasible mitigation can be identified that would reduce this impact to below thresholds.

**Construction Odor Emissions**

**Impact 3.2.11-5:** During construction, Alternative 3 may result in increases in odorous emissions, including exhaust from construction equipment. However, odors from construction equipment exhaust dissipate rapidly, and are not anticipated to affect receptors located adjacent to the project site area. Therefore, impacts to sensitive receptors are considered **less than significant**.

Because Alternative 3 would have less than significant impacts associated with odor emissions, no mitigation is required.

**Operational Emissions**

*Baseline Year (2005) Conditions*

A comparative analysis was conducted to examine the project’s existing or “baseline” year (2005) air quality emissions against predicted 2005 air quality emissions if the project were in place under 2005 conditions.

**Table 3.2.11-2** shows the results of the regional emissions analysis completed for the project under existing year (2005) conditions.

**Table 3.2.11-2  
2005 Regional Emission Changes, in Pounds per Day**

Alternative	ROG	NO <sub>x</sub>	PM <sub>10</sub>
Existing (2005)	90.3	640.3	18.2
Existing + Alternative 3 (Proposed Project)	99.5	680.0	19.3
Net Change	+9.2	+39.7	+1.1

Operation of the project would result in small increases in emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>, as compared to the existing condition; however, none of the emission increases would approach the SMAQMD regional thresholds of significance.

The maximum concentration for carbon monoxide predicted would be 5.5 parts per million (ppm) for the 1-hour averaging time and 3.9 ppm for the 8-hour averaging time. In the Existing Plus Project scenario the maximum concentration predicted would be 7.1

ppm for the 1-hour averaging time and 5.0 for the 8-hour averaging time. While the project would increase concentrations of carbon monoxide at homes adjacent to the project, concentrations would remain well below the applicable state/national standards.

**Impact 3.2.11-6** Alternative 3 operations would result in small increases in emissions of ROG, NO<sub>x</sub>, and PM, as compared to the baseline condition (2005); however, none of the emission increases would approach the SMAQMD regional thresholds of significance. Therefore, this would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to air quality compared to baseline conditions, no mitigation is required.

**Impact 3.2.11-7** The maximum concentration of carbon monoxide predicted would be 5.5 ppm for the 1-hour averaging time and 3.9 ppm for the 8-hour averaging time. Under baseline conditions with Alternative 3, the maximum concentration predicted would be 7.1 ppm for the 1-hour averaging time and 5.0 ppm for the 8-hour averaging time. Alternative 3 would increase concentrations of carbon monoxide at homes adjacent to the project; however, concentrations would remain well below the applicable state/national standards. Therefore, this would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to carbon monoxide emissions under baseline conditions, no mitigation is required.

#### *Design Year (2037) Conditions*

**Impact 3.2.11-8** Under 2037 conditions, the maximum carbon monoxide concentration predicted for the project area would be 3.9 ppm for the 1-hour averaging time and 2.7 ppm for the 8-hour averaging time without the proposed project. With Alternative 3, the maximum concentration predicted would be 4.8 ppm for the 1-hour averaging time and 3.4 ppm for the 8-hour averaging time. While Alternative 3 would increase concentrations of carbon monoxide at homes adjacent to the project, concentrations would remain well below the applicable state and federal standards. Therefore, this would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to carbon monoxide under 2037 conditions, no mitigation is required.

**Impact 3.2.11-9** For the No Build and Alternative 3 alternatives, the amount of mobile source air toxics (MSAT) emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same. Because no change in vehicle mix is anticipated and the VMT estimated for the project are similar to that of the No Build alternative, substantially higher levels of regional MSATs are not expected from the project. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to air pollutant emissions under 2037 conditions, no mitigation is required.

The project would change traffic volumes and average vehicle speed within the study area, resulting in changes in air pollutant emissions within the region. The project would not generate any new vehicle trips within the region but the project would increase vehicle miles traveled within the study area. At the same time, the project would change average vehicle speeds.

The impact of the project on regional air quality was evaluated based upon AM and PM peak hour VMT and average speed estimates based on transportation modeling performed for the project. Emissions were calculated by multiplying peak hour VMT (multiplied by three to account for a three-hour peak traffic period) by speed-adjusted emission factors generated by the EMFAC2007 emission program.

The results of the regional emission analysis are shown in **Table 3.2.11-3** for 2037. Construction of the project would result in small increases in regional emissions under 2037 conditions. None of the emission increases would approach the SMAQMD regional thresholds of significance.

**Table 3.2.11-3  
2037 Regional Emission Changes, in Pounds per Day**

Alternative	ROG	NO <sub>x</sub>	PM <sub>10</sub>
AM Peak			
No Build	7.9	32.7	9.0
Project	10.1 (+2.9)	41.1 (+8.4)	11.1 (+2.1)
PM Peak			
No Build	7.8	32.4	8.9
Project	9.3	37.6	10.2

	(+1.5)	(+5.2)	(+1.3)
SMAQMD Threshold of Significance	65.0	65.0	--

Source: Ballanti, Air Quality Evaluation for the Rancho Cordova Parkway Interchange Project, August 2010

**Impact 3.2.11-10** Alternative 3 would result in small increases in regional emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub>; however, none of the emission increases would approach the SMAQMD regional thresholds of significance, and all emissions would remain well below the SMAQMD emissions threshold. Therefore, this would be considered a **less than significant impact**.

### 3.2.12. Noise

In addition to the federal and state regulations discussed in Section 2.2.6, “Noise,” the following regulatory framework applies to the proposed project.

#### **Sacramento County General Plan**

The Sacramento County General Plan Noise Element includes the following policy that relates to noise, as it relates to the proposed project. The updated General Plan can be found at: <http://www.msa2.saccounty.net/planning/Pages/GeneralPlanUpdate.aspx>.

**Policy NO-9:** For capacity enhancing roadway or rail projects, or the construction of new roadways or railways, a noise analysis shall be prepared in accordance with the Table 3 requirements. If projected post-project traffic noise levels at existing uses exceed the noise standards of Table 1, then feasible methods of reducing noise to levels consistent with the Table 1 standards shall be analyzed as part of the noise analysis. In the case of existing residential uses, sensitive outdoor areas shall be mitigated to 60 dB [decibels], when possible, through the application of feasible methods to reduce noise. If 60 dB cannot be achieved after the application of all feasible methods of reducing noise, then noise levels up to 65 dB are allowed.

If pre-project traffic noise levels for existing uses already exceed the noise standards of Table 1 and the increase is significant as defined below, feasible methods of reducing noise to levels consistent with the Table 1 standards should be applied. In no case shall the long-term noise exposure for nonindustrial uses be greater than 75 dB; long-term noise exposure above this level has the potential to result in hearing loss.

A significant increase is defined as follows:

<u>Pre-Project Noise Environment (<math>L_{dn}</math>)</u>	<u>Significant Increase</u>
Less than 60 dB	5+ dB
60 - 65 dB	3+ dB
Greater than 65 dB	1.5+ dB

Table 1 from the General Plan Noise Element referenced in the policy above identifies that noise levels for new uses affected by traffic noise shall not exceed 65 dB day-night average noise level ( $L_{dn}$ ) at sensitive outdoor areas and 45 dB ( $L_{dn}$ ) at sensitive indoor areas for all residential uses.

**City of Rancho Cordova General Plan**

While no existing sensitive noise receptors were identified within the City of Rancho Cordova limits, discussion of the City’s noise policies is included in this section to provide information on the regulatory environment that applies to the larger project.

**Table 3.2.12-1** shows the maximum transportation-source noise exposure that is allowable for various land use types under the City of Rancho Cordova’s General Plan Noise Element.

**Table 3.2.12-1  
City of Rancho Cordova Noise Element  
Transportation-Source Noise Standards**

Land Use Category	Outdoor Activity Areas <sup>1</sup> $L_{dn}/CNEL$ , dB	Interior Spaces	
		$L_{dn}/CNEL$ , db	$L_{eq}$ , dB <sup>2</sup>
Residential	60 <sup>3</sup>	45	--
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources that produce clearly identifiable, discrete noise events (e.g., the passing of a single train).	60 <sup>3</sup>	40 <sup>5</sup>	--
Transient lodging	60 <sup>4</sup>	45	--
Hospitals, nursing homes	60 <sup>3</sup>	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls	60 <sup>3</sup>	--	40
Office buildings	--	--	45
Schools, libraries, museums	--	--	45
Playgrounds, neighborhood parks	70	--	--

Source: City of Rancho Cordova General Plan Noise Element, 2006

Notes:

1 Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

2 As determined for a typical worst-case hour during periods of use.

3 Where it is not possible to reduce noise in outdoor activity areas to 60 dB  $L_{dn}$ /CNEL or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB  $L_{dn}$ /CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

4 In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

5 The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.

The City of Rancho Cordova General Plan also identifies the following action that relates to increases in noise resulting from roadway improvements.

**Action N.2.2.1:** Assess the significance of the noise increase of all roadway improvement projects in existing areas according to the following criteria:

- Where existing traffic noise levels are less than 60 dB  $L_{dn}$  at the outdoor activity areas of noise-sensitive uses, a +5 dB  $L_{dn}$  increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels range between 60 and 65 dB  $L_{dn}$  at the outdoor activity areas of noise-sensitive uses, a +3 dB  $L_{dn}$  increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels are greater than 65 dB  $L_{dn}$  at the outdoor activity areas of noise-sensitive uses, a +1.5 dB  $L_{dn}$  increase in noise levels due to roadway improvement projects will be considered significant.

### Impact Statements and Mitigation Measures

The impact statements included below are based on the information presented in Section 2.2.6, “Noise,” and in the tables below.

Under CEQA Guidelines Appendix G, the proposed project may result in significant noise impacts if it would:

- Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies.
- Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

**Baseline Year (2005) Conditions**

A comparative analysis was conducted to examine the project’s existing or “baseline” year (2005) noise levels at surrounding sensitive receptors against predicted 2005 noise levels if the project were in place under 2005 conditions.

**Table 3.2.12-2** shows predicted baseline year (2005) peak hour noise levels, in  $L_{eq}(h)$  (the noisiest hour expressed as the energy-average of the A-weighted noise level occurring during a 1-hour period), for each receptor in the project vicinityarea without Alternative 3, and the predicted Existing Year (2005) noise levels, in  $L_{eq}(h)$ , for each receptor in the project vicinityarea with Alternative 3. This provides a point of comparison for anticipated noise levels with and without the proposed project during the estimated loudest hour of the day, to determine how much noise could be attributed to the operation of the proposed interchange versus what could be attributed to general noise in the area, generated predominantly from the operation of U.S. 50.

**Table 3.2.12-2  
Predicted Baseline Year (2005) Peak Hour Traffic  
Noise Levels and Impacts [in  $L_{eq}(h)$ ]**

Receiver	Traffic Noise Levels, $L_{eq}(h)$ (dBA)		
	Existing Conditions	Existing Plus Alternative 3 (Proposed Project)	Change in Noise
R1	71	67	-4
R2	66	62	-4
R3	63	60	-3
R4	61	59	-2
R5	62	58	-4
R6	64	61	-3
R7	66	64	-2

Source: ATS 2011  
Notes: Existing Conditions and Existing Plus Project are for 2005.

As can be seen in **Table 3.2.12-2**, peak hour traffic noise levels are predicted to decrease by 2–4 dBA (A-weighted decibel) at all receivers, with the Existing Plus project condition as compared to baseline conditions. The reduction of noise levels that would result from construction of the Alternative 3 as compared to baseline conditions is primarily the result of the acoustical shielding that would be provided by the proposed U.S. 50 westbound on- and off-ramps, which would be elevated and would serve as a barrier between the U.S. 50 mainline and adjacent residences.

**Table 3.2.12-3** shows predicted baseline conditions (2005) and baseline conditions with Alternative 3 noise levels in terms of  $L_{dn}$ , which is representative of a 24-hour energy-equivalent noise level ( $L_{eq}$ ) with adjustments made to reflect the greater sensitivity of most people to noise during the nighttime.  $L_{dn}$  is one of the most common measures of total community noise over a 24-hour period and is the measure used by the City of Rancho Cordova and Sacramento County when establishing their General Plan noise policies.

**Table 3.2.12-3  
Predicted Baseline Year (2005) Peak Hour  
Traffic Noise Levels and Impacts (in  $L_{dn}$ )**

Receiver	Traffic Noise Levels, $L_{dn}$ (dBA)		
	Existing Conditions	Existing Plus Alternative 3 (Proposed Project)	Change in Noise
R1	70	66	-4
R2	65	62	-3
R3	62	59	-3
R4	61	58	-3
R5	61	57	-4
R6	64	61	-3
R7	65	63	-2

Source: ATS 2011

Notes: Existing Conditions and Existing Plus Project are for 2005.

As can be seen in **Table 3.2.12-3**, peak hour traffic noise levels are predicted to decrease by 2 to 4 dBA at all receivers, with the Existing Plus project condition as compared to existing conditions. The reduction of noise levels that would result from construction of the proposed project as compared to existing conditions is primarily the result of the acoustical shielding that would be provided by the proposed U.S. 50 westbound on- and

off-ramps, which would be elevated and would serve as a barrier between the U.S. 50 mainline and adjacent residences.

**Impact 3.2.12-1:** Under baseline conditions, Alternative 3 would result in a reduction of noise levels between 2 and 4 dBA  $L_{dn}$  and  $L_{eq}(h)$ , as compared to existing conditions. This reduction is primarily due to the acoustical shielding that would result from construction of the westbound on- and off-ramps associated with the project, which would be elevated and would serve as a barrier between the U.S. 50 mainline and adjacent residences. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to noise levels, no mitigation is required.

***Build Year (2037) Scenario***

Because Sacramento County and the City of Rancho Cordova have attenuation and mitigation criteria that differ from the Caltrans Noise Abatement Protocol applied under the requirements of NEPA as described in Chapter 2, a separate analysis of the noise abatement that was considered for these jurisdictions is offered here.

*County of Sacramento*

Sacramento County’s General Plan Noise Element Policy NO-9 requires that noise created by transportation sources should not exceed 65 dBA  $L_{dn}$  at the outdoor activity area of an existing residence. When noise levels would exceed 65 dBA  $L_{dn}$ , then feasible measures to reduce noise should be applied. For existing residences, noise should be mitigated to less than 60 dBA  $L_{dn}$ , if possible. When application of all feasible methods to reduce noise cannot achieve the 60 dBA  $L_{dn}$ /CNEL standard, then Sacramento County allows an exterior noise level of 65 dBA  $L_{dn}$ /CNEL.

It should be noted that when noise levels at existing receptors already exceed the 65 dBA  $L_{dn}$  limit, then a significant increase is defined as follows:

<u>Pre-Project Noise Environment (<math>L_{dn}</math>)</u>	<u>Significant Increase</u>
Less than 60 dB	5+ dB
60–65 dB	3+ dB
Greater than 65 dB	1.5+ dB

**Table 3.2.12-4** shows the predicted noise levels in terms of  $L_{dn}$ , which is representative of a 24-hour  $L_{eq}$  with adjustments made to reflect the greater sensitivity of most people to noise during the nighttime.  $L_{dn}$  is one of the most common measures of total community noise over a 24-hour period and is the measure used by the City of Rancho Cordova and Sacramento County when establishing their General Plan noise policies.

**Table 3.2.12-4  
Predicted Design Year (2037) Noise Levels and  
Impacts for Alternative 3 (in L<sub>dn</sub>)**

Receiver	Traffic Noise Levels, L <sub>dn</sub> (dBA)					
	No Build	Build	Build Minus No Build	Exceed City Policies <sup>1</sup> ?	Exceed County Policies <sup>2</sup> ?	Exceed City and County Thresholds of Significance <sup>3</sup> ?
R1	69	68	-1	Yes	Yes	No
R2	64	63	-1	Yes	No	No
R3	61	61	0	Yes	No	No
R4	60	60	0	No	No	No
R5	61	60	-1	No	No	No
R6	63	63	0	Yes	No	No
R7	65	65	0	Yes	Yes	No

Source: ATS Consulting 2010

1 The City of Rancho Cordova establishes a noise level of 60 dBA L<sub>dn</sub> as the goal noise levels for exterior areas of residences.

2 The County of Sacramento establishes a noise level of 65 dBA L<sub>dn</sub> as the goal noise level for exterior areas of residences.

3 City of Rancho Cordova General Plan Action N.2.2.1 and County of Sacramento General Plan Policy NO-9 establish that, where existing noise levels are between 60 and 65 dBA L<sub>dn</sub>, an increase of 3 dBA would be considered a significant increase. Where noise levels are greater than 65 dBA L<sub>dn</sub>, an increase of 1.5 dBA would be considered a significant increase.

The Design Year (2037) L<sub>dn</sub> noise levels after Alternative 3 construction are predicted to be equal to the noise levels without project construction (No Build) at Receivers R3, R4, R6, and R7. The predicted L<sub>dn</sub> at Receivers R1, R2, and R5 is up to 1 dBA lower after construction (Build) because of acoustical shielding that would be provided by the proposed U.S. 50 westbound on- and off-ramps.

**Table 3.2.12-4** shows that noise levels with the project would remain below the County’s threshold of 65 dB L<sub>dn</sub> for all receptors except for Receptor 1 and Receptor 7. For Receptor 1 and Receptor 7, because existing noise levels already meet or exceed the 65 dB L<sub>dn</sub> threshold, then an increase of 1.5 dB from the proposed project would be considered a significant increase. As shown in **Table 3.2.12-4**, the proposed project would result in either no change or a slight reduction in noise levels as compared to without the project.

**Operational Noise Impacts**

**Impact 3.2.12-2:** Under Design Year (2037) conditions, Alternative 3 would result in no change or a decrease in noise levels at all receptor locations as compared to the No Build condition. This is due primarily to the acoustical shielding that would be provided by the proposed U.S. 50

westbound on- and off-ramps, which would be elevated and include an 8-foot sound wall, and would serve as a barrier between the U.S. 50 mainline and adjacent residences. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to changes in noise levels under 2037 conditions, no mitigation is required.

**Impact 3.2.12-3:** Under Sacramento County noise standards, after Alternative 3 implementation, noise levels at the outdoor activity areas of adjacent sensitive receptors would exceed the normally acceptable noise standards of 65 dBA L<sub>dn</sub>/CNEL at two receptor locations, as shown in **Table 3.2.12-4**. Implementation of the project would result in either no change or a slight decrease in noise at all receptor locations as compared to the No Build scenario. Because the project would result in no change or a slight decrease in noise levels as compared to without the project, the project would not exceed Sacramento County significance criteria. This would be considered a **less than significant impact**.

Because Alternative 3 would have less than significant impacts to changes in noise levels associated with compliance with Sacramento County noise standards under 2037 conditions, no mitigation is required.

### ***Groundborne Vibration and Noise***

**Impact 3.2.12-4:** Alternative 3 design does not include any features that would result in generation of groundborne vibration or groundborne noise levels. Therefore, the project would have **no impact** from groundborne vibration and noise.

Because Alternative 3 would have no impact associated with groundborne vibration, no mitigation is required.

### ***Construction Noise***

**Impact 3.2.12-5:** During construction of the project, noise levels would temporarily be elevated in association with operation of heavy equipment. Based on the types of construction activities and equipment required for the proposed project, noise levels at 50 feet from the center of construction

activities would generally range from 80 to 95 dBA. Generally, for point source noise such as piling driving, there is a 6 dBA decrease in noise level per doubling of distance. For highway traffic noise, because it is a line source, there is a 3 dBA decrease in noise level per doubling of distance. Sensitive noise receptors adjacent to the project [sitearea](#) are located more than 150 feet from the project [sitearea](#), which would result in construction noise levels at sensitive receptor locations that are substantially lower than the 80 to 95 dBA levels at 50 feet from the construction area. Without accounting for background noise levels, the decrease in noise level for point source noise sources could be as much as 18 dBA quieter and for line source noise sources as much as 9 dBA quieter. Regardless, although this impact would occur for a short duration and would not result in a permanent increase in noise levels, the disruption to adjacent sensitive receptors resulting from a long-term construction project (approximately 15 months) would be considered a **potentially significant impact**.

### **Mitigation Measures**

**MM 3.2.12-5** To minimize potential construction noise impacts, the contractor shall:

- Conform to Section 14-8, “Noise and Vibration,” in Caltrans Standard Specifications.
- Adhere to local ordinances and codes relating to construction equipment and sound levels.
- Install and maintain effective mufflers on construction equipment.
- Locate equipment and staging areas as far from residences as possible.
- Limit unnecessary idling of equipment.
- Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted within 100 feet of residences, i.e., the westbound on- and off-ramps (north side of U.S. 50), or during any pile-driving activities.

<i>Timing/Implementation:</i>	<i>During project construction</i>
<i>Enforcement/Monitoring:</i>	<i>City of Rancho Cordova Public Works Department</i>

Implementation of the above mitigation measures would substantially reduce construction noise. However, construction activities would still result in temporary high noise sources and construction along U.S. 50 may require nighttime construction. Given these circumstances, this impact would be considered **significant and unavoidable**.

### ***City of Rancho Cordova***

Because no existing sensitive noise receptors were identified within the City of Rancho Cordova, no analysis of attenuation measures to reduce the project’s impacts to receptors within the city is provided.

### **3.2.13. Natural Communities**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.3.1, “Natural Communities.”

Under CEQA Guidelines Appendix G, impacts to natural communities may be considered significant if the project would:

- Modify a natural community in such a way that it would result in a substantial adverse effect on candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS).
- Result in a substantial adverse effect of any riparian or other sensitive natural community identified in local or regional plans, policies or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on a federally protected wetland community, as defined by Section 404 of the Clean Water Act.
- Impede the use of established native resident or migratory wildlife corridors or native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting trees or other biological resources.

- Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

The Initial Study prepared for the project in September 2005 identified that the project would have less than significant impacts to migratory wildlife corridors and no impacts associated with conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

**Impact 3.2.13-1:** Alternative 3 would result in removal of portions of several natural communities, including nonnative grassland, Fremont cottonwood-oak woodland, Fremont cottonwood woodland, coyote brush scrub, and trees. In addition, the proposed project may have indirect effects to natural communities within the project area. Impacts to these communities would potentially impact sensitive species and would be considered **potentially significant**.

### ***Mitigation Measures***

The quantities of nonnative grassland, Fremont cottonwood-oak woodland, Fremont cottonwood woodland, and coyote brush scrub communities that would be removed for Alternative 3 (proposed project) do not qualify for protection or mitigation under any local, state, or federal protection on their own. However, avoidance, minimization, and mitigation for impacts to some of these communities serving as habitat for special-status species are incorporated into the project and are discussed in Sections 2.3.2 through 2.3.6 and Sections 3.2.15 through 3.2.17 pertaining to biological resources. Application of these avoidance and minimization measures would reduce this impact to **less than significant after mitigation**.

### **3.2.14. Wetlands and Other Waters**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.3.2, “Wetlands and Other Waters.”

Pursuant to CEQA Guidelines Appendix G, the project's impact to waters of the U.S. may be considered significant if it would:

- 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, and coastal) through direct removal, filling, hydrological interruption, or other means.
- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

### ***Vernal Pool***

**Impact 3.2.14-1:** The vernal pool located within the project area is not considered a jurisdictional wetland under the authority of the U.S. Army Corps of Engineers (USACE), according to the wetland verification issued by USACE on January 31, 2008; therefore, there would be no direct impacts to this resource as defined under USACE criteria. Additionally, the vernal pool would not be filled by implementation of the proposed project, and therefore there would be no direct effects to the vernal pool by the proposed project as defined by USACE criteria. Therefore, the project would have **no impact** to this vernal pool resource as defined by USACE criteria.

Because the vernal pool is hydrologically isolated, it is not protected under USACE jurisdiction as defined by Section 404 of the Clean Water Act, and therefore no compensatory mitigation under Section 404 of the Clean Water Act would be required.

**Impact 3.2.14-2:** The vernal pool located within the project area could be disturbed by construction activities, including encroachment by construction equipment or materials. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.14-2** In order to avoid and minimize project effects to the vernal pool, the following measures shall be implemented during construction activities:

- During project development, the size of the work area limits will be minimized within sensitive habitat areas.
- Additional impacts from vernal pool disturbance will be avoided by installing protective Environmentally Sensitive Area fencing and silt fencing between the vernal pool and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the vernal pool during construction.
- Standard BMPs will be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

*Timing/Implementation:*      *Prior to and during project construction*

*Enforcement/Monitoring:*      *City of Rancho Cordova Public Works Department*

Implementation of the above mitigation would ensure that potential impacts vernal pools retained would be reduced to **less than significant after mitigation**.

### ***Isolated Seasonal Wetlands***

**Impact 3.2.14-3:** The proposed project would permanently fill approximately 0.30 acres and temporarily impact approximately 0.10 acres of isolated seasonal wetlands during project construction. Loss of these resources would be a **potentially significant impact**.

### ***Mitigation Measures***

Implementation of the mitigation measures described, identified below under Threatened and Endangered Species, would mitigate this loss consistent with City General Plan Policies NR.2.1 and NR.2.2 protecting all wetlands and would mitigate it to **less than significant after mitigation**.

### ***Intermittent Creek (Buffalo Creek)***

**Impact 3.2.14-4:** Of the aquatic resources present within the project area, only the intermittent creek (Buffalo Creek) is considered a federally jurisdictional wetland. Alternative 3 would directly and temporarily affect up to 0.1 acre of Buffalo Creek during construction of the project. Construction activities would result in localized loss of

vegetation and general disturbance to the soil surrounding the intermittent creek, and could result in the release of high levels of sedimentation and debris into downstream aquatic habitat. Construction activities could also result in minor fuel and oil spills from the maintenance of construction equipment, which could result in adverse effects to the aquatic environment. These impacts would be considered **potentially significant**.

**Mitigation Measures**

**MM 3.2.14-4a** As permanent and temporary direct impacts would occur to Buffalo Creek, which is a USACE jurisdictional feature, compensatory mitigation for direct impacts would be required, as follows.

The City will execute a revegetation plan with three years of monitoring for the temporary degradation of intermittent creek habitat. The specific goals and criteria will aim to fully restore the functions and values to levels that are statistically identical or superior to that of adjacent habitat.

*Timing/Implementation:* *Prior to and during project construction*

*Enforcement/Monitoring:* *City of Rancho Cordova Public Works Department.*

**MM 3.2.14-4b** The City shall obtain all necessary permits required by the CWA and a Streambed Alteration Agreement from CDFW and implement all conditions specified in those permits:

- Section 404 permit from USACE for fill of waters of the United States, including wetlands.
- Section 401 water quality waiver or certification from RWQCB.
- Streambed Alteration Agreement from CDFW.

*Timing/Implementation:* *Prior to project construction*

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department, USACE, CDFW, and RWQCB

**MM 3.2.14-4c** The City shall ensure that the proposed project would result in no net loss of waters of the U.S. Where a Section 404 Permit has been issued by the USACE, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the USACE for granting a permit, may be submitted for purposes of achieving a no net loss of wetlands. Compensatory mitigation may consist of: (1) obtaining credits from a mitigation bank; (2) making a payment to an in-lieu fee program that will conduct wetland, stream or other aquatic resource restoration, creation, enhancement, or preservation activities; these programs are generally administered by government agencies or nonprofit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement and/or preservation activity. This last type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project proponent/permit applicant retains responsibility for the implementation and success of the mitigation project.

*Timing/Implementation:* After completion of project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.14-4d** The following measures will be implemented as part of the proposed project to avoid and minimize project effects to Buffalo Creek:

- During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas. The interchange structure will be elevated, resulting in

avoidance of any fill of intermittent creek habitat where it lies south of U.S. 50.

- Impacts to the water quality of the intermittent creek within the BSA will be minimized by implementing BMPs and an erosion and sediment control plan that minimize impacts to water quality within the creek.
- Measures to avoid temporary and indirect impacts would include fencing off the intermittent creek with orange construction fencing and limiting construction equipment access across the channel within the BSA.
- To reduce potential impacts to vegetation and aquatic habitat associated with accidental spills of pollutants (e.g., fuel, oil, grease), the construction contractor will implement appropriate hazardous materials management practices to reduce the possibility of chemical spills or releases of contaminants, including any non-stormwater discharge.

In addition, standard staging area practices for sediment-tracking reduction will also be implemented where necessary, including vehicle washing and street sweeping.

*Timing/Implementation:*                      *Prior to start of project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department and USACE*

Implementation of mitigation measures MM 3.2.14-4a through MM 3.2.14-4d would ensure that directly and permanently impacted waters of the U.S. within Buffalo Creek would be replaced or rehabilitated in accordance with USACE mitigation guidelines to ensure that “no net loss” of jurisdictional wetlands would occur consistent with City General Plan Policy NR.2.1, and would reduce the project’s temporary construction impacts to the creek. The project’s impacts to jurisdictional wetlands of Buffalo Creek would be considered **less than significant after mitigation**.

**Impact 3.2.14-5:** Portions of intermittent creek habitat would be shaded by the overpass structure and by eastbound off-ramps. This may result in a minor

change in the nature or density of vegetative cover in these areas. This would be considered a **less than significant impact**.

**Impact 3.2.14-6:** Alternative 3 would increase the amount of impervious surfaces in the area, and runoff from increased impervious surfaces may contain pollutants (e.g., heavy metals, oil, or litter) that could be directly discharged into the intermittent creek via sheet flow and storm drains. Discharge of roadway pollutants into the intermittent creek would be considered a **potentially significant impact**.

### ***Mitigation Measures***

Implementation of mitigation measures to protect water quality, including MM 3.2.8-1a, MM 3.2.8-b, MM3.2.8-1c, MM 3.2.8-5a, and MM 3.2.8-5b would serve to reduce these potential impacts from discharge of roadway pollutants into the intermittent creek to **less than significant after mitigation**.

### ***Folsom South Canal***

**Impact 3.2.14-7:** The Folsom South Canal is not considered a jurisdictional wetland under the authority of USACE, according to the wetland verification issued by USACE on January 31, 2008; therefore, there would be no impacts to this resource as defined under USACE criteria. Additionally, Alternative 3 would have no direct effects to the canal because Alternative 3 would construct the interchange bridge to clear-span the canal, and no encroachment into the canal would take place. Therefore, the project would have **no impact** to this resource as defined by USACE criteria.

Because no impacts would occur from the project, no compensatory mitigation would be necessary. The following Best Management Practices will be implemented as part of the proposed project to avoid and minimize project effects to Folsom South Canal:

- The interchange structure would be elevated, resulting in avoidance of any fill or disturbance to the Folsom South Canal.
- To reduce potential impacts to vegetation and aquatic habitats associated with accidental spills of pollutants (e.g., fuel, oil, grease etc.), the construction contractor will implement appropriate hazardous materials management practices to reduce the

possibility of chemical spills or releases of contaminants, including any non-stormwater discharge.

In addition, standard staging area practices for sediment-tracking reduction should also be implemented where necessary, including vehicle washing and street sweeping.

### **3.2.15. Plant Species**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.3.3, “Plant Species.”

Pursuant to CEQA Guidelines Appendix G, impacts to special-status plant species may be considered significant if the project would:

- Directly impact a candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Modify a natural community in such a way that it would result in a substantial adverse effect on candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Conflict with any local policies or ordinances protecting trees or other biological resources.
- Conflict with an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.
- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

#### ***Special-Status Plant Species***

**Impact 3.2.15-1:** Because there are no special-status plant species located within the project area, Alternative 3 would have **no impact** to special-status plant species.

Because Alternative 3 would have no impact to special-status plant species, no mitigation is required.

## **Tree Loss**

**Impact 3.2.15-2:** During construction, Alternative 3 may damage trees identified for preservation through encroachment of construction activities within the tree driplines. This would be considered a **potentially significant impact**.

## **Mitigation Measures**

**MM 3.2.15-2** The following measures from the Sacramento County Tree Preservation Ordinance (County Code Title 19.12), which was adopted by the City of Rancho Cordova, will be implemented as part of the proposed project to avoid and minimize damage to preserved trees during project construction:

- During project development, the size of the work area limits will be reduced and minimized to the smallest amount feasible within sensitive habitat areas.
- A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.
- Protective fencing shall be installed at the driplines of the protected trees prior to the start of any construction work (including grading or placement of vehicles on site), in order to avoid damage to the trees and their root systems. This fencing may be installed around the outermost dripline of clusters of trees proposed for protection, rather than individual trees. Fencing shall be shown on all project plans.
- No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the driplines of protected trees. A laminated sign indicating such shall be attached to fencing surrounding trees on-site.

- No grading (grade cuts or fills) shall be allowed within the driplines of protected trees.
- Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.
- No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.
- The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system shall be installed under the supervision of a certified arborist. Wherever possible, pervious concrete shall be used as an alternative to traditional concrete, when it is required under tree driplines.
- No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines of protected trees. An aboveground drip irrigation system is recommended.
- Landscaping beneath protected trees may include non-plant materials such as bark mulch or wood chips. The only plant species that shall be planted within the driplines of protected trees are those that are tolerant of the natural environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.
- Any protected trees on the site, which require pruning, shall be pruned by an arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute A300 pruning standards and the International Society of Arboriculture's "Tree Pruning Guidelines."

- No signs, ropes, cables (except those which may be installed by an arborist to provide limb support), or any other items shall be attached to the protected trees.

*Timing/Implementation:*                      *Prior to and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works and Planning Departments*

Implementation of the above mitigation measure would protect trees identified for preservation during construction. Implementation of the proposed measure would reduce impacts to protected trees to **less than significant after mitigation**.

**Impact 3.2.15-3:** The implementation of Alternative 3 could result in the direct removal of approximately 130 native trees measuring a total of 2,866 inches diameter at breast height (dbh). Of these, 63 trees are native oaks, measuring a total of 1,230 inches dbh, protected under the Sacramento County Tree Protection Ordinance. Additionally, there are approximately 20 trees that could be indirectly impacted by project construction. Of these, 13 are native oaks that are protected under the Sacramento County Tree Protection Ordinance. The impact of removing or indirectly impacting mature oak and other native tree species is considered **potentially significant**.

### ***Mitigation Measures***

**MM 3.2.15-3a** Any trees protected by the Tree Preservation Ordinance or the Rancho Cordova General Plan requiring removal for project construction will either be compensated for by replacement, purchase of habitat conservation areas to protect existing woodland habitats, through contribution to tree planting programs or in-lieu fee programs in the area, or through some combination of these options to achieve no net loss of trees from the project.

Prior to any groundbreaking activities, the City Planning Department will determine which trees would be suitable candidates for protection and which trees will need to be mitigated if removed. Trees that would be removed or otherwise harmed by the project shall be mitigated for as described below.

*Timing/Implementation:*                      *Prior to and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works and Planning Departments*

**MM 3.2.15-3b** Prior to any groundbreaking activity, a Replacement Tree Planting Plan shall be prepared by an arborist or landscape architect. The Replacement Tree Planting Plan(s) shall follow the standards set forth in the City of Rancho Cordova Municipal Code and shall include the following minimum elements:

- Species, size, and locations of all replacement plantings.
- Method of irrigation.
- A tree planting detail, including a 10-foot depth-boring hole to provide for adequate drainage.
- Planting, irrigation, and maintenance schedules.
- Identification of the maintenance entity and a written agreement with that entity, if other than the City of Rancho Cordova, to provide care and irrigation of the trees for a five-year establishment period and to replace any of the replacement trees which do not survive during that period.

Replacement inches will be calculated based on the following size categories.

- One J-pot = 0.5 inch dbh
- One 15-gallon tree = 1 inch dbh
- One 24-inch box tree = 2 inches dbh
- One 36-inch box tree = 3 inches dbh

In order to meet some of the mitigation requirements, existing native trees on-site proposed for removal that are less than 6 inches dbh and are in fair or better condition may be transplanted to the new planting

area. If existing trees are successfully transplanted, mitigation requirements may be reduced.

No replacement tree shall be planted within 15 feet of a building foundation or other known areas of future ground disturbance. The minimum spacing for replacement trees shall be 15 feet on center. J-pots may be planted closer at the discretion of the City Arborist or the consulting arborist.

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department*

Implementation of the above mitigation measures would mitigate loss of trees during construction through replacement provisions. Implementation of the proposed measures would reduce impacts to protected trees to **less than significant after mitigation**.

### **3.2.16. Animal Species**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.3.4, “Animal Species.”

Pursuant to CEQA Guidelines Appendix G, impacts to special-status wildlife species may be considered significant if the project would:

- Directly impact a candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Modify a natural community in such a way that it would result in a substantial adverse effect on candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

## **Aquatic Invertebrates**

**Impact 3.2.16-1:** Construction of Alternative 3 may result in the degradation of habitat for midvalley fairy shrimp through introduction of sedimentation and debris into isolated seasonal wetland and vernal pool habitat. Construction activities could also result in minor fuel and oil spills from the maintenance of construction equipment, which could result in adverse effects to the aquatic environment. This would be considered a **potentially significant impact**.

## **Mitigation Measures**

**MM 3.2.16-1** The following measures will be implemented as part of the proposed project to avoid and minimize project effects to aquatic habitat (vernal pools and isolated seasonal wetlands) supporting special-status aquatic invertebrate species:

- During project development, the size of the work area limits will be minimized within sensitive habitat areas.
- ~~Temporary impacts from aquatic habitat disturbance will be avoided by installing protective silt fencing between the aquatic habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the aquatic habitats during construction.~~
- Orange Environmentally Sensitive Area (ESA) fencing and silt fencing will be installed between the construction limits and the seasonal wetlands and vernal pool.
- Appropriate hazardous materials management practices will be implemented to reduce the possibility of chemical spills or releases of contaminants.
- Standard BMPs will be implemented during and after construction to protect water quality in sensitive habitat areas during construction, including: appropriate hazardous materials management practices to reduce the possibility of chemical spills or releases of contaminants; and standard staging area practices for

sediment-tracking reduction such as vehicle washing and street-sweeping.-

<i>Timing/Implementation:</i>	<i>Prior to and during project construction</i>
<i>Enforcement/Monitoring:</i>	<i>City of Rancho Cordova Public Works Department and USFWS</i>

After implementation of mitigation measure MM 3.2.16-1, the project’s impacts to aquatic invertebrate habitat would be considered **less than significant after mitigation**. Specifically, this mitigation measure would protect habitat areas from construction activities.

**Impact 3.2.16-2:** Implementation of Alternative 3 would result in the direct removal (fill) of approximately 0.58 acres of isolated seasonal wetlands, which may provide habitat for midvalley fairy shrimp. This would be considered a **potentially significant impact**.

***Mitigation Measures***

Implementation of the mitigation measures described below in Section 3.2.17, “Threatened and Endangered Species,” would ensure that the loss of wetland resources and associated habitat is fully mitigated consistent with City General Plan Policies NR.2.1 and NR.2.2. This would reduce the project’s effects to midvalley fairy shrimp habitat to **less than significant after mitigation**.

**Impact 3.2.16-3:** Alternative 3 may indirectly impact vernal pool and seasonal wetland habitat that supports special-status invertebrate species, through the disturbance of 0.34 acres of vernal pool habitat and 0.23 acres of isolated seasonal wetland habitat located within 250 feet of the project construction area. This would be considered a **potentially significant impact**.

***Mitigation Measures***

Implementation of the mitigation measures described below in Section 3.2.17, “Threatened and Endangered Species,” would ensure that the loss of wetland resources and associated habitat is fully mitigated consistent with City General Plan Policies

NR.2.1 and NR.2.2. This would reduce the project's effects to midvalley fairy shrimp habitat to **less than significant after mitigation**.

### ***Western Spadefoot Toad***

**Impact 3.2.16-4:** Alternative 3 would result in the removal of approximately 0.30 acres of seasonal wetland habitat that could provide habitat for the western spadefoot toad. Additionally, the project may result in indirect impacts to the western spadefoot toad through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and areawide changes in surface water flows due to development of previously undeveloped areas. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

Implementation of the mitigation measures described below in Section 3.2.17, "Threatened and Endangered Species," would ensure that the loss of wetland resources and associated habitat is fully mitigated consistent with City General Plan Policies NR.2.1 and NR.2.2. This would reduce the project's effects to habitat to **less than significant after mitigation**.

**Impact 3.2.16-5:** During project construction, there is potential that impacts to this species could occur, either through injury or death of adults or tadpoles during project construction or through destruction of eggs through destruction of nest sites. Activities that produce low frequency noise and vibration in or near habitat for western spadefoot toads may be detrimental to the species. Spadefoot toads are extremely sensitive to such stimuli, which cause them to break dormancy and emerge from their burrows. This could result in mortality or reduced productivity. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

Avoidance and minimization measures implemented for effects to listed aquatic invertebrate species habitats (i.e., seasonal wetlands and vernal pools) will also be employed as part of the project for the western spadefoot toad, as they share similar habitats.

Mitigation set forth to compensate for adverse effects to listed aquatic invertebrate species habitats (i.e., threatened and endangered aquatic invertebrate habitat) will also compensate for the western spadefoot toad, as they share similar habitats.

**MM 3.2.16-5a** Prior to the start of construction activities that would disturb western spadefoot toad habitat, a biological monitor shall survey for the presence of adult toads. If adult toads are present, then they shall be relocated prior to disturbance of habitat. This relocation shall be done in consultation with CDFW.

*Timing/Implementation:* Prior to project construction in potential toad habitat areas

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department and CDFW

**MM 3.2.16-5b** The City shall provide a Worker Environmental Awareness Program (WEAP) for all employees working within the BSA so that they are aware of resources in the area, required measures and practices for protecting biological resources, and contacts and procedures in case wildlife is injured or encountered during construction.

*Timing/Implementation:* Prior to and during project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

Implementation of the above mitigation measures would provide protection measure successful in protecting western spadefoot toad during construction to **less than significant after mitigation.**

### ***Western Pond Turtle***

**Impact 3.2.16-6:** Alternative 3 would result in direct removal of approximately 0.30 acres of isolated seasonal wetland, which may provide habitat for the western pond turtle. This species may utilize up to 15.87 acres of nonnative grasslands for over-wintering and nesting habitat that would be directly impacted by the proposed project either permanently or temporarily. Additionally, the project may result in indirect impacts to

the western pond turtle through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and areawide changes in surface water flows due to development of previously undeveloped areas. This would be considered a **potentially significant impact**.

**Mitigation Measures**

Implementation of the mitigation measures described below in Section 3.2.17, “Threatened and Endangered Species,” would ensure that the loss of wetland resources and associated habitat is fully mitigated consistent with City General Plan Policies NR.2.1 and NR.2.2. This would reduce the project’s effects to habitat to **less than significant after mitigation**.

**Impact 3.2.16-7:** If this species is nesting or over-wintering in the ground during construction activities, loss of individuals may occur. This would be considered a **potentially significant impact**.

**Mitigation Measures**

Mitigation set forth to minimize construction effects to listed aquatic invertebrate species habitats in mitigation measure MM 3.2.16-1 above will also incidentally minimize construction impacts to the western pond turtle, as they share similar habitats.

**MM 3.2.16-7** The City shall include information on the western pond turtle in its WEAP for all employees working within the BSA as described in the mitigation measure above.

Prior to the start of construction activities that would disturb western pond turtle habitat, a biological monitor shall survey for the presence of turtles. If turtles are present, they shall be relocated prior to disturbance of habitat. This relocation shall be done in consultation with CDFW.

*Timing/Implementation:* Prior to project construction in potential turtle habitat areas

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department and CDFW

Implementation of the above mitigation measures would reduce the project's construction effects to the western pond turtle to **less than significant after mitigation**.

### ***Western Burrowing Owl***

**Impact 3.2.16-8:** Alternative 3 would permanently and directly remove up to 11.82 acres of nonnative grassland and temporarily disturb approximately 5.56 acres<sup>3</sup> of nonnative grassland, which this species may inhabit. Additionally, the project may result in indirect impacts to the western burrowing owl through increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and areawide changes in habitat due to development of previously undeveloped areas. This would be considered a **less than significant impact**, since ample nonnative grassland is available surrounding the project area that could provide habitat for the western burrowing owl.

Because Alternative 3 would have less than significant impacts to western burrowing owl habitat, no mitigation is required.

**Impact 3.2.16-9:** Alternative 3 may result in impacts to western burrowing owls during project construction through injury or death of individuals from construction activities, destruction of nest sites, and/or through disturbance of nesting activities. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.16-9a** A qualified biologist shall perform burrowing owl surveys in order to determine burrow locations within 30 days prior to construction using CDFW and California Burrowing Owl Consortium guidelines. The breeding period for burrowing owls is between February 1 and August 31 with the peak being between April 15 and July 15 (the recommended survey window). If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed.

- Surveys for occupied burrows shall be completed within all construction areas and within 250 feet out from the proposed

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<sup>3</sup> The temporarily disturbed area comprises approximately 4.05 acres adjacent to the roadway corridor, plus 1.51 acres under the future overpass area.

project work areas (where possible and appropriate based on habitat). All occupied burrows will be mapped on an aerial photo.

- At least 15 days prior to the expected start of any project-related ground disturbance activities or the restart of activities, the City shall provide the burrowing owl survey report and mapping to the CDFW.

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department and CDFW*

**MM 3.2.16-9b** If burrowing owls are identified during preconstruction surveys, the following actions shall be taken by the City to offset impacts during construction:

1. All occupied burrows within 160 feet of all project construction during the non-breeding season of September 1 through January 31, or all occupied burrows within 250 feet of all project construction during the breeding season of February 1 through August 31, shall be clearly marked with flags to identify burrow locations.
2. If unpaired owls or paired owls are present in or within 160 feet of areas scheduled for disturbance or degradation (e.g., grading) and nesting is not occurring, owls are to be removed by a qualified biologist per CDFW-approved passive relocation protocols. Passive relocation requires the use of one-way exclusion doors, which must remain in place at least 48 hours prior to site disturbance to ensure owls have left the burrow prior to construction.
3. If paired owls are nesting in areas scheduled for disturbance or degradation, nest(s) shall be avoided from February 1 through August 31 by a minimum of a 250-foot buffer or until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist.
4. When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on a protected lands site.

*Timing/Implementation:*                      *Prior to and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public  
Works Department and CDFW*

Implementation of the above mitigation measure would reduce the project's construction impacts to western burrowing owls to **less than significant after mitigation**. These mitigation measures provide for protective measures to avoid taking of owls.

### ***Other Raptor Species***

**Impact 3.2.16-10:** Alternative 3 would result in the permanent loss of approximately 13.13 acres of suitable raptor foraging habitat. Within this area, the project would permanently impact approximately 11.82 acres of nonnative grassland from the construction of the interchange ramps and roadway extension, and would also impact 1.51 acres of nonnative grassland that would be shaded by the overpass and would therefore no longer be suitable raptor-foraging habitat. Additionally, the project would result in the loss of native vegetation associated with the Fremont cottonwood-oak woodland, Fremont cottonwood woodland, and coyote brush scrub habitat. This native vegetation supports wildlife that is an important food source for birds of prey. Finally, the proposed project could result in indirect impacts to special-status raptors through habitat degradation and removal of trees suitable for nesting, as well as diminished habitat value from additional traffic and increased human presence. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

Mitigation measures identified below, requiring preservation of habitat for the federally protected Swainson's hawk, would also serve to incidentally compensate for the loss of foraging for other raptor species that utilize the project area, as they share similar habitat. Implementation of this mitigation would reduce the project's impacts to other raptor species to **less than significant after mitigation**.

**Impact 3.2.16-11:** The project area contains several large trees or snags suitable for bird and raptor nesting. Construction of the project would result in the removal of several large trees or snags. Removal of trees or snags could result in direct mortality or nest abandonment if raptors are nesting within 100 feet of construction activities. If nesting raptors are present during project construction, the proposed project may cause direct mortality of raptor species or nest destruction due to the removal

of trees that contain active nests. Excessive noise, disturbance, and vibrations can cause nesting raptors to abandon their nests. The loss of active nests or direct mortality is prohibited by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503.5. Additionally, the project would result in temporary disturbance of approximately 4.05 acres of suitable foraging habitat during project construction. This impact would be **potentially significant**.

### **Mitigation Measures**

**MM 3.2.16-11** For trees/brush that must be removed to construct the proposed project, the City will target the removal of vegetation to occur outside the nesting season between September 1 and March 1. If trees/brush cannot be removed outside the nesting season, preconstruction surveys will be conducted prior to vegetation removal to verify the absence of active bird nests within 50 feet of construction activities. Two surveys will be conducted, at least one week apart, with the second survey occurring no more than two days prior to tree removal.

If no active nests are found, vegetation removal may proceed. If active nests are found, CDFW shall be notified, and the vegetation shall not be removed until the nest is no longer active, as determined by a CDFW-approved biologist. No construction activities shall take place within a 100-foot radius of the active nest (or another distance determined appropriate during consultation with CDFW).

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public  
Works Department and CDFW*

With implementation of the above mitigation measure, the proposed project would result in **less than significant impacts after mitigation**.

### **3.2.17. Threatened and Endangered Species**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.3.5, “Threatened and Endangered Species.”

Pursuant to CEQA Guidelines Appendix G, impacts to threatened and endangered species may be considered significant if the project would:

- Directly impact a candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Modify a natural community in such a way that it would result in a substantial adverse effect on candidate, sensitive, or special-status species identified by local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

**Impact 3.2.17-1:** Construction of Alternative 3 may result in the degradation of habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp through introduction of sedimentation and debris into isolated seasonal wetland and vernal pool habitat. Construction activities could also result in minor fuel and oil spills from the maintenance of construction equipment, which could result in adverse effects to the aquatic environment. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

After implementation of mitigation measure MM 3.2.17-1, the project's impacts to aquatic invertebrate habitat would be considered **less than significant after mitigation**. Specifically this mitigation measure would protect habitat areas from construction activities.

**Impact 3.2.17-2:** Vernal pools would not be filled by implementation of Alternative 3, and therefore there would be no direct effects to the vernal pools by the proposed project as defined by USFWS criteria. However, implementation of Alternative 3 would result in the direct removal (fill) of approximately 0.58 acres of isolated seasonal wetlands, which may provide habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. Alternative 3 would result in impacts to these species since the proposed project includes removal of suitable habitat for

these species. This would be considered a **potentially significant impact**.

**Impact 3.2.17-3:** Alternative 3 would indirectly affect vernal pool fairy shrimp and vernal pool tadpole shrimp habitat through disturbance of areas within 250 feet of vernal pool habitat and isolated seasonal wetland habitat. There are approximately 0.34 acres of vernal pool habitat and 0.23 acres of isolated seasonal wetland habitat located within 250 feet of the project footprint that would be indirectly affected by Alternative 3. This would be considered a **potentially significant impact**.

### ***Mitigation Measures***

**MM 3.2.17-3** The following measures will be implemented as part of the project to avoid and minimize project effects to aquatic habitat (vernal pools and isolated seasonal wetlands) supporting threatened and endangered aquatic invertebrate species:

- During project development, the size of the work area limits will be minimized within sensitive habitat areas.
- Temporary impacts from aquatic habitat disturbance would be avoided by installing protective silt fencing between the aquatic habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the aquatic habitats during construction.
- Standard BMPs would be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

A comprehensive plan for avoidance, on-site mitigation, off-site mitigation, or other compensation will be developed in cooperation with relevant state and federal agencies. To compensate for the permanent direct impacts to listed vernal pool crustacean habitat (isolated seasonal wetlands), the City of Rancho Cordova will purchase mitigation credits at a USFWS-approved conservation bank to offset the loss of isolated seasonal wetland habitat as a result of the project at a 3:1 ratio (3 acres of mitigation for every 1 acre lost). Because the project would not directly fill any vernal pools, no direct

impacts would occur; therefore, no mitigation would be necessary to compensate for direct impacts to vernal pools under USFWS guidelines. To compensate for indirect impacts to 0.34 acres of vernal pools and indirect impacts to 0.23 acres of isolated seasonal wetlands, the City of Rancho Cordova will purchase mitigation credits at a USFWS-approved conservation bank to offset the loss of indirectly impacted vernal pool and isolated seasonal wetland habitat as a result of the project at a 2:1 ratio (2 acres of mitigation for every 1 acre indirectly impacted).

*Timing/Implementation:*                      *Prior to project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department, USFWS*

After implementation of mitigation measure MM 3.2.17-3, the project would fully compensate for both direct fill and indirect effects to vernal pool fairy shrimp and vernal pool tadpole shrimp habitat, resulting in no net loss of habitat consistent with City General Plan Policy NR.2.2. After mitigation, the project's effects would be reduced to **less than significant after mitigation.**

### ***Valley Elderberry Longhorn Beetle***

**Impact 3.2.17-4:** Thirty-four elderberry shrubs with stems of various sizes are located between 20 feet and 100 feet of the project footprint. These shrubs would not be removed by the project; however, during construction of the project, habitat degradation could occur as a result of dust fall from grading operations and construction noise. This would be considered a **potentially significant impact.**

### ***Mitigation Measures***

**MM 3.2.17-4**      Avoidance and minimization efforts for this species ~~will be~~ coordinated with the USFWS during Section 7 Consultation between Caltrans and USFWS, and ~~likely be~~ in accordance with the July 9, 1999, *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* developed by the USFWS. The following measures will be implemented as part of the project prior to construction to avoid and minimize effects to VELB habitat:

- During project development, the size of the work area limits will be minimized within sensitive habitat areas.
- Effects from accidental disturbance during construction would be avoided by installing protective fencing between the shrubs identified for preservation and the construction area limits to prevent accidental disturbance during construction. Pursuant to the USFWS VELB conservation guidelines (USFWS 1999), elderberry shrub areas that will not be disturbed within a 100-foot buffer zone from the edge of project construction will be fenced and designated as avoidance areas during project construction. Minimum fence setbacks of 20 feet from the dripline of each elderberry plant may be allowed with USFWS approval.
- Water trucks shall be used to water areas of exposed dirt to control dust from the project site.
- Signs shall be erected along the edge of elderberry avoidance areas noticing construction crews that the area is VELB habitat and must not be disturbed. These signs shall remain for the duration of construction.
- A WEAP shall be implemented to educate construction workers about the presence of VELB habitat in and near the project area, and to instruct them on proper avoidance. Each elderberry stem measuring 1 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) shall be replaced, in a USFWS-approved conservation area, with elderberry seedlings or cuttings at a minimum ratio of 1:1 and as great as 6:1 (new plantings to affected stems).

*Timing/Implementation:*                      *Prior to and during project construction*

*Enforcement/Monitoring:*                      *City of Rancho Cordova Public Works Department and USFWS*

After implementation of above mitigation measure, the project's effects to VELB habitat during construction would be reduced to **less than significant after mitigation**.

**Impact 3.2.17-5:** Alternative 3 would result in the direct removal of approximately 23 elderberry shrubs, with stems of various sizes. USFWS considers all shrubs with stems greater than 1 inch in diameter as habitat for VELB. Construction of the project could result in direct mortality of a VELB through habitat (elderberry shrub) removal. An additional eight elderberry shrubs with stems of various sizes are within the 20-foot radius from the project footprint and would also be directly impacted by the proposed project, according to USFWS guidelines, through possible trimming or pruning to reduce size, or from changes in the quantity and/or nature of stormwater that waters the plants. This would be considered a **potentially significant impact**.

### **Mitigation Measures**

**MM 3.2.17-5** ~~While final~~The USFWS concurred with the proposed requirements and replacement ratios for elderberry plants removed by the project, ~~will occur during consultation with USFWS, it is anticipated that mitigation-~~Mitigation will be completed as follows:

Transplant Elderberry Plants That Cannot Be Avoided: Elderberry plants must be transplanted if they cannot be avoided by the proposed project. All elderberry plants with one or more stems measuring 1 inch or greater in diameter at ground level, including at a minimum the 23 shrubs within the project footprint, will be transplanted to a USFWS-approved conservation area. At USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, the mitigation ratios in **Table 3.2.17-1** [for reader ease, this table has been copied from Chapter 2 and is included on the following page] may be increased to offset the additional habitat loss.

Trimming of elderberry plants (e.g., pruning along roadways, bike paths, or trails) with one or more stems 1 inch or greater in diameter at ground level may result in mortality of beetles. Therefore, trimming is subject to appropriate mitigation ratios as outlined in **Table 3.2.17-1**. All transplanting or trimming shall occur in accordance with

procedures outlined in the 1999 USFWS VELB Guidelines, and shall be protected and monitored according to the guidelines.

**Table 3.2.17-1  
Mitigation Ratios for Elderberry Shrubs Affected by the Project**

<b>Location</b>	<b>Stems (maximum diameter at ground level)</b>	<b>Exit Holes on Shrub Y/N (quantify)<sup>1</sup></b>	<b>Elderberry Seedling Ratio<sup>2</sup></b>	<b>Associated Native Plant Ratio<sup>3</sup></b>
Nonriparian	Stems ≥ 1 inch and ≤ 3 inches	No	4:1	1:1
		Yes	2:1	2:1
Nonriparian	Stems > 3 inches and < 5 inches	No	2:1	1:1
		Yes	4:1	2:1
Nonriparian	Stems ≥ 5 inches	No	3:1	1:1
		Yes	6:1	2:1

Source: City of Rancho Cordova, Natural Environment Study, May 2008.

1 All stems measuring 1 inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

2 Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (1 inch or greater in diameter at ground level) affected by the project.

3 Ratios in the Associated Native Plant Ratio column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

<b>Riparian</b>	<b>Elderberry Stem Size</b>	<b>Exit Holes</b>	<b># of Stems</b>	<b>Seedling Ratio</b>	<b># of Replacement Elderberries</b>	<b>Associated Native Plant Ratio</b>	<b># of Associated Seedlings</b>
No	>1" and <3"	No	223	1:1	223	1:1	223
No	>3" and <5"	No	35	2:1	70	1:1	70
No	>5"	No	20	3:1	60	1:1	60
No	>1" and <3"	Yes	68	2:1	136	2:1	272
No	>3" and <5"	Yes	9	4:1	36	2:1	72
No	>5"	Yes	10	6:1	60	2:1	120
<b>Total Stems Affected</b>			<b>365</b>				
<b>Total Replacement Plantings</b>					<b>585</b>		<b>817</b>
<b>Conservation Credits Required for Plantings (total replacement plantings/10)</b>						<b>141</b>	

Source: Biological Assessment 2014

1 All stems measuring 1 inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

2 Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (1 inch or greater in diameter at ground level) affected by the project.

3 Ratios in the Associated Native Plant Ratio column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

Plant Additional Seedlings or Cuttings: Each elderberry stem measuring 1 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) shall be replaced, in a USFWS-approved conservation area, with elderberry seedlings or

cuttings at a minimum ratio of 1:1 to and as great as 6:1 (new plantings to affected stems). Compensation ratios are listed and explained in **Table 3.2.17-1**. If the USFWS determines that the elderberry plants on the proposed project site are unsuitable candidates for transplanting, USFWS may allow the City to modify the stated ratios in **Table 3.2.17-1** for each elderberry plant that cannot be transplanted.

A mix of native plants associated with the elderberry plants at the project site or similar sites will be planted at ratios ranging from 1:1 to 2:1 [native tree/plant species to each elderberry seedling or cutting (see **Table 3.2.17-1**)]. These native plantings must be monitored with the same survival criteria used for the elderberry.

Terms and Conditions: The incidental take of VELB anticipated for this project will result from direct effects to 31 elderberry shrubs with 365 stems ~~one~~ inch or greater in diameter at ground level that will be transplanted. In order to be exempt from the prohibitions of Section 9 of ESA, Caltrans must ensure compliance with the following terms and conditions, which implement the measures described above.

1. Caltrans shall include full implementation and adherence to the avoidance and minimization measures proposed in the BO ~~and~~ re-restated in this document.
  - a. As a condition of any permit issued for the project.
  
2. In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached, Caltrans shall adhere to the following reporting requirement:
  - a. For those components of the action that will result in habitat degradation or modification whereby incidental take will occur, i.e., the removal of elderberry shrubs, Caltrans will notify the USFWS as soon as the removal is completed, providing documentation that the removal did not exceed the 31 elderberry shrubs with 365 stems ~~one~~ inch or greater above ground level anticipated. For the duration of the project construction, Caltrans shall also notify the USFWS if there are any changes in project implementation that result in habitat disturbance not described in the Project Description and ~~not~~ analyzed in the BO.

*Timing/Implementation: Prior to project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and USFWS*

After implementation of the above mitigation measures, the project's effects to VELB habitat would be reduced to **less than significant after mitigation.**

### **Swainson's Hawk**

**Impact 3.2.17-6:** Implementation of Alternative 3 would result in the removal of several large trees. If nesting raptors are present during project construction, the proposed project may cause direct mortality of this species or the removal of trees that contain nests actively used by this species. Additionally, excessive noise, disturbance, and vibrations can cause nesting raptors to abandon their nests. The loss of active nests or direct mortality is prohibited by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503.5. Disturbance of active nests during project construction would be considered a **potentially significant impact**.

### **Mitigation Measures**

**MM 3.2.17-6** During project development, the size of the work area limits will be minimized within sensitive habitat areas.

To avoid impacts to nesting habitat, the removal of potential nest trees will be limited to only those necessary to construct the proposed project.

For trees that must be removed to construct the proposed project, the City will target the removal of trees to occur outside the nesting season, which is between September 1 and March 1. If trees cannot be removed outside the nesting season, preconstruction surveys will be conducted prior to tree removal to verify the absence of active raptor nests within 500 feet of construction activities. Two surveys will be conducted, at least one week apart, with the second survey occurring no more than two days prior to tree removal.

If no active nests are found, tree removal may proceed. If active nests are found, CDFW shall be notified, and the tree shall not be removed until the nest is no longer active, as determined by a CDFW-approved biologist. No construction activities shall take place within a 500-foot radius of the active nest (or another distance as determined appropriate during consultation with CDFW).

*Timing/Implementation:* *Prior to and during project construction*

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department and CDFW

After implementation of the above mitigation measure, the project would minimize disturbance of active Swainson's hawk nests, and the project's effects would be considered **less than significant after mitigation**.

**Impact 3.2.17-7:** Construction of Alternative 3 would result in temporary disturbance of approximately 4.05 acres of suitable hawk foraging habitat during project construction. This would be considered a **potentially significant impact**.

**Mitigation Measures**

**MM 3.2.17-7** Measures to minimize impacts to Swainson's hawk foraging habitat include restoration of foraging habitat temporarily disturbed by project construction activities. After construction is completed, all temporarily disturbed areas will be stabilized with hydroseed and replanted with a mixture of native and nonnative plants (as deemed appropriate by a CDFW-approved biologist).

*Timing/Implementation:* After project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

After implementation of the above mitigation measure, the project would reduce the temporary effects to Swainson's hawk foraging habitat to **less than significant after mitigation**.

**Impact 3.2.17-8:** Alternative 3 would result in the permanent loss of approximately 13.13 acres of suitable Swainson's hawk foraging habitat. Within this area, the project would permanently impact approximately 11.82 acres of nonnative grassland from the construction of the interchange ramps and roadway extension, and the project would also impact approximately 1.51 acres of nonnative grassland that would be shaded by the overpass and would therefore no longer be suitable Swainson's hawk foraging habitat. Additionally, the project would result in the loss of native vegetation associated with the Fremont cottonwood-oak woodland, Fremont cottonwood woodland, and coyote brush scrub

habitat. This native vegetation supports wildlife that is an important food source for birds of prey. This would be considered a **potentially significant impact**.

### **Mitigation Measures**

**MM 3.2.17-8** To compensate for the permanent loss of 13.13 acres of potential foraging habitat, it is anticipated that the City will purchase mitigation credits from a CDFW-approved Swainson’s Hawk Mitigation Fund at a 1:1 ratio.

*Timing/Implementation:* Prior to project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department and CDFW

Implementation of the above mitigation measure would reduce the project’s effects to Swainson’s hawk foraging habitat to **less than significant after mitigation**.

**Impact 3.2.90:** There is a less than significant potential to spread these noxious weeds. This would be considered a **less than significant impact**.

Even though there is a less than significant impact associated with the spread of noxious weeds, the City has agreed to adopt additional avoidance and minimization practices; in compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

### **3.2.18. Population and Housing/Growth Inducement**

#### **Impact Statements and Mitigation Measures**

The impact statements included below are based on the information presented in Section 2.1.3, “Growth,” and Section 2.1.5, “Relocations.”

Pursuant to CEQA Guidelines Appendix G, the project would have a significant impact if:

- 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).
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

**Impact 3.2.18-1:** Alternative 3 would correct existing operational deficiencies on area roadways and would accommodate increased traffic demand generated by approved and planned development as part of the City of Rancho Cordova General Plan. The environmental effects of growth in the City of Rancho Cordova have been considered and disclosed in the City of Rancho Cordova General Plan Final EIR. Alternative 3 would not result in new change in the anticipated growth under the City's General Plan. Thus, this impact would be **less than significant**.

Because Alternative 3 would have less than significant impacts to growth, no mitigation is required.

**Impact 3.2.18-2:** Alternative 3 would not displace existing housing or substantial numbers of people. Thus, **no impact** would occur.

Because Alternative 3 would have no impacts to displacement of housing or people, no mitigation is required.

### **3.3. Climate Change under the California Environmental Quality Act**

Please note that this section has been prepared by the City of Rancho Cordova and reflects the City's independent CEQA analysis for climate change. This section may inform Caltrans' NEPA decision regarding climate change but is not necessarily reflective of Caltrans' policies with respect to CEQA climate change analysis.

#### **Regulatory Setting**

##### ***Federal***

##### *Greenhouse Gases*

In the past, the U.S. Environmental Protection Agency (USEPA) has not regulated greenhouse gases (GHG) under the Clean Air Act because it asserted that the act did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. However, the U.S. Supreme Court held that USEPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, 12 states and cities, including California, together with several environmental organizations, sued to require USEPA to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 (2007)). The Court ruled that GHGs fit within the Clean Air Act's definition of a pollutant and that USEPA did not have a valid rationale for not regulating GHGs. In 2009, USEPA responded to this ruling and made an endangerment finding that GHGs pose a threat to the public health and welfare. That was the first step necessary for the establishment of federal GHG regulations under the Clean Air Act.

In April 2010, USEPA issued the final rule on new standards for GHG emissions and fuel economy for light-duty vehicles in model years 2017–2025. In November 2010, USEPA published the "Prevention of Significant Deterioration (PSD) and Title V Permitting Guidance for Greenhouse Gases," which provides the basic information that permit writers and applicants need to address GHG emissions regulated under the Clean Air Act. In that document, USEPA described the "Tailoring Rule" in the regulation of GHG emissions. With the Tailoring Rule, USEPA established a phased schedule in the regulation of stationary sources. The first phase of the "Tailoring Rule" began January 2, 2011, and focuses the GHG permitting programs on the largest sources with the most Clean Air Act permitting experience. Then, during the second phase, which began June 1, 2011, the rule expanded to cover large sources of GHGs that may not have been

previously covered by the Clean Air Act for other pollutants. The rule also describes USEPA's commitment to future rulemaking that will describe subsequent steps of the "Tailoring Rule" for GHG permitting (USEPA 2010).

## **State**

### *Assembly Bill 1493*

Assembly Bill (AB) 1493 (Pavley) of 2002 requires CARB to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as "Pavley I." The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the state of California submitted a request for a waiver from federal clean air regulations, as the state is authorized to do under the Clean Air Act, to allow the state to require reduced tailpipe emissions of CO<sub>2</sub>. In late 2007, USEPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the state brought suit against USEPA related to this denial.

In January 2009, President Obama instructed USEPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, USEPA granted California's waiver request, enabling the state to enforce its GHG emissions standards for new motor vehicles beginning with the current model year. Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the United States. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

### *Executive Order S-3-05*

Executive Order S-3-05 proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (Cal-EPA) to coordinate a multiagency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of Cal-EPA created a Climate Action Team (CAT) made up of members from various state agencies and commissions. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government, and community actions, as well as through state incentive and regulatory programs.

### *Assembly Bill 32, the California Global Warming Solutions Act of 2006*

AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that started phasing in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient

manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

### *Assembly Bill 32 Climate Change Scoping Plan*

In October 2008, CARB published its Climate Change Proposed Scoping Plan, which is the state's plan to achieve GHG reductions in California required by AB 32. The scoping plan contains the main strategies California will implement to achieve reduction of 169 million metric tons (MMT) of CO<sub>2</sub>e (CO<sub>2</sub> equivalent emissions of GHGs), or approximately 30 percent from the state's projected 2020 emission level of 596 MMT of CO<sub>2</sub>e under a business-as-usual scenario (this is a reduction of 42 MMT CO<sub>2</sub>e, or almost 10 percent, from 2002–2004 average emissions). The scoping plan also includes CARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO<sub>2</sub>e), implementation of the Low-Carbon Fuel Standard (15.0 MMT CO<sub>2</sub>e), energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO<sub>2</sub>e), and a renewable portfolio standard for electricity production (21.3 MMT CO<sub>2</sub>e). CARB has not yet determined what amount of GHG reductions it recommends from local government operations; however, the proposed scoping plan does state that land use planning and urban growth decisions will play an important role in the state's GHG emissions reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. (Meanwhile, CARB is also developing an additional protocol for community emissions.) CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The proposed scoping plan states that the ultimate GHG emissions reduction assignment to local government operations is to be determined. With regard to land use planning, the proposed scoping plan expects approximately 5.0 MMT CO<sub>2</sub>e will be achieved associated with implementation of Senate Bill (SB) 375, which is discussed further below. The Climate Change Proposed Scoping Plan was approved by CARB on December 11, 2008.

As of October 28, 2010, the following is a summary of Scoping Plan implementation associated with transportation sources of GHG that have been approved by CARB:

- Measure T-1 (AB 1493, Pavley)—estimated to result in a reduction of 27.7 MMT of GHG by 2020.

- Measure T-2 (Low Carbon Fuel Standard)—estimated to result in a reduction of 16 MMT of GHG by 2020.
- Measure T-3 (Regional Transportation–Related GHG Targets, SB 375)—estimated to result in a reduction of 5 MMT of GHG by 2020.
- Measure T-4 (Tire Pressure Program)—estimated to result in a reduction of 0.74 MMT of GHG by 2020.
- Measure T-7 (Heavy-Duty Vehicle GHG Emission Reduction)—estimated to result in a reduction of 0.93 MMT of GHG by 2020.

The timing of the implementation of the Climate Change Scoping Plan is currently uncertain as a result of a court decision in the case of *Association of Irrigated Residents v California Air Resources Board* (San Francisco Superior Court Case No. CPF-09-509562). The court found that CARB, in its CEQA review, had not adequately explained why it selected a scoping plan that included a cap and trade program rather than an alternative plan.

### *California Climate Action Registry*

The California Climate Action Registry (CCAR) was established in 2000 by SB 1771 and modified in 2001 by SB 527 as a nonprofit voluntary registry for GHG emissions. The purpose of CCAR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry. CCAR has now merged its GHG emissions registry with the climate registry and is primarily focused on offset projects and research.

### *Senate Bill 375*

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for 2020 and 2035. These reduction targets will be updated every eight years, but can be updated every four years if advancements in

emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the RTP (and associated SCS or APS). However, new provisions of CEQA would incentivize qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

### *Caltrans Climate Action Program*

While Caltrans is not the CEQA lead agency for the proposed project, Caltrans and its parent agency, the Business, Transportation and Housing Agency, have taken an active role in addressing GHG emissions 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. The Climate Action Program at Caltrans can be found at the following web address:

[http://www.dot.ca.gov/hq/tpp/offices/ogm/key\\_reports\\_files/State\\_Wide\\_Strategy/Caltrans\\_Climate\\_Action\\_Program.pdf](http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf).

### **Local**

#### *Sacramento Metropolitan Air Quality Management District*

The SMAQMD CEQA Guide Chapter 6 (December 2009) provides background and recommendations on the analysis of project-generated GHG emissions for land use development projects and stationary-source facilities. SMAQMD has developed a draft set of recommended GHG reduction measures and potential ranges of GHG emissions reductions for each measure.

#### *Sacramento Area Council of Governments*

SACOG is currently evaluating GHG emissions reduction options as part of the update of the MTP 2035 (e.g., Policy 9 calling for reduced GHG emissions and activities associated with future compliance with SB 375). SACOG has released for public comment per-

capita GHG emissions reductions between 5 percent and 6 percent for 2020 and between 14 percent and 15 percent for 2035 (compared to a 2005 base year). As identified in SACOG's GHG reduction options (May 11, 2010), implementation of the adopted MTP (which includes the Rancho Cordova Parkway Interchange project) would reduce per-capita GHG emissions 4 percent for 2020 and 13 percent for 2035 (as compared to a 2005 base year).

## ***Affected Environment***

### *Climate Change and Greenhouse Gases*

To fully understand global climate change, it is important to recognize the naturally occurring “greenhouse effect” and to define the GHGs that contribute to this phenomenon. The temperature on Earth is regulated by this greenhouse effect, which is so named because the earth's atmosphere acts like a greenhouse, warming the planet in much the same way that an ordinary greenhouse warms the air inside its glass walls. Like glass, the gases in the atmosphere let in light yet prevent heat from escaping.

GHGs are naturally occurring gases such as water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) that absorb heat radiated from the earth's surface. GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and others—are transparent to certain wavelengths of the sun's radiant energy, allowing them to penetrate deep into the atmosphere or all the way to the earth's surface. Clouds, ice caps, and particles in the air reflect about 30 percent of this radiation, but oceans and land masses absorb the rest (70 percent of the radiation received from the sun) before releasing it back toward space as infrared radiation. GHG and clouds effectively prevent some of the infrared radiation from escaping; they trap the heat near the earth's surface where it warms the lower atmosphere. If this natural barrier of atmospheric gases were not present, the heat would escape into space and earth's average global temperatures could be as much as 61 degrees Fahrenheit (°F) cooler (NASA 2009).

In addition to natural sources, human activities are exerting a major and growing influence on climate by changing the composition of the atmosphere and by modifying the land surface. Particularly, the increased consumption of fossil fuels (e.g., natural gas, coal, gasoline) has substantially increased atmospheric levels of GHGs. Measured global GHG emissions resulting from human activities, especially the consumption of fossil fuels, have grown since preindustrial times, with an increase of 70 percent between 1970 and 2004 (IPCC 2007). This increase in atmospheric levels of GHG unnaturally enhances the greenhouse effect by trapping more infrared radiation as it rebounds from the earth's

surface and thus trapping more heat near the earth's surface. Prominent GHGs contributing to the greenhouse effect and climate change include CO<sub>2</sub>, CH<sub>4</sub>, ozone (O<sub>3</sub>), N<sub>2</sub>O, and chlorofluorocarbons (CFC). Emissions of these gases are attributable to human activities associated with the industrial/manufacturing, utilities, transportation, residential, and agricultural sectors (CEC 2006a).

According to USEPA, the earth's average surface temperature has increased by about 1.2°F to 1.4°F since 1900. The warmest global average temperatures on record have all occurred within the past 15 years, with the warmest two years being 1998 and 2005. Eleven of the years between 1995 and 2006 ranked among the hottest years on record since 1850, when reliable worldwide temperature measurements began (IPCC 2007). Most of the warming in recent decades is likely the result of human activities. Other aspects of the climate are also changing, such as rainfall patterns, snow and ice cover, and sea level.

### *Global Implications*

Recognizing the problem of global climate change, the World Meteorological Organization and the United Nations Environment Programme established the Intergovernmental Panel on Climate Change (IPCC) in 1988. It is open to all members of the United Nations and World Meteorological Organization. The role of the IPCC is to assess on a comprehensive, objective, open, and transparent basis the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation. IPCC projects that the earth's average surface temperature should rise 1.8°F to 6.3°F before 2100 (IPCC 2007). At a more local level, the California CAT found that California-specific models estimate an average warming increase of 2.7°F to 10.5°F throughout California before 2100 (CAT 2009). This may not seem like a significant increase, yet even at the lowest projected global increase of 1.8°F, the earth would be warmer than it has been for 10,000 years (Miller 2000).

The IPCC Fourth Assessment Report's Working Group I Summary for Policymakers synthesizes current scientific understanding of global climate change and projects future climate change using the most comprehensive set of well-established global climate models. The report incorporates findings of the current effects of global climate change. These findings include:

- The intensity of tropical cyclones (hurricanes) in the north Atlantic has increased over the past 30 years, which correlates with increases in tropical sea surface temperatures.

- Droughts have become longer and more intense and have affected larger areas since the 1970s, especially in the tropics and subtropics.
- Since 1900, the northern hemisphere has lost 7 percent of the maximum area covered by seasonally frozen ground.
- Mountain glaciers and snow cover have declined worldwide.
- Satellite data since 1978 show that the extent of Arctic sea ice during summer has shrunk by more than 20 percent.
- Since 1961, the world's oceans have been absorbing more than 80 percent of the heat added to the climate, causing ocean water to expand and contributing to rising sea levels. Between 1993 and 2003, ocean expansion was the largest contributor to sea level rise.
- Melting glaciers and losses from the Greenland and Antarctic ice sheets have also contributed to recent sea level rise.

An enhanced greenhouse effect will generate new patterns of microclimate and may have significant impacts on the economy, environment, and transportation infrastructure and operations due to increased temperatures, intensity of storms, sea level rise, and changes in precipitation. Impacts may include flooding of tunnels, coastal highways, runways, and railways, buckling of highways and railroad tracks, submersion of dock facilities, and a shift in agriculture to areas that are now cooler. Such prospects will have strategic, security, and transportation implications.

Climate change affects public health and the environment. Increased smog and emissions, respiratory disease, reduction in the state's water supply, extensive coastal damage, and changes in vegetation and crop patterns have been identified as effects of climate change. The impacts of climate change are broad-ranging and interact with other market failures and economic dynamics, giving rise to many complex policy problems.

### *California Implications*

Climate change and global warming could negatively affect agriculture, forestry, water resources (water supply and flooding), coastal areas, energy production, air quality, public health, public infrastructure, natural protections, sensitive species and habitats, public safety, and the economy (CAT 2009). The estimated economic value of shoreline development that could be impacted by a 55-inch rise in sea level is \$62 billion. As the

existing climate throughout California changes over time, mass migration of species, or worse, failure of species to migrate in time to adapt to the perturbations in climate, could also result.

### *Current Greenhouse Gas Emissions*

The following is a summary of current estimates of GHG emissions for the state and the City of Rancho Cordova.

#### *California Emissions*

The California Energy Commission (CEC) estimates that California is the second-largest state emitter of GHG emissions in the United States, behind Texas in absolute emissions (CEC 2006a). However, the state has relatively low carbon intensity when considering GHG emissions per person or GHG emissions per unit gross state product. Worldwide, California is estimated to be the 12th to 16th largest emitter of CO<sub>2</sub> and is responsible for approximately 2 percent of the world's CO<sub>2</sub> emissions (CEC 2006a). CARB released estimates of California's 1990 emissions inventory, which amounted to 433.29 MMT CO<sub>2</sub>e (CARB 2009). CARB has also estimated that 2006 emissions levels were 483.87 MMT CO<sub>2</sub>e. Factoring in the reduction in GHG emissions due to the functioning of existing forests and rangeland as carbon sinks, California's GHG emissions in 2006 were 479.80 MMT CO<sub>2</sub>e. GHG emissions for California were apportioned to the following sectors in 2006: transportation (38.4 percent), electric power (21.9 percent), commercial and residential energy usage (9.2 percent), industrial (19.9 percent), recycling and waste (1.3 percent), high global warming potential gases (3.1 percent), agriculture (6.2 percent), and forestry (0.04 percent) (CARB 2009).

#### *City of Rancho Cordova Emissions*

The Greenhouse Gas Emissions Inventory for Sacramento County (SMAQMD 2009) identifies the stationary and mobile sources of GHG in the unincorporated area of the county as well as the cities. **Table 3.3-1** summarizes GHG emissions for the City of Rancho Cordova. As identified in **Table 3.3-1**, the City generated 557,943 metric tons of GHG emissions in 2005, which was 4 percent of the total county's GHG emissions of 13,890,792 metric tons. The City's 2005 GHG emissions per capita were 9.9 metric tons as compared with the countywide GHG emissions per capita of 10.0 metric tons.

**Table 3.3-1  
City of Rancho Cordova 2005  
Greenhouse Gas Emissions by Sector**

<b>2005 Emissions by Sector and Source</b>	<b>Metric Tons Carbon Dioxide Equivalent (MT CO<sub>2</sub>e)</b>	<b>Percentage of Total</b>
Residential	94,324	16.9
Commercial and Industrial	135,190	24.2
On-Road Transportation	251,690	45.1
Off-Road Vehicle Use	23,762	4.3
Waste	19,435	3.5
Wastewater Treatment	5,466	1.0
Water Related	3,821	0.7
Agriculture	1,268	0.2
High Global Warming GHGs	22,987	4.1
<b>Total</b>	<b>557,943</b>	<b>100.00%</b>

Source: SMAQMD 2009

### **Energy Consumption**

#### *Vehicle Energy Consumption*

California’s transportation system includes 33.5 million registered vehicles (cars, trucks, trailers, and motorcycles) and almost 170,000 miles of roads maintained by local, state, and federal governments. A total of 2,453 miles are U.S. interstate freeways. The state’s motor vehicle fleet includes private passenger cars as well as buses, motorcycles, and light- and heavy-duty trucks, which are used for passenger and freight movement respectively (CEC 2007b). In 2007, taxable gasoline sales (including aviation gasoline) in California accounted for 15,672,334,029 gallons of gasoline (CEC 2007b). For more information regarding state transportation energy, go to the CEC website at <http://energyalmanac.ca.gov/transportation/summary.html#fuel>.

According to a fuel consumption analysis conducted for the proposed project using the EMFAC model to input current and future vehicle fleet mix, traffic on project-related roadways and intersections for the baseline year fuel consumed approximately 1,616,387 gallons of automotive fuel (diesel and gasoline) per day in 2005.

## **Environmental Consequences**

### ***City of Rancho Cordova Standards of Significance***

Per Appendix G and Appendix F of the CEQA Guidelines and SMAQMD CEQA Guide, the City considers impacts related to energy use and climate change significant if implementation of the proposed project would result in any of the following:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs (AB 32, SB 375, and SACOG MTP).
3. Inefficient, wasteful, and unnecessary consumption of energy.

The analysis provided below evaluates project GHG emissions to both baseline conditions (2005 conditions) and 2037 without project conditions. Currently, there are no numeric thresholds for transportation projects that have been established. As identified in the AB 32 Scoping Plan, CARB has determined that a zero threshold for addressing GHG emissions should not be utilized, but that any other thresholds need to be consistent with the state's GHG emission reduction targets. There is no available guidance for numeric threshold for transportation projects from state regulatory agencies. By their nature, transportation projects involving roadways and freeway interchanges will often result in an increase in VMT and a corresponding increase in GHG emissions from increased VMT. In the absence of a numeric threshold of significance under CEQA supported by substantial scientific evidence, the determination of the significance for GHG emission under CEQA in this EIR will be based on a qualitative analysis as authorized under CEQA Guidelines Section 15064.4. Thus, the analysis analyzes whether increases in GHG emissions are cumulatively considerable as compared to the no project conditions and whether the project would conflict with GHG reductions associated with implementation of the SACOG MTP, AB 32, SB 375 and the City's General Plan. However, even though the significance determination is based on a qualitative analysis, the amount of GHG emissions from the proposed project and No Build alternative are set forth below for information purposes. The GHG analysis in this EIR/EA is specific to this transportation project and does not establish a methodology for analyzing GHGs for the city for other types of projects, such as land use projects, including specific plans and subdivisions.

### **Methodology for Estimating Amount of GHG Emissions**

Estimated GHG (CO<sub>2</sub>) emissions for project construction are based on the predicted CO<sub>2</sub> in pounds per day using the SMAQMD's Road Construction Emissions Model (Version 6.3-2) Model (see **Table 3.2.11-1**).

VMT and vehicle speed data from the project traffic impact analysis (see Section 2.1.8, "Traffic and Transportation/Pedestrian and Bicycle Facilities") was utilized to estimate changes in subregional VMT along the U.S. 50 corridor (Watt Avenue to the City of Folsom) from the operation of the proposed new interchange and the associated changes in GHG emissions anticipated using CARB's EMFAC air quality model.

In addition to this modeling effort, this analysis compared the project's relationship to expected changes in region-wide VMT and associated improvements in GHG emissions from the implementation of the SACOG 2035 MTP as compared to conditions without implementation of the MTP. As noted above, the SACOG 2035 MTP is a key component of SACOG's efforts to reduce GHG emissions consistent with AB 32 and comply with SB 375.

The current state of the practice for evaluating GHG emissions associated with roadway infrastructure projects is to estimate the change in VMT caused by implementation of the project under existing and cumulative conditions. The methodology to capture VMT effects includes a stratification of VMT changes by five-mile-per-hour speed increments so this information can be input into CARB's EMFAC air quality emissions model. Specific VMT data for the project from Section 2.1.8 were used to estimate GHG emission changes. The analysis compared 2005 baseline conditions and 2037 conditions without the project with 2037 conditions with the project and factored fuel efficiency expected as part of the implementation of AB 1493.

As noted in the analysis below, this methodology provides a worst-case analysis of GHG emissions from the project and likely overestimates the actual GHG emissions from project operation as compared to the No Build alternative as it does not adjust for anticipated growth that would not occur in the City of Rancho Cordova that would be displaced to other communities in the region.

#### *No Build Alternative (2037 Conditions without the Project)*

The No Build alternative assumes that the proposed Rancho Cordova Parkway interchange is not constructed on U.S. 50, but that all Tier 1 roadway improvements (i.e., those improvements that have reasonably expected funds) contained in the 2030

Sacramento MTP are assumed to be in place in the region depending on their completion dates (see Section 2.1.8 for further details on traffic analysis). Under the No Build alternative, traffic operations in the immediate project study area and in the region would continue to degrade as vehicle trips resulting from planned and approved growth in the area continue to increase. As described in more detail below, the predicted VMT and resulting GHG emissions would likely increase as growth is displaced from urban infill areas to outlying areas further away from urban and job centers. Moreover, the No Build alternative would not be consistent with the long-range planning goals and principles of the SACOG MTP and Blueprint, and the City's General Plan, all of which include the construction of the Rancho Cordova Parkway Interchange as an important project for local and regional planning in the area. The interchange is also a key component of SACOG's regional transportation planning efforts to reduce GHG emissions consistent with AB 32 and comply with SB 375.

### *Alternative 3 (Proposed Project) Impacts*

#### **Climate Change and Greenhouse Gases**

The estimated GHG (CO<sub>2</sub>) emissions for project construction are 8,215 metric tons per day based on the predicted CO<sub>2</sub> in pounds per day using the SMAQMD's Road Construction Emissions Model (Version 6.3-2) Model (see **Table 3.2.11-1**). This volume equates to 0.2 percent of the baseline GHG emissions.

The impact analysis identified that subregional VMT conditions for 2005 baseline, 2037 without project, and 2037 with project results in the following GHG emissions:

- VMT
  - 2005 baseline: 27,921,095 daily VMT.
  - 2037 no project: 42,992,085 daily VMT.
  - 2037 project: 43,088,255 daily VMT (an increase of 96,170 from 2037 no project conditions).
- GHG
  - 2005 baseline: 5,048,928.2 annual metric tons of GHG (CO<sub>2</sub>) emissions.
  - 2037 no project: 5,657,788.3 annual metric tons of GHG (CO<sub>2</sub>) emissions.

- 2037 project: 5,668,946.4 annual metric tons of GHG (CO<sub>2</sub>) emissions (an increase of 620,018.2 metric tons from 2005 baseline conditions and an increase of 11,158.1 metric tons from 2037 no project conditions).

While these analysis results represent the state of the practice, they do not provide a complete picture of VMT and GHG emissions effects due to one significant limitation of the methodology. This limitation is related to the fact that static land use forecasts are used between the No Build alternative and proposed project scenarios. In reality, the absence of the proposed interchange would change land use patterns in the vicinity of the interchange and for projects within the Sunrise-Douglas Community Plan area in the city.

Without the new Rancho Cordova Parkway interchange access to U.S. 50, land development adjacent to the interchange would be far less intense causing some amount of development to occur elsewhere in the U.S. 50 corridor. Further, the Sunridge Specific Plan Conditions of Approval (Zoning Condition 48) limit that development to 6,500 residential dwelling units (out of a total of 8,214) until an interchange at the project location is constructed. Without this interchange, 1,714 residential units (plus some of the planned land uses around the immediate interchange area) would develop elsewhere, most likely further to the east or south in places like Folsom, El Dorado Hills, Rancho Murieta, or Elk Grove (based on review of development scenarios used in the SACOG Blueprint process). This growth displacement outside the City of Rancho Cordova would result in a future scenario with higher levels of overall VMT and GHG emissions based on the SACOG projections that show these other areas generate more VMT per household (see **Table 3.3-2** for details).

**Table 3.3-2  
Comparison of VMT Generated per Household by Jurisdiction**

Jurisdiction	VMT Generated per Household	Percent Increase Compared to Rancho Cordova
Rancho Cordova	41.9	NA
Folsom	53.4	27.4%
El Dorado Hills	69.0	64.7%
Rancho Murieta	102.1	143.7%
Elk Grove	56.8	35.6%

The average VMT generated per household of the other four areas in **Table 3.3-2** is 70.3, which is 67.9 percent higher than households in Rancho Cordova. A shift of 1,714 residential units to these other jurisdictions would equate to approximately 48,680 more daily VMT under cumulative no project conditions that was not accounted for with the

fixed land use forecasts. This amount could be much higher if Policy LU.2.5 (see below) of the Rancho Cordova General Plan is applied to the remainder of the Sunrise-Douglas Community Plan area when projects advance to the tentative map stage similar to the Sunridge Specific Plan.

Policy LU.2.5 – Phase growth based on infrastructure capacity, infrastructure financing, and the timing of the design, approval/permitting, and construction of transportation facilities and other infrastructure.

The entire Sunrise-Douglas Community Plan area was planned for approximately 22,503 residential units. Without the planned interchange, a total of approximately 16,003 residential units from the Sunrise-Douglas area could potentially be shifted to other areas resulting in approximately 184,000 daily VMT being added to the cumulative No Build alternative. This estimate is based on the daily VMT generation for households in Folsom shown in **Table 3.3-2**. Using the average household VMT generation of 70.3 from **Table 3.3-2** would add over 450,000 daily VMT to the cumulative no project scenario. Additional VMT could also be generated under the cumulative No Build alternative from planned development around the proposed interchange shifting to other more accessible areas.

In addition, urban development without the interchange may be restricted in the city given that some projects would not function for roadway access without the interchange. This is true particularly for planned developments immediately south of U.S. 50, including the City's Westborough Special Planning Area (6,000 residential units), Rio del Oro Specific Plan Area (11,601 residential units), and Sacramento County's Glenborough Community (4,810 residential units). Without the interchange, these planned developments may be in conflict with City General Plan policies on roadways and infrastructure.

While this is only a general assessment of the VMT change, the magnitude suggests that the cumulative No Build alternative forecasts of VMT and GHG emissions would likely be higher than the proposed project when land use effects are also considered. Other supporting evidence for this conclusion is listed below:

- Under the proposed project, more development would occur within an existing and planned urban area of the city where land uses are closer together, which reduces the reliance on automobile travel that creates GHGs.

- In urban areas, people have more travel choices such as walking, bicycling, and riding transit due to close proximity of land uses and availability of transit service, which would result in fewer GHG emissions as compared to reliance on automobile travel.

### ***Consistency of Project with SACOG MTP, SB 375 and AB 32***

The proposed project is a component of the SACOG MTP. SACOG is currently evaluating GHG reduction options as part of the implementation of the MTP 2035 (e.g., Policy 9 calling for reduced GHG emissions and activities associated with future compliance with SB 375). SACOG has released for public comment per capita GHG emission reductions between 5 percent and 6 percent for 2020 and between 14 percent and 15 percent for 2035 (compared to a 2005 base year). As identified in SACOG's GHG reduction options (May 11, 2010) implementation of the adopted MTP (which includes the Rancho Cordova Parkway Interchange project) would reduce per capita GHG emissions 4 percent for 2020 and 13 percent for 2035 (as compared to a 2005 base year). These SB 375 compliance efforts by SACOG are also consistent with the AB 32 Scoping Plan. Thus, the project is a component of and consistent with regional efforts to reduce GHG emissions in compliance with SB 375 and AB 32.

It is also important to note that the MTP EIR did evaluate climate change and GHG emissions associated with implementation of the transportation improvements in the MTP and determined that the MTP's impact was less than significant (see Chapter 9, "Energy and Global Climate Change," MTP Draft EIR). The SACOG MTP EIR is hereby incorporated by reference.

### ***Consistency of Project with City General Plan***

The proposed project is a key component of the General Plan Circulation Plan (Figure C-1 of the Circulation Element of the General Plan). While the provision of adequate roadway facilities to accommodate transportation needs is one aspect of the General Plan's policy direction regarding transportation, the Circulation Element of the General Plan also provides direction in the improvement of alternative forms of transportation associated with transit, bicycles, and pedestrians.

The City has or is in the process of developing and implementing transit, bike, and pedestrian facility master plans to improve alternative forms of transportation in the City and would provide opportunities for further reductions in VMT. The City of Rancho Cordova has prepared a Transit Master Plan (adopted August 2006) that sets the framework for future citywide transit service. This service will provide options to

automobile travel for residents and workers, both within the city and in surrounding areas. Service concepts will be geared toward connecting neighborhoods and business opportunities and will be closely coordinated with the Sacramento Regional Transit District's Gold Line service, providing smooth and timely light rail connections. The City of Rancho Cordova adopted a Bicycle Master Plan and a Pedestrian Master Plan in March 2011, which include goals promoting safe and desirable non-motorized travel for residents and workers as well as good connections across U.S. 50 and to regional trails systems like the American River Parkway Trail. The City is also developing a concept for a new bicycle and pedestrian crossing over U.S. 50 in the vicinity of Prospect Park Drive on the south and Olson Drive on the north. The bridge has been identified as "The Promenade" and would connect office parks and future residents south of U.S. 50 with the City's commercial core on the north of U.S. 50, effectively linking more than 25,000 jobs with light rail and retail services.

Finally, one of the key tenets of the Rancho Cordova General Plan is to apply "smart growth" planning principles to development. An essential goal of the City and General Plan is to achieve compact, mixed-use development with improved mobility to enhance the quality of life of all residents, employees, and visitors. The General Plan utilizes building blocks (e.g., neighborhoods, villages, districts, and centers) and Smart Growth Principles to achieve this goal. The nine Smart Growth Principles are listed below and described further in the Land Use Element of the proposed General Plan:

- Provide a Variety of Transportation Choices
- Offer Housing Choices and Opportunities
- Promote Balanced Land Uses
- Integrate a Mix of Land Uses into New and Existing Development Areas
- Promote Compact Urban Development
- Encourage Regeneration/Infill in Existing Developed Areas
- Create Walkable Neighborhoods
- Foster Distinctive, Attractive Communities with a Strong Sense of Place and Quality

## **Design**

- Promote Preservation and Integration of Natural Resources with Urban Land Uses

These “smart growth” strategies have benefits in terms of lower energy use and fewer and shorter vehicle trips since residents and employees of these areas have more home, work, and shopping opportunities within walking or biking distance. Transit is also a more viable form of transportation since these developments have a larger number of potential transit users and can support more frequent transit service to regional destinations.

Operation of the project would provide improved traffic levels of service at the majority of roadways, intersections, and vehicle queuing in the area compared to conditions without the project (see Section 2.1.8 for further details on the traffic analysis). Since the proposed project is an essential infrastructure component for achieving the City’s planned development pattern, which stems from the SACOG regional blueprint and 2035 MTP whose objectives are to reduce VMT and GHG emissions through compliance with SB 375 and AB 32 Scoping Plan, GHG emissions resulting from the project would not be substantial compared to the No Build alternative. While the proposed project may result in an increase in VMT in the local area under 2037 conditions as compared to the No Build scenario, the proposed project would allow planned development to occur in a relatively concentrated urban area that would reduce pressures to develop in areas further away from the urban core that are known to produce more GHGs per capita.

Furthermore, the City is implementing, and will continue to implement, measures associated with its General Plan that would further address GHG reduction (bicycle and pedestrian master planning, transit master planning, smart growth principles). The no project scenario would be inconsistent with the City’s General Plan and the SACOG MTP resulting in higher levels of VMT and GHG emissions.

## **Impact of Climate Change on Project**

There are many technical studies available regarding the environmental effects of climate change on the earth as a whole as well as in California specifically. However, the extents of these environmental effects are still being defined as climate modeling tools become more refined. Potential environmental effects of climate change that could impact the project [vicinity area](#) and City could include the following (which were previously noted above):

- Adverse impacts on water supply availability.

- Increased severity of flooding events.
- Increased wildland fire hazards.
- Alteration of natural habitats for special-status plant and animal species.
- Air quality impacts.

These potential impacts are real, given the general concurrence in the scientific community about the potential impacts of climate change on the environment. However, the extent and severity of such impacts to the city is still speculative at this time. Specifically, the project would not result in substantial use of water supply and is not located in an area subject to flooding or wildland fire hazards.

### *CEQA Determination*

Although modeling predicts that GHG operational emissions will increase (0.2 percent) with the proposed project under cumulative project conditions, the preceding analysis and discussion indicates that other factors involving actual land use, development and growth displacement outside of the city, and VMT patterns that are likely to occur if the project were not built, combined with General Plan and master planning efforts by the City, and state regulations support a determination by the City of Rancho Cordova that the impacts of future GHG emissions from the project would be **less than cumulatively considerable** and, therefore, a **less than significant impact** on the environment. Therefore, no mitigation measures are required. However, measures are identified below to reduce GHG emissions from project construction and operations.

Also, because the project is included in the City's General Plan circulation element that complies with the SACOG 2035 MTP and SACOG Blueprint, it does not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs (AB 32, SB 375, and SACOG MTP).

### ***Energy Consumption***

According to a fuel consumption analysis conducted for the proposed project using the EMFAC model to input current and future vehicle fleet mix, traffic on project-related roadways and intersections for the baseline year fuel consumed approximately 1,616,387 gallons of automotive fuel (diesel and gasoline) per day in 2005. The proposed project is predicted to result in the consumption of 1,646,309 gallons of automotive fuel per day under future cumulative 2037 conditions. Thus, fuel consumption for the proposed project in 2037, including implementation of AB 1493 standards, is approximately 2

percent higher than the baseline year 2005 fuel consumption, while 2037 VMT would be 35 percent higher than 2005 conditions. Predicted 2037 fuel consumption under the scenario without implementation of AB 1493 fuel efficiency requirements is 2,392,350 gallons. Therefore, implementation of AB 1493, affecting the entire fleet mix associated with the proposed project, results in a fuel consumption reduction of 31 percent compared to the fleet mix without this legislation. Moreover, the difference in fuel consumption between building the proposed project compared to the No Build alternative in 2037 (1,642,634 gallons, also incorporating AB 1493 standards) is 0.2 percent. Given that the proposed project in 2037 conditions would result in 35 percent increase in VMT but only a 2 percent increase in fuel use as compared to 2005 conditions, the proposed project would not result in an inefficient, wasteful, and unnecessary consumption of energy. This conclusion is consistent with the conclusions of the SACOG MTP EIR that concluded that implementation of the MTP would not result in inefficient, wasteful and unnecessary consumption of energy (see page 9-26 of the MTP Draft EIR).

### *CEQA Determination*

The proposed project would increase the consumption of energy associated with vehicle fuel. As noted above, this increase would be minor and would not result in an inefficient, wasteful, and unnecessary consumption of energy. The City of Rancho Cordova considers this to be **a less than significant impact**.

### **Avoidance, Minimization, and/or Mitigation Measures**

Because the project would not result in significant impacts to climate change, no additional mitigation measures would be required. However, the City would implement the following recommendations and air quality measures to reduce the GHG emissions from the project.

- Landscaping reduces surface warming, and through photosynthesis, decreases CO<sub>2</sub>. The project proposes planting throughout the project [sitearea](#), which would help reduce surface warming in the project [sitearea](#).
- The project would incorporate the use of energy efficient lighting, such as LED traffic signals. LED bulbs—or “balls,” in the stoplight vernacular—cost \$60 to \$70 each but last five to six years, compared to the one-year average lifespan of the incandescent bulbs previously used. The LED balls themselves consume 10 percent of the

electricity of traditional lights, which will also help reduce the projects CO<sub>2</sub> emissions.<sup>4</sup>

- Measures as described in Section 2.2.5 will also be implemented to control and reduce GHG emissions and fuel use during project construction.

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<sup>4</sup> Knoxville Business Journal, "LED Lights Pay for Themselves," May 19, 2008 at <http://www.knoxnews.com/news/2008/may/19/led-traffic-lights-pay-themselves/>.

## Chapter 4. Comments and Coordination

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

### 4.1. Scoping Process

Per the requirements of the California Environmental Quality Act (CEQA), a Notice of Preparation (NOP) for the Rancho Cordova Parkway Interchange project was mailed on September 9, 2005, to elected officials, government and other resource agencies, and all individuals and department entities that may have a concern or interest in the project.

Copies of the NOP and the Initial Study were made available to the public at Rancho Cordova City Hall, 3121 Gold Canal Drive, and the City of Rancho Cordova's (City) website at [http://www.cityofranchocordova.org/html/planning\\_current\\_projects.html](http://www.cityofranchocordova.org/html/planning_current_projects.html). Additionally, the City held an open house to allow interested members of the public to learn more about the project, have questions answered by City staff, and provide input on the project. The public meeting was held on July 27, 2005, at the California State University, Sacramento Aquatic Center at 1901 Hazel Avenue, with approximately 160 members of the public participating. A newsletter was also mailed out to interested parties and available on the City's website dedicated to the project (at <http://www.ranchocordovainterchange.net>) to raise awareness about the project and inform the public of the upcoming Initial Study comment period.

In December 2005, the City prepared a Public Scoping Summary Report that summarized public noticing, communication, and scoping efforts completed for the project up to that date. The Public Scoping Summary Report is included in this Environmental Impact Report/Environmental Assessment (EIR/EA), and provides a full summary of the public house meeting and the comments received. Additional public outreach and communication efforts completed after December 2005 are discussed below in Section 4.3, "Public Participation."

## **4.2. Consultation and Coordination with Public Agencies**

The City and the California Department of Transportation (Caltrans) have coordinated with several public agencies that may have an interest in the project as part of the project development process. Several agencies and organizations were provided notification of the NOP and Initial Study, and provided comments on the scope of the project and its associated environmental documentation. These communications and comments are summarized in the Public Scoping Summary Report prepared for the project.

Additionally, the City focused coordination or communications with the agencies described below.

### **4.2.1. U.S. Army Corps of Engineers**

Melissa Logue, the City's Environmental Project Manager, and Anna Sutton, the U.S. Army Corps of Engineers' (USACE) representative for the project, completed a site visit of the northern portion of the project area (i.e., from the Folsom South Canal to the northern boundary of the project ~~site area~~ adjacent to the Gold River community) on March 14, 2007. During the visit, USACE examined the draft wetland delineation map prepared for the project and compared it to observations made during the field visit. Minor modifications to the wetland delineation map were requested by USACE, and USACE verified the wetland delineation, including requested modifications, on July 19, 2007.

For the southern portion of the project area (i.e., the Rancho Cordova Parkway roadway corridor from south of the Folsom South Canal to White Rock Road), a draft wetland delineation was prepared by ECORP Consultants, Inc. (ECORP) biologists as part of the Westborough at Easton residential development project located on GenCorp/Aerojet property south of U.S. Highway 50. The draft wetland delineation was submitted to USACE for verification on August 25, 2005.

The initial field verification site visit was conducted on September 6, 2006, and included M. Finan and T. Eckerle representing USACE and A. Ballard representing ECORP. Following the initial field verification site visit, ECORP provided supplemental information as requested by USACE in a submittal dated January 29, 2007.

Representatives from USACE (M. Finan) and ECORP (A. Ballard and K. Kwan) attended a meeting at USACE's office on February 6, 2007, to discuss the results of the initial field verification site visit, information provided in the January 29, 2007, submittal, and other aspects of the verification process. ECORP then provided supplemental information as requested by USACE in a submittal dated March 1, 2007.

A follow-up field verification site visit was conducted on October 30, 2007, by M. Finan and L. Gibson from USACE, and A. Ballard and D. Snider from ECORP. A revised wetland delineation was submitted to USACE on December 3, 2007. USACE verification of the wetland delineation for this portion of the project was issued on January 31, 2008.

The City will request a 404 permit to allow fill of wetlands and other waters of the U.S. The City will submit its application for a 404 permit and USACE must issue the 404 permit prior to the start of project construction.

#### **4.2.2. U.S. Fish and Wildlife Service**

The City and Caltrans completed a focused Technical Assistance meeting with the U.S. Fish and Wildlife Service (USFWS) to discuss the project's potential effects to federally protected species and to discuss appropriate minimization and mitigation actions to reduce these effects. The Technical Assistance meeting took place on November 13, 2007, and included representatives from USFWS, Caltrans, and the City. The discussion focused on the project's potential effects to the habitat of the federally protected valley elderberry longhorn beetle, but also included discussion of the project's potential effects to vernal pool invertebrates, and other special-status species.

The project ~~must complete~~has completed Section 7 Consultation and received a Biological Opinion (BO) from USFWS for federally listed special-status species. ~~Section 7 consultation was initiated by Caltrans in July 2011, and consultation must be completed and the Biological Opinion must be issued before Caltrans and the U.S. Bureau of Reclamation (USBR) can issue their National Environmental Policy Act (NEPA) determinations for the project, and before USACE can issue the 404 permit for the project.~~

The following list summarizes the history of consultation with the USFWS:

November 17, 2007 Representatives of the USFWS and the applicant met to discuss the proposed project's potential effects on VELB.

July 11, 2011 The USFWS received the July 8, 2011, letter from Caltrans requesting initiation of formal consultation, which included the July 2011 BA.

May 23, 2012 A site visit was conducted with representatives of the USFWS, Caltrans-, and PMC (consultant) to discuss the proposed project's effects on VELB and the results of surveys for vernal pool

crustaceans. Based on the survey results, Caltrans proposed to revise ~~their~~its initiation letter and BA.

March 20, 2014      The USFWS received the March 18, 2014, revised letter from Caltrans requesting initiation of formal consultation, which included the February 2014 amended BA.

April 16, 2014      The USFWS sent a letter to Caltrans requesting additional information on the proposed project's effects on vernal pool crustaceans, vernal pool grasses, and VELB.

June 20, 2014      The USFWS received the June 18, 2014, letter from Caltrans providing the additional information requested.

July 7, 2014      The USFWS received an email from Caltrans revising the proposed compensation for effects to VELB.

July 15, 2014      The USFWS issued a ~~Biological Opinion (BO)~~ for the project.

#### **4.2.3. U.S. Bureau of Reclamation**

USBR owns the Folsom South Canal. Because the project would cross over the canal, USBR must issue an aerial easement over the canal to allow for project construction.

On March 21, 2007, USBR participated in a federal agency coordination meeting, including Caltrans, the Federal Highway Administration (FHWA), and the City. During the meeting, it was agreed upon that Caltrans, as assigned by FHWA, would serve as the NEPA Lead Agency, and that USBR would be a NEPA cooperating agency in order to issue the aerial easement over the Folsom South Canal required by the project.

#### **4.2.4. California Department of Fish and Wildlife**

Although no additional focused coordination with the California Department of Fish and Wildlife (CDFW) has taken place in the NOP period, future consultation will be required to obtain a 1602 Streambed Alteration Agreement to authorize construction activities within Buffalo Creek. It is not anticipated that consultation with CDFW will be required to authorize incidental take (as defined in the CESA) of state-listed special-status animal species, as avoidance and mitigation measures would serve to avoid direct impacts to these species. However, if a tree supporting an active Swainson's hawk nest could not be

avoided and therefore was identified for removal prior to the young fledging, the project would require a California Fish and Game Code Section 2081 Take Permit.

### **4.3. Public Participation**

Since completion of preliminary scoping and public outreach efforts at the close of 2005, additional public outreach efforts have been made to provide information to area residents and to hear continued concerns about the project.

The City held a second public open house meeting on June 7, 2007, at the California State University, Sacramento Aquatic Center. The purpose of the meeting was to provide an update and present the proposed project alternative to the public. To promote the meeting, the City mailed newsletters to its database of 2,500 contacts, plus an additional 3,600 newsletters to extended contacts; newsletters were hand-delivered to the Rancho Cordova City Council's office, Sacramento County Supervisor Roberta MacGlashan's office, and the front desk of the Rancho Cordova City Hall; media announcements were sent and published in the *Grapevine Independent* and *Sacramento Bee*; and approximately 150 calls were made and 300 e-mails were sent to contacts reminding them to attend. As a result of these efforts, approximately 135 community members attended the meeting.

The meeting was held in an open house format where the community could view displays and talk one-on-one with key project team members. The meeting also included a formal presentation and question-and-answer session. Public input was recorded through comment cards and through notes taken during the question-and-answer portion of the meeting.

A copy of the newsletter mailed to contacts and a summary of the public meeting are included as an appendix to this EIR/EA.

#### **4.3.1. Community Advisory Committee**

The City initiated the formation of a Community Advisory Committee (CAC) to participate in the development of the proposed project. The purpose of the CAC is to provide a forum for representative community members to provide input on aspects of the project design, including aesthetic treatments, landscaping, lighting treatments, and other design features at an early stage of project design where inclusion of these features can be most readily completed.

The first CAC meeting was held at City offices on October 23, 2007. Meeting attendees included representatives from the City of Rancho Cordova Public Works and Planning

Departments, representatives from the local community including residents of the Gold River and Anatolia communities, a representative from Sacramento County Supervisor Roberta MacGlashan's office, and representatives from local businesses including the Mine Shaft property owners and GenCorp.

During the meeting, it was agreed that the attendees of the first meeting would constitute the core CAC group, with up to two additional spots for residents in the Anatolia area to be determined as soon as possible. Other special invited guests may be invited to bring specific technical or advocacy expertise as specific topics are discussed by the group during future meetings. It was agreed that the core CAC should meet bimonthly for one year, with interspersed focus meetings that target specific issues.

Between October 2007 and August 2008, the City of Rancho Cordova Public Works Department held six meetings of the Rancho Cordova Parkway Community Advisory Committee. These meetings were attended by City staff, consultants, property owners or their representatives, community organizations, and community members.

During these meetings, City staff and consultants presented project details and answered questions. Specific topics discussed included the design plans, lighting and landscape plans, and bike connections. Representatives of the Gold River Community Association informed City staff that the potential bikeway connections through Gold River were very troubling to the Gold River Community Association. Furthermore, the Gold River Community Association formally stated that it would not support a project that included bikeway connections through its community.

The CAC meetings provided citizens a forum for providing input into the design and features of the interchange. Commercial property owners voiced concerns regarding the visibility of commercial structures following construction of the interchange. Local residents voiced concerns about car headlights on the interchange that could illuminate nearby homes. Local residents also voiced concerns regarding the safety of children playing near the interchange.

The design and features of the interchange and parkway have been modified iteratively to address public concerns.

# Chapter 5. List of Preparers

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## **5.1. City of Rancho Cordova Public Works Department**

Cyrus Abhar                      City Engineer

Mark Thomas                      Project Manager

## **5.2. City of Rancho Cordova Planning Department**

Paul Junker                      Planning Director

Patrick Angell                      Senior Environmental Manager

Ananya Choudhuri                      Senior Environmental Planner

Melissa D. Logue                      Environmental Project Manager

Jed McLaughlin                      Associate Environmental Planner

John DeMartino                      GIS Technician

Jeannette Owen                      Senior Biologist

Angela Calderaro                      Biologist

## **5.3. Consultants**

### **ENGEO, Inc.—Hazardous Materials Consultant**

Mark M. Gilbert                      Principal

### **Fehr & Peers—Traffic Consultant**

Bob Grandy                      Principal

### **ATS Consulting—Noise Consultant**

Darren Nielson, INCE                      Principal

### **Donald Ballanti—Air Quality Consultant**

Donald Ballanti                      Principal

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## Chapter 6. Distribution List

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The following agencies and organizations received hard or electronic copies of the Draft Environmental Impact Report/Environmental Assessment (EIR/EA). Additional individuals not listed here also received notification of the availability of the Draft EIR/EA through direct mailings of the Notice of Availability or through publication of the Notice of Availability in the local newspaper or through posting on the City of Rancho Cordova's website, per the requirements of Section 15087 of the California Environmental Quality Act (CEQA) Guidelines.

### 6.1. Federal Agencies

**U.S. Army Corps of Engineers**—1325 J Street, Room 1480, Sacramento, CA 95814,  
Attn: Kathy Dadey

**U.S. Bureau of Reclamation**—7794 Folsom Dam Road, Folsom, CA 95630,  
Attn: Chelsea Newton

**U.S. Environmental Protection Agency**—75 Hawthorne Street (WTR-3), San  
Francisco, CA 94105, Attn: Paul Jones

**U.S. Fish and Wildlife Service**—2800 Cottage Way, Suite W-2605, Sacramento, CA  
95825, Attn: Ken Sanchez

### 6.2. State Agencies

**California Department of Fish and Wildlife, Region 2**—1701 Nimbus Road, Rancho  
Cordova, CA 95670

**California Regional Water Quality Control Board, Central Valley Region**—11010 Sun  
Center Drive, Suite 200, Rancho Cordova, CA 95670, Attn: Alexander McDonald and  
Christine Sotelo

**California Transportation Commission**—1120 N Street, Room 2221 (MS-52),  
Sacramento, CA 95814

**Native American Heritage Commission**—915 Capital Mall, Room 364, Sacramento,  
CA 95814, Attn: Debbie Pilas-Treadway

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### **6.3. Local Agencies and Organizations**

**County of Sacramento, Department of Environmental Review and Assessment—827**  
7th Street, Room 220, Sacramento, CA 95814, Attn: Tim Hawkins

**County of Sacramento, Department of Transportation—906 G Street, Suite 510,**  
Sacramento, CA 95814, Attn: Scott Fujikawa

**County Sanitation District 1—10545 Armstrong Avenue, Mather, CA 95655, Attn:**  
Wendy Haggard

**GenCorp/Aerojet—620 Coolidge Drive, Suite 100, Folsom, CA 95630, Attn: Michael**  
Pavik

**Gold River Community Association—Gold River Interchange Committee—11715**  
Gold Country Boulevard, Gold River, CA 95670, Attn: Steve Watanabe

**Roberta MacGlashan, Sacramento County Supervisor, District 4—700 H Street,**  
Suite 2450, Sacramento, CA 95814, Attn: Ted Wolter

**Sacramento Area Bicycle Advocates—909 12th Street, Suite 116, Sacramento, CA**  
95814, Attn: Walt Seifert

**Sacramento Metropolitan Air Quality Management District—777 12th Street, 3rd**  
Floor, Sacramento, CA 95814, Attn: Jeane Borkenhagen

**Sacramento Metropolitan Fire District, Fire Prevention Bureau—3012 Gold Canal**  
Drive, Rancho Cordova, CA 95670, Attn: Michael Stewart

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# Appendix A. California Environmental Quality Act Checklist

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

Supporting documentation of all CEQA checklist determinations is provided in Chapters 2 and 3 of this Environmental Impact Report/Environmental Assessment. Documentation of “no impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts and avoidance, minimization, and/or compensation measures is presented under the appropriate topic headings in Chapters 2 and 3.

<b>AESTHETICS: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>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:</b>				
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"/>

Appendix A • California Environmental Quality Act Checklist

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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"/>

**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:**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**BIOLOGICAL RESOURCES: Would the project:**

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input 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, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

<b>CULTURAL RESOURCES: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>GEOLOGY AND SOILS: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>
<b>GREENHOUSE GAS EMISSIONS: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>HAZARDS AND HAZARDOUS MATERIALS: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>HYDROLOGY AND WATER QUALITY: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>
<b>LAND USE AND PLANNING: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input 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"/>

<b>MINERAL RESOURCES: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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"/>
<b>NOISE: Would the project result in:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>
<b>POPULATION AND HOUSING: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input 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"/>

<b>PUBLIC SERVICES:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>RECREATION:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

<b>TRANSPORTATION/TRAFFIC: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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?

<b>UTILITIES AND SERVICE SYSTEMS: Would the project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>MANDATORY FINDINGS OF SIGNIFICANCE</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix B. Resources Evaluated Relative to the Requirements of Section 4(f)

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This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use. The preliminary *de minimis* use determination for the Folsom South Canal Bike Trail and the Citrus Road Bike Trail is discussed in Section 2.1.2 of the EIR/EA.

### **Regulatory Setting**

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation (Caltrans) under its assumption of responsibility pursuant to 23 U.S. Code (USC) 327.

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC §303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl, and historic sites.”

Section 4(f) specifies that “[t]he Secretary [of Transportation] may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if—

- (1) there is no prudent and feasible alternative to using that land; and
- (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the U.S. Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f).

## Resources Evaluated Relative to Section 4(f)

The following potential recreational resources occur within one-half mile radius of the proposed project and were evaluated relative to Section 4(f):

- Prospect Hill Park, a public park, is located north of the project **sitearea** in the Gold River community. This 7-acre park is on Prospect Hill Drive and Tenderfoot Drive, and includes picnic areas, playing fields, and playgrounds and is maintained by the Cordova Community Parks Department.
- A network of privately owned recreational trails used by bicycles and pedestrians is located within the Gold River Community, some of which lead north and west from Prospect Hill Park and are within a half-mile of the project.
- A Class II bike lane that runs the length of Folsom Boulevard.
- Folsom South Canal Bike Trail (preliminary *de minimis* use determination is contained in Section 2.1.2 of this EIR/EA; no further discussion in this appendix).
- Citrus Road Bike Trail (preliminary *de minimis* use determination is contained in Section 2.1.2 of this EIR/EA; no further discussion in this appendix).

There are no lands of a historic site of national, state, or local significance within the project area that meet the criteria as a Section 4(f) resource.

## Section 4(f) Determinations

### Prospect Hill Park

Prospect Hill Park is a resource eligible for protection under Section 4(f) since it is a publicly owned park that is open to the public. However, the proposed project would not result in a use of Prospect Hill Park under Section 4(f). There would not be an actual use of Prospect Hill Park because no part of the park would be incorporated into the transportation facilities associated with the proposed project.

There would be no constructive use of the Prospect Hill Park because there are no proximity impacts that would rise to the level of substantial impairment. The park is located behind rows of residences and would be shielded by the residences from any potential added traffic noise or visual intrusions. The proposed project would not affect accessibility to the park since the park is far removed by the proposed project and there is no existing entrance or exit point to the park that would be within the proposed project

limits. Likewise, vegetation, wildlife and water quality within the park will not be impacted by the project; again, this is due to the physical distance and intervening development between the proposed project and the park. As discussed in Section 2.2.5, the proposed project would not create any exceedances of state or federal air quality standards during operation. The proposed project may cause short-term construction air quality impacts. Given the physical distance of the park from the proposed project construction and the short-term nature of the construction emissions, the potential air quality impacts would not rise to the level of substantial impairment of the park's facilities, functions, and/or activities. The proposed project also would not temporarily use any of the park as the construction staging and actual construction are not within the limits of the park boundary. Therefore, the proposed project will not cause a constructive use of Prospect Hill Park because the proximity impacts will not substantially impair the protected activities, features, or attributes of the park.

#### Gold River Community Bike Trails

The Gold River Community bike trails are not Section 4(f) resources. Although the public is not prevented from using the trails, the trails are not publicly owned; the trails are owned by the Gold River Community Association.

Therefore, the provisions of Section 4(f) are not triggered.

#### Class II Bike Lane on Folsom Boulevard

According to the Federal Highway Administration (FHWA) Section 4(f) Policy Paper (March 2005), "if the publicly owned bikeway is primarily used for transportation and is an integral part of the local transportation system, the requirements of Section 4(f) would not apply, since it is not a recreational area. Section 4(f) would apply to publicly owned bikeways (or portions thereof) designated or functioning primarily for recreation, unless the official having jurisdiction determines it is not significant for such purpose." Unlike the bicycle *trails* near and within the project area, the Class II bike lane along Folsom Boulevard is not considered a Section 4(f) resource since it is primarily used for transportation (commuter) purposes and is not a recreational facility. Furthermore, even if the bike lane on Folsom Boulevard was designated as primarily recreational, the proposed project would have no actual, constructive, or temporary use of the bike lane since the proposed project will not physically incorporate any of the bike lane into the project; will not substantially impair the protected activities, features, or attributes of the bike lane; and will not close the bike lane during construction.

Therefore, the provisions of Section 4(f) are not triggered.

## Appendix C. Title VI Policy Statement

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**DEPARTMENT OF TRANSPORTATION**

OFFICE OF THE DIRECTOR  
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*Flex your power!  
Be energy efficient!*

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](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 14<sup>th</sup> 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 D. Summary of Relocation Benefits

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## Declaration of Policy

“The purpose of this title is to establish a **uniform policy for fair and equitable treatment** of persons displaced as a result of federal and federally assisted programs in order that such persons **shall not suffer disproportionate injuries** as a result of programs designed for the benefit of the public as a whole.”

The Fifth Amendment to the U.S. Constitution states, “No Person shall...be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation.” The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations, Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

## Fair Housing

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require the City of Rancho Cordova (City) to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee to see that all payments and benefits are fully utilized, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations, and also are given a detailed explanation of the California Department of Transportation (Caltrans) Relocation Assistance Program, with which the City will comply. To avoid loss of possible benefits,

no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a City relocation advisor.

## **Relocation Assistance Advisory Services**

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the City will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. The City will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are “decent, safe and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase. (For business, farm, and nonprofit organization relocation services, see below.)

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federally assisted and state-assisted housing programs, and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe and sanitary” replacement dwelling, available on the market, is offered to them by the City.

## **Residential Relocation Payments**

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

## **Moving Costs**

Any displaced person who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until the City obtains control of the property to be eligible for relocation payments.

## **Purchase Differential**

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

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property) may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is \$22,500. If the total entitlement (without the moving payments) is in excess of \$22,500, the Last Resort Housing Program will be used (see the explanation of the Last Resort Housing Program below).

## **Rent Differential**

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by the City prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when the City determines that the cost to rent a comparable “decent, safe and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the “Down Payment” section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is \$5,250. If the total entitlement for rent supplement exceeds \$5,250, the Last Resort Housing Program will be used.

To receive any relocation benefits, the displaced person must buy or rent and occupy a “decent, safe and sanitary” replacement dwelling within one year from the date the City takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

### **Down Payment**

The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to the City’s initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of \$5,250. The one-year eligibility period in which to purchase and occupy a “decent, safe and sanitary” replacement dwelling will apply.

### **Last Resort Housing**

Federal regulations (49 Code of Federal Regulations 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal aid projects. Except for the amounts of payments and the methods in making them, Last Resort Housing benefits are the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the \$22,500 and \$5,250 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances apply.

After the initiation of negotiations, the City will personally contact the displacees within a reasonable length of time to gather important information, including the following:

- Number of people to be displaced
- Specific arrangements needed to accommodate any family member(s) with special needs
- Financial ability to relocate into comparable replacement dwelling that will adequately house all members of the family
- Preferences in area of relocation
- Location of employment or school

## **Nonresidential Relocation Assistance Program**

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms, and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms, and nonprofit organizations are searching and moving expenses, and possibly reestablishment expenses, or a fixed in-lieu payment instead of any moving, searching, and reestablishment expenses. The payment types can be summarized as follows:

### **Moving Expenses**

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment, and similar business-related property, including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the Right-of-Way contract may not be moved under the Nonresidential Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Actual, direct loss of tangible personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to \$2,500, for reasonable expenses actually incurred.

### **Reestablishment Expenses**

Reestablishment expenses may include expenses related to the operation of the business at the new location, up to \$10,000 for reasonable expenses actually incurred.

### **Fixed In-Lieu Payment**

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than \$1,000 nor more than \$20,000.

## **Additional Information**

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, *except* for any federal law providing local “Section 8” housing programs.

Any person, business, farm, or nonprofit organization that has been refused a relocation payment by the City relocation advisor, or that believes that the payment(s) offered by the agency are inadequate, may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans Right-of-Way. California’s law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

## **The Business Relocation Assistance Program**

*Located on the following pages.*

Your Rights and Benefits as a  
Displacee Under the Uniform  
Relocation Assistance Program  
(Residential)  
2007



*Caltrans*

California Department of Transportation

## **Introduction**

In building a modern transportation system, the displacement of a small percentage of the population is often necessary. However, it is the policy of Caltrans that displaced persons shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole.

Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments.

This brochure provides information about available relocation services and payments. If you are required to move as the result of a Caltrans transportation project, a Relocation Agent will contact you. The Relocation Agent will be able to answer your specific questions and provide additional information.

### **Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 As Amended "The Uniform Act"**

The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

49 Code of Federal Regulations Part 24 implements the "Uniform Act" in accordance with the following relocation assistance objective:

To ensure that persons displaced as a direct result of federal or federally-assisted projects are treated fairly, consistently and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

*While every effort has been made to assure the accuracy of this booklet, it should be understood that it does not have the force and effect of law, rule, or regulation governing the payment of benefits. Should any difference or error occur, the law will take precedence.*

## Some Important Definitions...

Your relocation benefits can be better understood if you become familiar with the following terms:

Comparable Replacement: means a dwelling which is:

- (1) Decent, safe, and sanitary. (See definition below)
- (2) Functionally equivalent to the displaced dwelling.
- (3) Adequate in size to accommodate the family being relocated.
- (4) In an area not subject to unreasonable adverse environmental conditions.
- (5) In a location generally not less desirable than the location of your displacement dwelling with respect to public utilities and commercial and public facilities, and reasonably accessible to the place of-employment.
- (6) On land that is typical in size for residential development with typical improvements.

Decent, Safe and Sanitary (DS&S): Replacement housing must be decent, safe, and sanitary...which means it meets all of the minimum requirements established by federal regulations and conforms to applicable housing and occupancy codes. The dwelling shall:

- (1) Be structurally sound, weather tight, and in good repair.
- (2) Contain a safe electrical wiring system adequate for lighting and other devices.



- (3) Contain a heating system capable of sustaining a healthful temperature (of approximately 70 degrees) for a displaced person, except in those areas where local climatic conditions do not require such a system.
- (4) Be adequate in size with respect to the number of rooms and area of living space needed to accommodate the displaced person. The Caltrans policy is that there will be no more than 2 persons per room unless the room is of adequate size to accommodate the normal bedroom furnishings for the occupants.
- (5) Have a separate, well-lighted and ventilated bathroom that provides privacy to the user and contains a sink, bathtub or shower stall, and a toilet, all in good working order and properly connected to appropriate sources of water and to a sewage drainage system.

*Note: In the case of a housekeeping dwelling, there shall be a kitchen area that contains a fully usable sink, properly connected to potable hot and cold water and to a sewage drainage system, and adequate space and utility service connections for a stove and refrigerator.*

- (6) Contains unobstructed egress to safe, open space at ground level. If the replacement dwelling unit is on the second story or above, with access directly from or through a common corridor, the common corridor must have at least two means of egress.
- (7) *For a displaced person who is handicapped, be free of any barriers which would preclude reasonable ingress, egress, or use of the dwelling by such displaced person.*

Displaced Person or Displacee: Any person who moves from real property or moves personal property from real property as a result of the acquisition of the real property, in whole or in part, or as the result of a written notice from the agency to vacate the real property needed for a transportation project. In the case of a partial acquisition, Caltrans shall determine if a person is displaced as a direct result of the acquisition.

Residents **not lawfully present** in the United States are not eligible to receive relocation payments and assistance

Relocation benefits will vary, depending upon the type and length of occupancy. As a residential displacee, you will be classified as either a:

- An owner occupant of a residential property (includes mobile homes)
- A tenant occupant of a residential property (includes mobile homes and sleeping rooms)

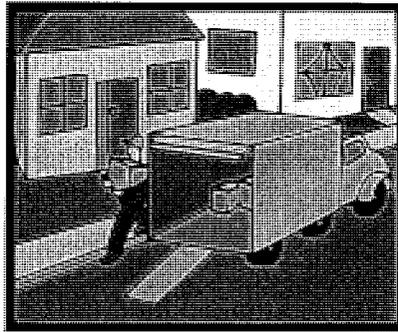
Dwelling: The place of permanent or customary and usual residence of a person, according to local custom or law, including a single family house; a single family unit in a two-family, multi-family, or multi-purpose property; a unit of a condominium or cooperative housing project; a non-housekeeping unit; a mobile home; or any other residential unit.

Owner: A person is considered to have met the requirement to own a dwelling if the person purchases or holds any of the following interests in real property:

- (1) Fee title, a life estate, a land contract, a 99-year lease, oral lease including any options for extension with at least 50 years to run from the date of acquisition; or
- (2) An interest in a cooperative housing project which includes the right to occupy a dwelling; or
- (3) A contract to purchase any interests or estates; or
- (4) Any other interests, including a partial interest, which in the judgment of the agency warrants consideration as ownership.

Tenant: A person who has the temporary use and occupancy of real property owned by another.

# Moving Expenses



If you qualify as a displaced person, you are entitled to reimbursement of your moving costs and certain related expenses incurred in moving. The methods of moving and the various types of moving cost payments are explained. Below.

Displaced individuals and families may choose to be paid on the basis of actual, reasonable moving costs and related expenses, or according to a fixed moving cost schedule. However, to ensure your eligibility and prompt payment of moving expenses, you should contact your Relocation Agent before you move.

## You Can Choose Either:

**Actual Reasonable Moving Costs** - You may be paid for your actual reasonable moving costs and related expenses when a commercial mover performs the move. Reimbursement will be limited to a move of 50 miles or less. Related expenses may include:

- Transportation
- Packing and unpacking personal property.
- Disconnecting and reconnecting household appliances.
- Temporary storage of personal property.
- Insurance while property is in storage or transit.

**OR**

**Fixed Moving Cost Schedule** - You may be paid on the basis of a fixed moving cost schedule. Under this option, you will not be eligible for reimbursement of related expenses listed above. The fixed schedule is designed to cover such expenses.

Examples (Year 2005 Rate):  
4 Rooms - \$ 950  
7 Rooms - \$1,550

If the furniture is moved with the mobile home, the amount of the fixed payment is based on Schedule B.

Examples (Year 200 Rate):  
4 Rooms - \$1,175  
7 Rooms - \$1,900

Under the Fixed Move Schedule for a furnished unit (e.g. you are a tenant of an apartment that is furnished by your landlord) is based on Schedule B.

Example (Year 2005 Rate):  
1 Room - \$400

Under the Fixed Move Schedule, you will not receive any additional payments for temporary storage, lodging, transportation or utility hook-ups.

## **Replacement Housing Payments**

The type of Replacement Housing Payment (RHP) depends on whether you are an owner or a tenant, and the length of occupancy in the property being acquired.

If you are a qualified **owner occupant** of more than 180 days prior to the initiation of negotiations for the acquisition of your property, you may be entitled to a RHP that consists of:

**Price Differential, and**

**Mortgage Differential, and**

**Incidental Expenses;**

**OR**

**Rent Differential**

If you are a qualified **owner occupant** of more than 90 days but less than 180 days, OR you are a qualified **tenant occupant** of at least 90 days, you may be entitled to a RHP as follows:

**Rent Differential**

**OR**

**Downpayment Option**

Length of occupancy simply means counting the number of days that you actually occupied a dwelling before the date of initiation of negotiations by Caltrans for the purchase of the property. The term "initiation of negotiations" means the date Caltrans makes the first personal contact with the owner of real property, or his/ her representative, to give him/her a written offer for the property to be acquired.

*Note: If you have been in occupancy less than 90 days before the initiation of negotiations and the property is subsequently acquired, or if you move onto the property after the initiation of negotiations and you are still in occupancy on the date of acquisition, you may or may not be eligible for a Replacement Housing Payment. Check with your Relocation Agent before you make any decision to vacate your property.*

## **For Owner Occupants of 180 Days or More**

If you qualify as a 180-day owner occupant, you may be eligible -- in addition to the fair market value of your property -- for a Replacement Housing Payment that consists of a Price Differential, Mortgage Differential and/or Incidental Expenses.

The **Price Differential** payment is the amount by which the cost of a replacement dwelling exceeds the acquisition cost of the displacement dwelling. This payment will assist you in purchasing a comparable decent, safe, and sanitary (DS&S) replacement dwelling. Caltrans will compute the maximum payment you may be eligible to receive.

In order to receive the full amount of the calculated price differential, you must spend at least the amount calculated by Caltrans on a replacement property

The **Mortgage Differential** payment will reimburse you for any increased mortgage interest costs you might incur because the interest rate on your new mortgage exceeds the interest rate on the property acquired by Caltrans. The payment computation is complex as it is based on prevailing rates, your existing loan and your new loan. Also, a part of this payment may be prorated such as reimbursement for a portion of your loan origination fees and mortgage points.

To be eligible to receive this payment, the acquired property must have been encumbered by a bona fide mortgage which was a valid lien for at least 180 days prior to the initiation of negotiations.

You may also be reimbursed for any actual and necessary **Incidental Expenses** that you incur in relation to the purchase of your replacement property. These expenses may be those costs for title search, recording fees, credit report, appraisal report, and certain other closing costs associated with the purchase of property. You will not be reimbursed for any recurring costs such as prepaid real estate taxes and property insurance.

If the total amount of your **Replacement Housing Payment** (Price Differential, Mortgage Differential and Incidental Expenses) exceeds \$22,500, the payment must be deposited directly into an escrow account or paid directly to the mortgage company.

## EXAMPLES OF PRICE DIFFERENTIAL PAYMENT COMPUTATION:

Assume that Caltrans purchases your property for \$98,000. After a thorough study of available, decent, safe and sanitary dwellings on the open market, Caltrans determines that a comparable replacement property will cost you \$100,000. If your purchase price is \$100,000, you will receive \$2,000 (see *Example A*).

If your actual purchase price is more than \$100,000, you pay the difference (see *Example B*). If your purchase price is less than \$100,000, the differential payment will be based on actual costs (see *Example C*).

How much of a differential payment you receive depends on how much you actually spend on a replacement dwelling as shown in these examples:

### Caltrans' Computation

Comparable Replacement Property and Mobile Home	\$100,000
Acquisition Price of Your Property and Mobile Home	<u>-\$ 98,000</u>
Maximum Price Differential	\$ 2,000

### Example A

Purchase Price of Replacement	\$100,000
Comparable Replacement Property	\$100,000
Acquisition Price of Your Property	<u>-\$ 98,000</u>
Maximum Price Differential	\$ 2,000

### Example B

Purchase Price of Replacement Property	\$105,000
Comparable Replacement Property	\$100,000
Acquisition Price of Your Property	<u>\$ 98,000</u>
Maximum Price Differential	\$ 2,000
You Must Pay the Additional	\$ 5,000

### Example C

Comparable Replacement Property	\$100,000
Purchase Price of Replacement	\$ 99,000
Acquisition Price of Your Property	<u>\$ 98,000</u>
Price Differential	\$ 1,000

*In Example C you will only receive \$1,000 - not the full amount of the Caltrans "Comparable Replacement Property" because of the "Spend to Get" requirements.*

**IN ORDER FOR A "180 DAY OWNER OCCUPANT" TO RECEIVE THE FULL AMOUNT OF THEIR REPLACEMENT HOUSING PAYMENT** (*Price Differential, Mortgage Differential and Incidental Expenses*), **you must:**

A) Purchase and occupy a DS&S replacement dwelling within one year after the later of:

(1) The date you first receive a notification of an available replacement house, **OR**

(2) The date that Caltrans has paid the acquisition cost of your current dwelling (usually the closing of escrow on State's acquisition),

**AND**

B) Spend at least the amount of the Caltrans "Comparable Replacement Property" for a replacement property,

**AND**

C) File a claim for relocation payments within 18 months of the later:

(1) The date you vacate the property acquired by Caltrans, **OR**

(2) The date that Caltrans has paid the acquisition cost of your current dwelling (usually the close of escrow on State's acquisition)

**You will not be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. Also, you will also receive at least 90 days' written notice before you must move.**

## For Owner Occupants and Tenants of 90 Days or More

If you qualify as a 90-day occupant (either as an owner or tenant), you may be eligible for a Replacement Housing Payment in the form of a Rent Differential.

The **Rent Differential** payment is designed to assist you in renting a comparable decent, safe and sanitary replacement dwelling. The payment is based on the difference between the base monthly Rent for the property acquired by Caltrans (including average monthly cost for utilities) and the lesser of:

- a) The monthly rent and estimated average monthly cost of utilities for a comparable replacement dwelling as determined by Caltrans, **OR**
- b) The monthly rent and estimated average monthly cost of utilities for the decent, safe and sanitary dwelling that you actually rent as a replacement dwelling.

Utility costs are those expenses you incur for heat, lights, water and sewer - regardless of the source (e.g. electricity, propane, and septic system). It does not include garbage, cable, telephone, or security. The utilities at your property are the average costs over the last 12 months. The utilities at the comparable replacement property are the estimated costs for the last 12 months for the type of dwelling and area used in the calculation.

This difference is multiplied by 42 months and may be paid to you in a lump sum payment or in periodic installments in accordance with policy and regulations.

In order to receive the full amount of the calculated Rent Differential, you must spend at least the amount calculated by Caltrans on a replacement property.

This payment may - with certain limitations - be converted to a **Downpayment Option** to assist you in purchasing a replacement property.

### Example of Rent Differential Payment Computation:

After a thorough study of comparable, decent, safe and sanitary dwellings that are available for rent, Caltrans determines that a comparable replacement property will rent for \$325.00 per month.

#### Caltrans Computation (rates are per month)

Rental Rate for Comparable Replacement Property	\$ 325
PLUS average estimated utilities costs	<u>+ 100</u>
TOTAL Cost to Rent Comparable Replacement Property	= \$ 425

Rental Rate for Your Current Property	\$ 300
PLUS average utilities costs	<u>+ 90</u>
TOTAL Cost to Rent Current Property	= \$ 390

Comparable Replacement Property including utilities	\$ 425
Cost you pay to rent your property including utilities	<u>+ 390</u>
Difference	= \$ 35

Multiplied by 42 months = \$1,470 Rent Differential

#### Example A:

Rental Rate for a Replacement Property including Estimated average utilities costs	\$ 525
Comparable Replacement Property including utilities	\$ 425
Cost you pay to rent your property including utilities	\$ 390

Since \$425 is less than \$525, the Rent Differential is based on the difference between \$390 and \$425.

Rent Differential (\$35 x 42 months = \$1,470)

*In this case you spent "at least" the amount of the Comparable Replacement Property on the replacement property and will receive the full amount.*

#### Example B:

Rental Rate for a Replacement Property including Estimated average utilities costs	\$ 400
Comparable Replacement Property including utilities	\$ 425
Cost you pay to rent your property including utilities	\$ 390

Since \$400 is less than \$525, the Rent Differential is based on the difference between \$400 and \$390.

Rent Differential (\$10 x 42 months = \$420)

*In this case you spent "less than" the amount of the Comparable Replacement Property on the replacement property and will not receive the full amount.*

**IN ORDER FOR A "90 DAY OWNER OCCUPANT" TO RECEIVE THE FULL AMOUNT OF THEIR REPLACEMENT HOUSING PAYMENT (Rent Differential), you must:**

A) Rent and occupy a DS&S replacement dwelling within one year after the later of:

- (1) The date you first receive a notification of an available replacement house, **OR**
- (2) The day you vacate the property acquired by Caltrans.

**AND**

B) Spend at least the amount of the Caltrans "Comparable Replacement Property" to rent a replacement property,

**AND**

C) File a claim for relocation payments within 18 months of the later of:

- (1) The date you vacate the property acquired by Caltrans, **OR**
- (2) The date that Caltrans has paid the acquisition cost of your current dwelling (usually the close of escrow on State's acquisition)

**You will not be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. And, you will also receive at least 90 days' written notice before you must move.**

*Note1: The time periods for a 90-day owner occupant are different than a 180-day owner occupant.*

*Note 2: If the Rent Differential is converted to a Downpayment Option, there is no "spend-to-get" requirement.*

## **DOWN PAYMENT OPTION**

The Rent Differential payment may - with certain limitations - be converted to a **Down Payment Option** to assist you in purchasing a replacement property. The down payment option is a direct conversion of the Rent Differential payment.

If the Caltrans calculated Rent Differential is between \$0 and \$5,250, your down payment option will be \$5,250, which can be used towards the purchase of a replacement decent, safe and sanitary dwelling.

If the Rent Differential is over \$5,250, you may be able to convert the entire amount of the Rent Differential to a downpayment option.

The down payment option must be used for the acquisition of the replacement dwelling, plus any eligible incidental expenses (see "180-day Owner Occupants Incidental Expenses") related to the purchase of the property. You must work closely with your Relocation Agent to ensure you can utilize the full amount of your down payment option towards the purchase.

If any portion of the Rent Differential was used prior to the decision to convert to a down payment option, those advance payments will be deducted from the entire benefit.

## **LAST RESORT HOUSING**

On most projects, an adequate supply of housing will be available for sale and for rent, and the benefits provided will be sufficient to enable you to relocate to comparable housing. However, there may be projects in certain locations where the supply of available housing is insufficient to provide the necessary housing for those persons being displaced. In such cases, Caltrans will utilize a method called Last Resort Housing. Last Resort Housing allows Caltrans to construct, rehabilitate or modify housing in order to meet the needs of the people displaced from a project. Caltrans can also pay above the statutory limits of \$5,250 and \$22,500 in order to make available housing affordable.

## Relocation Advisory Assistance



Any individual, family, business or farm displaced by Caltrans shall be offered relocation advisory assistance for the purpose of locating a replacement property. Relocation services are provided by qualified personnel employed by Caltrans. It is their goal and desire to be of service to you and assist in any way possible to help you successfully relocate.

A Relocation Agent from Caltrans will contact you personally. Relocation services and payments will be explained to you in accordance with your eligibility. During the initial interview with you, your housing needs and desires will be determined as well as your need for assistance. You cannot be required to move unless at least one comparable replacement dwelling is made available to you.

You can expect to receive the following services, advice and assistance from your Relocation Agent who will:

- Explain the relocation benefits and eligibility requirements.
- Provide the amount of the replacement housing payments in writing.
- Assure the availability of a comparable property before you move.
- Inspect possible replacement residential units for DS&S compliance.
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location.
- Assist you in completing loan documents, rental applications or Relocation Claims Forms.

AND provide information on:

- Security deposits
- Interest rates and terms
- Typical down payments
- VA and FHA loan requirements
- Real property taxes.
- Consumer education literature on housing

If you desire, your Relocation Agent will give you current listings of other available replacement housing. Transportation will be provided to inspect available housing, especially if you are elderly or handicapped. Though you may use the services of a real estate broker, Caltrans cannot provide a referral.

Your Relocation Agent is familiar with the services provided by others in your community and will provide information on other federal, state, and local housing programs offering assistance to displaced persons. If you have special problems, your Relocation Agent will make every effort to secure the services of those agencies with trained personnel who have the expertise to help you.

If the highway project will require a considerable number of people to be relocated, Caltrans will establish a temporary Relocation Field Office on or near the project. Project relocation offices will be open during convenient hours and evening hours if necessary.

In addition to these services, Caltrans is required to coordinate its relocation activities with other agencies causing displacements to ensure that all persons displaced receive fair and consistent relocation benefits.

Remember - YOUR RELOCATION AGENT is there to offer advice and assistance. Do not hesitate to ask questions. And be sure you fully understand all of your rights and available benefits.



## YOUR RIGHTS AS A DISPLACEE

All eligible displacees have a freedom of choice in the selection of replacement housing, and Caltrans will not require any displaced person to accept a replacement dwelling provided by Caltrans. If you decide not to accept the replacement housing offered by Caltrans, you may secure a replacement dwelling of your choice, providing it meets DS&S housing standards. Caltrans will not pay more than your calculated benefits on any replacement property.

The most important thing to remember is that the replacement dwelling you select must meet the basic "decent, safe, and sanitary" standards. Do not execute a purchase agreement or a rental agreement until a representative from Caltrans has inspected and certified in writing that the dwelling you propose to occupy meets the basic standards. **DO NOT jeopardize** your right to receive a replacement housing payment by moving into a substandard dwelling.

It is important to remember that your relocation benefits will not have an adverse affect on your:

- Social Security Eligibility
- Welfare Eligibility
- Income Taxes

In addition, the Title VIII of the Civil Rights Act of 1968 and later acts and amendments make discriminatory practices in the purchase and rental of most residential units illegal if based on race, color, religion, sex, or national origin.

Whenever possible, minority persons shall be given reasonable opportunities to relocate to decent, safe, and sanitary replacement dwellings, not located in an area of minority concentration, and that is within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Caltrans' Non-Discrimination Policy ensures that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex in compliance with Title VI of the 1964 Civil Rights Act (42 USC 2000d. et seq.).

And you always have the Right to Appeal any decision by Caltrans regarding your relocation benefits and eligibility.

Your Right of Appeal is guaranteed in the "Uniform Act" which states that any person may file an appeal with the head of the responsible agency if that person believes that the agency has failed to properly determine the person's eligibility or the amount of a payment authorized by the Act.

If you indicate your dissatisfaction, either verbally or in writing, Caltrans will assist you in filing an appeal and explain the procedures to be followed. You will be given a prompt and full opportunity to be heard. You have the right to be represented by legal counsel or other representative in connection with the appeal (but solely at your own expense).

Caltrans will consider all pertinent justifications and materials submitted by you and other available information needed to ensure a fair review. Caltrans will provide you with a written determination resulting from the appeal with an explanation of the basis for the decision. If you are still dissatisfied with the relief granted, Caltrans will advise you that you may seek judicial review.

## NOTES

# Appendix E. SHPO Concurrence Letter

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

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December 21, 2007

Reply To: FHWA071120A

Lupe Jimenez  
Chief, Office of Program Project Management S4  
Caltrans District 3  
2800 Gateway Oaks Drive, Suite 100  
Sacramento, CA 95833

Re: Determinations of Eligibility for the Proposed Rancho Cordova Interchange on Highway 50 between Sunrise Boulevard and Hazel Avenue Interchanges, Sacramento County, CA

Dear Mr. Jimenez:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

The California Department of Transportation (Caltrans) is requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA, that the following properties are not eligible for the National Register of Historic Places.

- CA-SAC-308-H (portions of the tailings within the project APE)
- an abandoned railroad grade
- five metal silos of EC-06-10

Based on my review of the submitted documentation, I concur.

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 654-0631 or e-mail at [nlindquist@parks.ca.gov](mailto:nlindquist@parks.ca.gov).

Sincerely,

*Susan K Stratton for*

Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer

## Appendix F. Glossary of Technical Terms

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**Accident rate**—Number of accidents per million vehicles.

**Anadromous**—Migrating up rivers from the sea to breed in freshwater.

**Basin Plan**—A specific plan for control of water quality within one of the nine hydrologic basins of the state under the regulation of a Water Quality Control Board.

**Best management practices (BMP)**—Any program, technology, process, operating method, measure, or device that controls, prevents, removes, or reduces pollution.

**Bypass**—An arterial highway that permits traffic to avoid all or part of a certain area such as an urban area or park.

**Conventional highway**—A highway with no control of access roads onto the highway, which may or may not be divided or have grade separations at interchanges.

**Cooperating agency**—An agency other than the lead agency that has jurisdiction by law or other expertise and is involved in a proposed project.

**Corridor**—A strip of land between two termini within which traffic, topography, environment, and other characteristics are evaluated for transportation purposes.

**Cumulative effects**—Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.

**Decibel**—A numerical expression of the relative loudness of a sound.

**Draft EIR/EA**—Draft Environmental Impact Report (state), Environmental Assessment (federal).

**Drainage basin**—The area in which all surface water will accumulate into one given stream.

**Encroachment (floodplain)**—An action within the limits of the 100-year floodplain.

**Endangered**—A plant or animal species in danger of extinction throughout all or a significant portion of its range.

**Erosion**—The wearing away of the land surface by running water, wind, ice, or other geological agents.

**Evolutionarily Significant Unit (ESU)**—A distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout.

**Expressway**—Arterial highway with at least partial control of access, where limits are placed on the number and type of intersecting streets, roads, and driveways. An expressway may or may not be divided or have separations at intersections.

**Federal Register**—A federal publication that provides official notice of federal administrative hearings and issuance of proposed and final federal administrative rules and regulations.

**Flood Insurance Rate Map (FIRM)**—The official map upon which the Federal Emergency Management Agency has delineated the areas of special flood hazard applicable to a community.

**Floodplain (100-year)**—The area subject to flooding by the flood or tide having a 1 percent chance of being exceeded in any given year.

**Freeway**—A divided arterial highway with full control of access and with grade separations at intersections.

**Grade separation**—A separation utilized when two roads intersect at different grades (vertical elevations); normally provided as part of an interchange, in lieu of an at-grade intersection.

**Habitat**—The place or type of site where a plant or animal naturally or normally lives and grows.

**Hectare**—A unit of surface measure in the metric system, equal to 10,000 square meters.

**Historic Property Survey Report (HPSR)**—A comprehensive evaluation of cultural resources in a given area.

**Initial site assessment**—A California Department of Transportation (Caltrans) term for an initial study to determine hazardous waste issues on a project.

**L<sub>dn</sub>**—A 24-hour L<sub>eq</sub> with adjustments made to reflect the greater sensitivity of most people to noise during the nighttime (10 p.m. to 7 a.m.).

**Least Environmentally Damaging Practicable Alternative (LEDPA)**—The only project alternative for which a permit can be issued under Section 404 of the Clean Water Act. The Clean Water Act Section 404(b)(1) Alternatives Analysis is a specific evaluation to determine the LEDPA to waters of the United States (including wetlands) while meeting the project purpose.

**L<sub>eq</sub>**—A measurement for evaluation of sound impacts, namely the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually one hour).

**Level of service (LOS)**—A measurement of capacity of a roadway.

**Median**—The area of a divided highway that separates the traveled way for traffic in opposite directions.

**Mitigation**—Compensation for an impact by replacement or provision of substitute resources or environments. Mitigation can include avoiding an impact by not taking a certain action, minimizing impacts by limiting the degree of an action, or rectifying an impact by repairing or restoring the affected environment.

**National Flood Insurance Program (NFIP)**—A program that enables interested parties to purchase insurance against loss resulting from physical damage to or loss of real property or personal property related thereto arising from any flood occurring in the United States.

**National Historic Preservation Act (NHPA)**—A law that sets forth national policy and procedures regarding historic properties.

**National Pollutant Discharge Elimination System (NPDES)**—A permit regulated by the Regional Water Quality Control Board that is required if the project involves 1 acre or more of soil disturbance. One condition of this permit is that the contractor submit a Storm Water Pollution Prevention Plan (SWPPP), which is similar to the Water Pollution Control Plan required by Caltrans' Standard Specification 7-I.01G.

**Notice of Determination (NOD)**—A decision statement that indicates that a project has been approved subject to the requirements of the California Environmental Quality Act (CEQA).

**Notice of Intent (NOI)**—Part of the National Environmental Policy Act (NEPA) process; a notice placed in the *Federal Register* to advise the public that an environmental impact statement will be prepared for a project.

**Notice of Preparation (NOP)**—Part of the CEQA process; a notice sent to responsible agencies stating that an environmental impact report will be prepared for a project.

**Postmile (PM)**—A method of identifying a location on the state highway system using miles. When combined with the county and route, identifies unique locations along any state route in terms of miles.

**Practicable**—An action that is capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

**Programmatic Agreement (PA)**—An agreement that implements the Advisory Council’s regulations, streamlining the Section 106 process and delegating certain responsibilities to Caltrans.

**Receptors**—A term used in air quality and noise studies that refers to houses or businesses that could be affected by a project.

**Record of Decision (ROD)**—Part of the NEPA process. A statement that explains why an alternative has been selected and summarizes mitigation and efforts made to minimize environmental impacts.

**Regulatory agency**—An agency that has jurisdiction by law.

**Relocation Assistance Program (RAP)**—A Caltrans program based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Title 49 Code of Federal Regulations (CFR) Part 24.

**Responsible agency**—A public agency other than the lead agency that has responsibility for carrying out or approving a project under CEQA.

**Right-of-way**—A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

**Riparian**—Pertaining to the banks and other adjacent terrestrial (as opposed to aquatic) environs of freshwater bodies, watercourses, estuaries, and surface-emergent aquifers, whose transported freshwater provides soil moisture sufficient in excess of that available through local precipitation to potentially support the growth of vegetation.

**Special-status species**—Plant or animal species that are either (1) federally listed, proposed for, or a candidate for listing as threatened or endangered; (2) bird species protected under the federal Migratory Bird Treaty Act; (3) protected under state endangered species laws and regulations, plant protection laws and regulations, Fish and Wildlife codes, or species of special concern listings and policies; or (4) recognized by national, state, or local environmental organizations (e.g., California Native Plant Society).

**Threatened**—A plant or animal species that is likely to become endangered in the foreseeable future in the absence of special protection.

**Total maximum daily load (TMDL)**—Regulations established by the state Water Resources Control Board designed to improve water quality by controlling the amount of a pollutant entering a water body.

**Underground storage tanks (UST)**—Tanks that typically contain motor vehicle fuel and are placed approximately 3 feet below the ground surface.

**Waters of the United States**—As defined by the U.S. Army Corps of Engineers in 33 CFR 328.3(a):

1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:
  - i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - iii. Which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundment of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs 1–4;
6. The territorial seas;
7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs 1–6.

**Wetlands**—Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas [33 CFR 328.3(b)].

# Appendix G. Avoidance, Minimization, and/or Mitigation Summary

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## Parks and Recreation Facilities

**MM 3.2.2-1** The construction contractor will minimize the duration of the closures of the Folsom South Canal and Citrus Road bicycle trails to the shortest period necessary to complete construction activities. The trails will remain open during regular trail hours (daytime hours) unless construction activities are occurring that require closure of the trails for either physical or public safety reasons. Signage will be placed at the entrances to the Folsom South Canal trail at Hazel Avenue and Sunrise Boulevard and at Folsom Boulevard and Sunrise Boulevard for the Citrus Road bicycle trail to notify users of the closures. This signage will also advise the users of alternative trail routes that they may use. On behalf of Caltrans, the City will notify local bicycling groups and associations prior to the trail closures and notify them of the reopening in an effort to disseminate the information to their members. The features and attributes of the bicycle trail will be fully restored once the construction of the project is complete.

*Timing/Implementation:* During project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

## Utilities/Emergency Services

**MM 3.2.3-3a** During construction, emergency access on public roadways shall be available at all times to maintain emergency vehicle access through the area. At no time during the construction period will the entire width of a public roadway be closed to emergency vehicle traffic.

*Timing/Implementation:* During project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.3-3b** Prior to the start of construction, a Traffic Management Plan shall be developed that would reduce delays and obstructions caused by

construction detours to the greatest extent possible. The plan developers shall coordinate with emergency service providers (i.e., fire and police) during plan development to ensure that traffic control measures proposed in the plan would meet the needs of the service providers. These detours shall be provided to all emergency service entities that service the area prior to their implementation to avoid impacts to emergency response times.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

## **Traffic and Transportation/Pedestrian and Bicycle Facilities**

**MM 3.2.4-1a** A Traffic Management Plan will be prepared and submitted to Caltrans and the City for review and approval before starting construction work. This plan will include such elements as public information/public awareness, the designation of haul routes for construction-related trucks, the location of access to the construction site, any driveway turn restrictions, temporary traffic control devices or flagmen, and designated parking and staging areas for workers and equipment. The Traffic Management Plan will also include measures to prohibit lane closures on U.S. 50 during peak and daytime hours and on holidays. During construction, at least one high-occupancy vehicle lane and three general purpose lanes will remain in operation on U.S. 50 in both directions at peak periods. Full closure of U.S. 50 may be allowed during late evening to early morning hours to construct crossover lanes. Lane closure locations and approval will be coordinated with Caltrans District 3 Traffic Manager prior to performing any lane closures. Construction traffic involving heavy haulers (defined as vehicles with three or more axles) moving fill to and leaving the project site shall operate outside of AM and PM peak traffic hours (defined as between the hours of 7:00 a.m. and 10:00 a.m. and 3:00 p.m. and 6:00 p.m. Monday through Friday). This requirement shall be included in the construction contract. The Traffic Management Plan Data Sheet (April 2010) recommendations are consistent with the above list of measures.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Development Services*

**MM 3.2.4-1b** A Construction Zone Enhanced Enforcement Program may be appropriate during portions of this project. The program involves the presence at all times of the California Highway Patrol in construction zones to remind motorists to slow down and use caution when traveling through work areas. The Caltrans North Region Construction Division would be consulted to decide whether the program is warranted for this project.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Development Services*

## **Visual/Aesthetics**

**MM 3.2.5-1** Wherever feasible, construction materials and debris shall be stored away from highly visible areas, which shall include but not be limited to the U.S. 50 corridor, the Folsom South Canal corridor, and the vacant parcel located north of U.S. 50 adjacent to Tenderfoot Drive. Storage areas shall be fenced and/or covered so as to minimize visibility of these areas to potential viewers.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Development Services*

**MM 3.2.5-2** Construction lighting shall be designed to face downward and away from adjacent properties to the extent feasible. In addition, lighting shall be directed away from traffic lanes and areas where lighting could disturb passing drivers and/or pedestrians. Adjacent residents shall be provided with a City contact number to call in case nighttime lighting becomes disruptive.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Development Services*

**MM 3.2.5-3a** The project shall be designed to incorporate tree protection during construction as provided in City, County, and other applicable tree protection ordinances. Where feasible, existing trees shall be preserved in place, and protection measures shall be incorporated to minimize disturbance around preserved trees during construction.

*Timing/Implementation:* During project design and construction

*Enforcement/Monitoring:* City of Rancho Cordova Development Services

**MM 3.2.5-3b** Where removal is unavoidable, oak and other protected trees shall be relocated or replaced according to City, County, and other applicable tree protection ordinances. Replacement trees shall be planted within the project **sitearea** where feasible to maintain visual quality. Planting of trees within Caltrans right-of-way shall be conducted in coordination with Caltrans biologists and landscape architects.

*Timing/Implementation:* During and after project construction

*Enforcement/Monitoring:* City of Rancho Cordova Development Services

**MM 3.2.5-3c** Where vegetation removal is unavoidable, this vegetation shall be replaced in accordance with City, County, and Caltrans landscaping requirements. In addition, sensitive habitats, such as wetland and riparian habitat, shall be replaced in accordance with applicable regulatory requirements.

*Timing/Implementation:* During and after project construction

*Enforcement/Monitoring:* City of Rancho Cordova Development Services

**MM 3.2.5-4a** Design features shall be incorporated, to soften the visual appearance of the interchange structure and to blend in to the surrounding visual setting. This shall be accomplished using landscaping techniques and aesthetic treatments on the hardscape elements of the project, including the overcrossing structure, ramps, retaining walls, and sound walls. The following options shall be studied and implemented:

- Incorporating planting as a component of noise barrier design.
- Using stamped concrete or other aesthetic treatments on sound walls.
- Replacing concrete sound walls with earthen noise berms.

During consideration and design of potential aesthetic treatments, public outreach efforts shall be conducted with affected viewer groups and other stakeholders. In addition, design options for the remaining right-of-way north of the interchange shall incorporate features, where feasible, to shield the surrounding land uses from views of the interchange and enhance the aesthetics of the area.

*Timing/Implementation: During project design*

*Enforcement/Monitoring: City of Rancho Cordova Planning and Public Works Departments*

**MM 3.2.5-4b**

The railing and lighting design for the project shall incorporate features that are consistent with City, County, and Caltrans policies and that meet the desired visual character of the area. To the extent feasible, an unobtrusive railing design should be chosen that minimizes obstruction of existing views. During consideration and design of potential aesthetic treatments, public outreach efforts shall be conducted with affected viewer groups and other stakeholders.

*Timing/Implementation: During project design*

*Enforcement/Monitoring: City of Rancho Cordova Planning and Public Works Departments*

**MM 3.2.5-4c**

During project design, the City shall coordinate with Caltrans landscape architects and the project development team to ensure that chosen aesthetic treatments and landscaping components are incorporated into the plans, specifications, and estimates. This should include making final decisions on:

- Type, treatment, and color for barriers and walls.

- Architectural styles for bridge structures and miscellaneous hardware.
- Contour grading plans that incorporate slope rounding.
- Landscape treatment (e.g., planting for screening, revegetation).

During identification of final design details, public outreach efforts shall be conducted with affected viewer groups and other stakeholders.

*Timing/Implementation:* During project design

*Enforcement/Monitoring:* City of Rancho Cordova Planning and Public Works Departments

**MM 3.2.5-5**

Lighting poles and signs shall be designed to minimize reflection to the extent feasible. All surfaces shall be painted with an antireflective coating or otherwise treated to reduce light reflection.

*Timing/Implementation:* During project design

*Enforcement/Monitoring:* City of Rancho Cordova Planning and Public Works Departments

**MM 3.2.5-6a**

The City shall conduct a photometric study to identify the potential for the lightshed of the project to affect adjacent residential properties. Because it is difficult to measure the lightshed of the project until specific lighting types and measurements have been identified, the study shall be conducted during final project design. Based on the results of the study, lighting types and shading methods shall be incorporated into the project to ensure that lighting impacts are reduced. Methods shall include focusing lighting away from residential properties, using hooded lighting, and reducing the height of the lighting to the extent feasible, in addition to other feasible methods.

*Timing/Implementation:* During project design

*Enforcement/Monitoring:* City of Rancho Cordova Planning and Public Works Departments

**MM 3.2.5-6b** The City shall also include landscape features that will shield adjacent residential properties from “spillover” lighting and overall nighttime glare from vehicles using the overcrossing structure to the greatest extent feasible. Shielding landscaping may include additional tall tree or vegetation planting in areas between the overcrossing structure and adjacent residential properties. During identification of final design details, the City shall conduct public outreach efforts with affected residents and stakeholders to obtain input on desired shielding landscaping materials and techniques.

*Timing/Implementation:* During project design

*Enforcement/Monitoring:* City of Rancho Cordova Planning and Public Works Departments

## Cultural Resources

**MM 3.2.6-2a** If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area shall be discontinued and diverted until a qualified archaeologist can assess the nature and significance of the find. Caltrans shall be notified of any discoveries made within the Caltrans right-of-way. If the archeologist determines that the discovered resource is significant, the resource shall be either avoided or any impacts on the resource mitigated to less than significant in accordance with CEQA standards (see Public Resources Code section 21083.2 and CEQA Guidelines section 15064.5).

*Timing/Implementation:* During project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.6-2b** If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and that the County Coroner shall be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant. At

this time, the person who discovered the remains will contact the City's Environmental Monitoring staff so that they and City cultural resources staff may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable. Caltrans will be notified if cultural remains or human remains are found within Caltrans' right-of-way.

*Timing/Implementation:*     *During project construction*

*Enforcement/Monitoring:*   *City of Rancho Cordova Public Works  
Department*

## Hydrology and Floodplain

**MM 3.2.29**     Any dewatering activities during construction would be in compliance with applicable National Pollutant Discharge Elimination System (NPDES) permits and other water quality regulations.

Construction BMPs would be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved project Storm Water Pollution Prevention Plan (SWPPPs); however, these measures would be designed to accommodate drainage requirements and avoid on- and off-site flooding. With implementation of BMPs required for NPDES Construction General Permit and other applicable water quality regulations (joint NPDES permit for MS4s in their municipal jurisdictions [NPDES No. CAS082597]), effects from short-term flooding during project construction would be negligible.

*Timing/Implementation:*     *During project construction*

*Enforcement/Monitoring:*   *City of Rancho Cordova Public Works  
Department*

## Water Quality and Stormwater Runoff

**MM 3.2.8-1a**     Any dewatering activities during construction would be in compliance with applicable NPDES permits and other water quality regulations.

Construction BMPs would be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and finalized within the approved project SWPPPs; however, these measures would be designed to accommodate drainage requirements and avoid on- and off-site flooding. With implementation of BMPs required for NPDES Construction General Permit and other applicable water quality regulations (joint NPDES permit for MS4s in their municipal jurisdictions [NPDES No. CAS082597]), effects from short-term flooding during project construction would be negligible.

Timing/Implementation: During project construction

Enforcement/Monitoring: City of Rancho Cordova Public Works Department

**MM 3.2.8-1b**

Construction BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. The project SWPPP will require the contractor to identify the location of designated staging areas, would include specific requirements for equipment fueling, maintenance, and storage processes, and will include stormwater BMPs to prevent the release of polluted stormwater into adjacent waterways. With adherence to the NPDES requirements and implementation of applicable BMPs, short-term impacts to water quality related to materials discharge will be adequately controlled during construction.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.8-1c**

BMPs will be implemented for the project in adherence to all applicable NPDES requirements and other water quality regulations to minimize impacts to water quality. Specific BMPs to be used during construction would be identified as project design advances and are finalized within the approved project SWPPP based on the Risk Level determined under the NPDES General Construction Permit guidelines;

however, temporary concrete washouts, stabilized construction entrance/exits, silt fencing, sand bag barriers, gravel bag berms, and fiber rolls have been identified as potential construction site BMPs to control increased erosion and sedimentation and to prevent construction site runoff from entering adjacent waterways. In addition, ground disturbance within Buffalo Creek Channel associated with the culvert extension will occur during the dry season to minimize siltation impacts to flowing water. The General Construction Permit lists the following requirements for Risk Level 2, the most likely risk level for this project, for minimizing sediment, erosion, and water quality impacts:

- Good Site “Housekeeping”
- Sediment Controls
- Run-on and Run-off Controls
- Inspection, Maintenance, and Repair of BMPs
- Numeric Action Levels
  - Turbidity: 250 Nephelometric Turbidity Units
  - pH: 6.5–8.5
- Rain Event Action Plan
- Effluent Monitoring

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.8-2**

A geotechnical analysis shall be completed to identify the existing depth to groundwater in locations where cast-in-drilled-hole piles would be required or where other activities with the potential to contact groundwater would occur. If encounters with groundwater are anticipated, measures shall be incorporated into the construction specifications in compliance with applicable regulations that shall

ensure worker safety and ensure that groundwater contact with adjacent waterways is avoided.

*Timing/Implementation:* Prior to project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.8-3a**

Prior to project construction, the City shall coordinate with Aerojet and applicable regulatory agencies to identify any effects to groundwater extraction wells or monitoring wells that would occur during construction. If it is found that project construction would disrupt groundwater monitoring or extraction activities, the City and Aerojet shall identify and implement measures in the construction plans and specifications that will ensure that necessary extraction and monitoring activities can be maintained at all times during project construction. Any dewatering activities during construction would be in compliance with applicable ~~National Pollutant Discharge Elimination System (NPDES)~~ permits and other water quality regulations.

*Timing/Implementation:* Prior to project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.8-3b**

Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and would be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required by NPDES permits, and with adherence to other applicable water quality regulations, pollutant levels in stormwater runoff would not be expected to exceed applicable water quality standards.

If any existing extraction or monitoring wells must be permanently relocated as a result of the project, the City shall coordinate with Aerojet and applicable regulatory agencies to design and install these

wells in a manner that ensures that required extraction and monitoring activities are maintained at all times.

*Timing/Implementation:* During project design and construction

*Responsible Agency:* City of Rancho Cordova Public Works  
Department

**MM 3.2.8-5a** Treatment BMPs will be implemented as required by NPDES permits to remove pollutants from runoff water. Specific BMPs would be identified as project design advances and would be identified in final design plans; however, detention basins, swales, and other on-site measures have been identified as potential BMPs to remove pollutants from runoff water. With implementation of BMPs required by NPDES permits, and with adherence to other applicable water quality regulations, pollutant levels in stormwater runoff would not be expected to exceed applicable water quality standards.

*Timing/Implementation:* Prior to project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works  
Department

**MM 3.2.8-5b** To accommodate the additional runoff, the project will include a new drainage system that will collect runoff water from the interchange facility and infiltrate it into the ground. The new drainage system will be designed to accommodate all collected runoff and will ensure that the runoff would not enter the Folsom South Canal. Design measures will be incorporated into slopes, benching, rounding, and terraces to minimize concentrated flows. Where feasible, 4:1 slopes will be included in the project design to minimize the potential for concentrated flows. Revegetation and landscaping would also be incorporated into design to reduce water flow and erosion potential.

*Timing/Implementation:* Prior to project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works  
Department

**MM 3.2.8-5c** The proposed project would implement Low Impact Development (LID) methods and features where possible. Emphasis to date on BMP

selection has been focused on the siting of BMPs at specific locations to provide direct source control or end-of-pipe treatment. Trends in sustainability have shown that an integrated system of decentralized, small-scale control measures that encourages infiltration, filtration, storage, evaporation, and detention of runoff to mimic natural hydrology can be more efficient in reducing the volume and rate of stormwater runoff. Some potential LID methods include grassy swales along U.S. 50 adjacent to the freeway and bioretention cells along the overcrossing structure where trees are located. A portion of the pavement runoff could also be directed to tree boxes to provide irrigation and filtration. Permeable pavers could also be used for sidewalks and bike paths on embankment fills to allow water infiltration. The design team will continue to look at other LID opportunities during the design process.

*Timing/Implementation: Prior to project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

## **Geology/Soils/Seismic/Topography**

**MM 3.2.9-3** Prior to approval of grading or improvement plans, whichever occurs first, the City of Rancho Cordova shall conduct a soil sample and laboratory test to determine the expansion potential and stability of the soil for development of the project site. If it is determined that the area contains expansive soils, one or more of the following mitigation measures shall be employed to stabilize the area affected by expansive soils:

- Expansive soils shall be excavated and replaced with nonexpansive materials. The required depth of excavation shall be specified by a registered civil engineer based on actual soil conditions.
- Expansive soils shall be treated in place by mixing them with lime. Lime treatment alters the chemical composition of the expansive clay minerals such that the soil becomes nonexpansive.

- Other engineering practices for mitigation of expansive soil conditions considered appropriate by Caltrans and the City of Rancho Cordova Public Works Department shall be implemented.

*Timing/Implementation: Prior to approval of grading plans*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

## **Hazardous Waste/Materials**

**MM 3.2.10-1** Appropriate BMPs will be incorporated into project plans to protect worker safety, and applicable hazardous materials regulations pertaining to collection, testing, and disposal of contaminated groundwater will be followed. Avoidance, minimization, and mitigation measures outlined in Section 2.2.2, “Water Quality and Stormwater Runoff,” will be implemented to further reduce the potential for accidental contact with, or release of, contaminated groundwater or soils.

In addition, as discussed in Section 2.2.2, measures shall be incorporated into the construction plans that comply with applicable regulations that shall ensure worker safety and ensure that groundwater contact with adjacent waterways is avoided.

*Timing/Implementation: Prior to approval of grading plans*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.10-2a** During ~~project~~ development/final design of the project, Phase II soil sampling shall be conducted within areas of potential aerially deposited lead. If lead is detected in the soil at concentrations that could pose a health hazard and/or violate local, state, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Rancho Cordova, Sacramento County, and Caltrans. Project construction shall not commence until the site has been remediated and is cleared for construction. If signs of potential contamination (e.g., odors, discolored soil) are observed during construction activity in areas

where Phase II sampling was not conducted, sampling and analysis and appropriate remediation shall be conducted.

*Timing/Implementation:* During project design and construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.10-2b** If yellow thermoplastic striping is to be removed separately from pavement during construction, the City shall require the construction contractor to prepare a project-specific Lead Compliance Plan to prevent or minimize worker exposure to lead while handling removed yellow thermoplastic and yellow paint residue. The plan shall be in accordance with City of Rancho Cordova, Sacramento County, and Caltrans requirements.

Before submission to the City, the plan shall be approved by an industrial hygienist certified in comprehensive practice by the American Board of Industrial Hygiene. The plan shall be submitted to the City for approval at least seven days prior to beginning removal of yellow thermoplastic and yellow paint. The yellow thermoplastic striping shall be removed and disposed of in accordance with the Caltrans Standard Specifications Standard Special Provisions for removal of yellow traffic stripe and pavement markings.

*Timing/Implementation:* During project design and construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.10-3** If existing transformers are removed as part of the proposed project, the City shall coordinate with the utility companies during final design and ensure that transformers are tested in accordance with applicable regulations. If PCBs are detected in materials to be removed, these materials shall be disposed of in accordance with applicable regulations.

*Timing/Implementation:* During project design

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.10-4** The use of and handling of hazardous materials during construction would be in accordance with applicable federal, state, and local laws including California Occupational Safety and Health Administration requirements.

Prior to start of construction, the construction contractor shall designate staging areas where fueling and oil-changing activities will take place. The staging areas shall be reviewed and approved by the City's Environmental Mitigation Monitor and the Storm Water Pollution and Prevention Manager prior to the start of construction. No fueling or oil-changing activities shall be permitted outside the designated staging areas. The staging areas, as much as practicable, shall be located on level terrain and away from sensitive land uses such as residences, day care facilities, and schools. Staging areas shall not be located near any stream, channel, wetlands, or other sensitive biological or water resources. The proposed staging areas shall be identified in the SWPPP.

*Timing/Implementation: Prior to start of construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.10-5** If contaminated soil is encountered during excavation or grading, the construction contractor shall stop work and contact an environmental hazardous materials professional to conduct an on-site assessment. If the materials are determined to pose a risk to the public or construction workers, the construction contractor shall prepare and submit a remediation plan to the appropriate agency and comply with all federal, state, and local laws. Soil remediation methods could include excavation and on-site treatment, excavation and off-site treatment or disposal, and/or treatment without excavation. Construction plans shall be modified or postponed to ensure that construction will not inhibit remediation activities and will not expose the public or construction workers to hazardous conditions.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.10-7a** Plans for alternative emergency access would be provided to the City for approval prior to the start of construction through the creation of a Traffic Management Plan. The contractor would be required to submit an emergency access plan to accommodate emergency traffic during the construction period, and this plan would be provided to emergency agencies (i.e., fire and police departments) prior to the start of construction.

*Timing/Implementation: Prior to the start of construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.10-7b** The City will require the construction contractor to clear the staging and development areas of the project site of all dried vegetation or other materials that could serve as fire fuel and require that construction equipment be equipped with spark arresters.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

## **Air Quality**

**MM 3.2.11-1a** The following measures shall be incorporated into all construction contract documents with respect to control of fugitive dust:

- Strict compliance with SMAQMD's Rule 403 shall be written into construction contracts.
- Water all exposed surfaces two times daily, or as necessary to maintain continued moist soil. Exposed surfaces include but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.

- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.

*Timing/Implementation:* During completion of project specification and during project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

**MM 3.2.11-1b** The following measures shall be incorporated into all construction contract documents with respect to control of equipment/vehicle particulate emissions:

- Contractors shall minimize idling time either by shuttling equipment off when not in use or reducing the time of idling to five minutes (as required by the state airborne toxics control measure [Title 13, Section 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Contractors shall maintain all construction equipment in proper working condition according to the manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
- Contractors shall ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and SMAQMD shall be notified within 48 hours of identification of noncompliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted to City Planning and SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of

vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure shall supersede other SMAQMD or state rules or regulations.

- Contractors shall provide a plan for approval by SMAQMD demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet average 20 percent NO<sub>x</sub> reduction and 45 percent particulate reduction<sup>1</sup> compared to the most recent California Air Resources Board (CARB) fleet average at time of construction. The contractor shall submit to the SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. On or after January 1, 2015, require all off-road diesel-powered construction equipment greater than 50 hp to meet the Tier 3 emission standards, where available. In addition, require all construction equipment to be outfitted with control technologies certified by California-ARB. Require any emissions control device used by the contractor to achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by California ARB regulations. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the SMAQMD with the anticipated construction

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<sup>1</sup> Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. However, this requirement is neither supported by Caltrans nor FHWA due to the state's obligations under the California Public Contract Code regarding restraint of competitive bidding process resulting from the requirement that newer equipment be used, thereby creating a potential disadvantage in bidding opportunities for smaller businesses that do not have inventories of such equipment.

timeline including start date and name and phone number of the project manager and on-site foreman.

If at the time of construction, the SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with SMAQMD prior to construction will be necessary to make this determination.

*Timing/Implementation: During completion of project specifications and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.11-2**

Implementation of measures outlined above to reduce the project's exhaust particulate matter emissions would also serve to reduce the project's emission of TACs during project construction. Additionally, the following measure shall be implemented:

The following measures shall be incorporated into all construction contract documents with respect to control of equipment/vehicle particulate emissions:

- ~~Any pre-1996 off road vehicles or equipment shall be fuelled with emulsified fuel designed to reduce emissions.~~
- Where feasible, electrical or non-diesel-powered equipment will be used.

The above measures would reduce exhaust particulate emissions by a minimum of 45 percent.

*Timing/Implementation: During completion of project specifications and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.11-4** Implementation of the measures above identified to reduce the project's fugitive dust particular matter and exhaust particulate matter would also serve to reduce impacts resulting from NOx emissions by approximately 20 percent. After mitigation, emissions would still exceed the SMAQMD threshold of 85 pounds per day.

SMAQMD has instituted a voluntary program for off-site mitigation for construction NOx impacts. The project's construction emissions could be reduced to less than 85 pounds per day through the purchase of an offset created by the SMAQMD. Fees collected in the program are used to reduce emissions within the region through engine repowers, retrofits of existing equipment with new emission control technology, and development of cleaner fuel alternatives for construction equipment. As of this writing, the mitigation fee rate was \$16,640 per ton of emissions.

SMAQMD has developed a mitigation fee calculator to estimate the necessary mitigation fee necessary for a construction project. The mitigation fee calculator has been applied to Alternative 3 under the worst-case assumption that interchange construction and construction of the Rancho Cordova Parkway would occur simultaneously. Based on an estimated 15-month construction period and emissions estimates generated by SMAQMD's Road Construction Emissions Model, the estimated fee to reduce this impact to a less than significant level is roughly \$503,000. This estimate is based on current knowledge of project scheduling and current mitigation fee. The Lead Agency will consult with the SMAQMD prior to the start of construction activities to recalculate the mitigation fee. The Lead Agency shall pay the recalculated fee amount.

*Timing/Implementation: During completion of project specifications and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

## Noise

**MM 3.2.12-5** To minimize potential construction noise impacts, the contractor shall:

- Conform to Section 14-8, “Noise and Vibration,” in Caltrans Standard Specifications.
- Adhere to local ordinances and codes relating to construction equipment and sound levels.
- Install and maintain effective mufflers on construction equipment.
- Locate equipment and staging areas as far from residences as possible.
- Limit unnecessary idling of equipment.
- Limit construction activity to the hours of 7:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 6:00 p.m. weekends when construction is conducted within 100 feet of residences, i.e., the westbound on- and off-ramps (north side of U.S. 50), or during any pile-driving activities.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

## **Wetlands and other Waters**

**MM 3.2.14-2** In order to avoid and minimize project effects to the vernal pool, the following measures shall be implemented during construction activities:

- During project development, the size of the work area limits will be minimized ~~reduced to the smallest amount feasible~~ within sensitive habitat areas.
- Additional impacts from vernal pool disturbance will be avoided by installing protective Environmentally Sensitive Area fencing and silt fencing between the vernal pool and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the vernal pool during construction.

- Standard BMPs will be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.14-4a** As permanent and temporary direct impacts would occur to Buffalo Creek, which is a USACE jurisdictional feature, compensatory mitigation for direct impacts would be required, as follows.

The City will execute a revegetation plan with three years of monitoring for the temporary degradation of intermittent creek habitat. The specific goals and criteria will aim to fully restore the functions and values to levels that are statistically identical or superior to that of adjacent habitat.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.14-4b** The City shall obtain all necessary permits required by the CWA and a Streambed Alteration Agreement from CDFW and implement all conditions specified in those permits:

- Section 404 permit from USACE for fill of waters of the United States, including wetlands.
- Section 401 water quality waiver or certification from RWQCB.
- Streambed Alteration Agreement from CDFW.

*Timing/Implementation: Prior to project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department, USACE, CDFW, and RWQCB*

**MM 3.2.14-4c** The City shall ensure that the proposed project would result in no net loss of waters of the U.S. Where a Section 404 Permit has been issued by the USACE, or an application has been made to obtain a Section 404 Permit, the Mitigation and Management Plan required by that permit or proposed to satisfy the requirements of the USACE for granting a permit, may be submitted for purposes of achieving a no net loss of wetlands. Compensatory mitigation may consist of:

(1) obtaining credits from a mitigation bank; (2) making a payment to an in-lieu fee program that will conduct wetland, stream or other aquatic resource restoration, creation, enhancement, or preservation activities; these programs are generally administered by government agencies or nonprofit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement and/or preservation activity. This last type of compensatory mitigation may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project proponent/permit applicant retains responsibility for the implementation and success of the mitigation project.

*Timing/Implementation: After completion of project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.14-4d** The following measures will be implemented as part of the proposed project to avoid and minimize project effects to Buffalo Creek:

- During project development, the size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas. The interchange structure will be elevated, resulting in avoidance of any fill of intermittent creek habitat where it lies south of U.S. 50.
- Impacts to the water quality of the intermittent creek within the BSA will be minimized by implementing BMPs and an erosion

and sediment control plan that minimize impacts to water quality within the creek.

- Measures to avoid temporary and indirect impacts would include fencing off the intermittent creek with orange construction fencing and limiting construction equipment access across the channel within the BSA.
- To reduce potential impacts to vegetation and aquatic habitat associated with accidental spills of pollutants (e.g., fuel, oil, grease), the construction contractor will implement appropriate hazardous materials management practices to reduce the possibility of chemical spills or releases of contaminants, including any non-stormwater discharge.

In addition, standard staging area practices for sediment-tracking reduction will also be implemented where necessary, including vehicle washing and street sweeping.

*Timing/Implementation: Prior to start of project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and USACE*

## **Plant Species**

**MM 3.2.15-2** The following measures from the Sacramento County Tree Preservation Ordinance (County Code Title 19.12), which was adopted by the City of Rancho Cordova, will be implemented as part of the proposed project to avoid and minimize damage to preserved trees during project construction:

- During project development, the size of the work area limits will be reduced and minimized to the smallest amount feasible within sensitive habitat areas.
- A circle with a radius measurement from the trunk of the tree to the tip of its longest limb shall constitute the dripline protection area of each tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of

the root zone and defines the minimum protected area of each tree. Removing limbs that make up the dripline does not change the protected area.

- Protective fencing shall be installed at the driplines of the protected trees prior to the start of any construction work (including grading or placement of vehicles on site), in order to avoid damage to the trees and their root systems. This fencing may be installed around the outermost dripline of clusters of trees proposed for protection, rather than individual trees. Fencing shall be shown on all project plans.
- No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the driplines of protected trees. A laminated sign indicating such shall be attached to fencing surrounding trees on-site.
- No grading (grade cuts or fills) shall be allowed within the driplines of protected trees.
- Drainage patterns on the site shall not be modified so that water collects or stands within, or is diverted across, the dripline of any protected tree.
- No trenching shall be allowed within the driplines of protected trees. If it is absolutely necessary to install underground utilities within the dripline of a protected tree, the utility line shall be bored and jacked under the supervision of a certified arborist.
- The construction of impervious surfaces within the driplines of protected trees shall be stringently minimized. When it is absolutely necessary, a piped aeration system shall be installed under the supervision of a certified arborist. Wherever possible, pervious concrete shall be used as an alternative to traditional concrete, when it is required under tree driplines.
- No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the driplines

of protected trees. An aboveground drip irrigation system is recommended.

- Landscaping beneath protected trees may include non-plant materials such as bark mulch or wood chips. The only plant species that shall be planted within the driplines of protected trees are those that are tolerant of the natural environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.
- Any protected trees on the site, which require pruning, shall be pruned by an arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute A300 pruning standards and the International Society of Arboriculture’s “Tree Pruning Guidelines.”
- No signs, ropes, cables (except those which may be installed by an arborist to provide limb support), or any other items shall be attached to the protected trees.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works and Planning Departments*

**MM 3.2.15-3a** Any trees protected by the Tree Preservation Ordinance or the Rancho Cordova General Plan requiring removal for project construction will either be compensated for by replacement, purchase of habitat conservation areas to protect existing woodland habitats, through contribution to tree planting programs or in-lieu fee programs in the area, or through some combination of these options to achieve no net loss of trees from the project.

Prior to any groundbreaking activities, the City Planning Department will determine which trees would be suitable candidates for protection and which trees will need to be mitigated if removed. Trees that would be removed or otherwise harmed by the project shall be mitigated for as described below.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works and Planning Departments*

**MM 3.2.15-3b** Prior to any groundbreaking activity, a Replacement Tree Planting Plan shall be prepared by an arborist or landscape architect. The Replacement Tree Planting Plan(s) shall follow the standards set forth in the City of Rancho Cordova Municipal Code and shall include the following minimum elements:

- Species, size, and locations of all replacement plantings.
- Method of irrigation.
- A tree planting detail, including a 10-foot depth-boring hole to provide for adequate drainage.
- Planting, irrigation, and maintenance schedules.
- Identification of the maintenance entity and a written agreement with that entity, if other than the City of Rancho Cordova, to provide care and irrigation of the trees for a five-year establishment period and to replace any of the replacement trees which do not survive during that period.

Replacement inches will be calculated based on the following size categories.

- One J-pot = 0.5 inch dbh
- One 15-gallon tree = 1 inch dbh
- One 24-inch box tree = 2 inches dbh
- One 36-inch box tree = 3 inches dbh

In order to meet some of the mitigation requirements, existing native trees on-site proposed for removal that are less than 6 inches dbh and are in fair or better condition may be transplanted to the new planting area. If existing trees are successfully transplanted, mitigation requirements may be reduced.

No replacement tree shall be planted within 15 feet of a building foundation or other known areas of future ground disturbance. The minimum spacing for replacement trees shall be 15 feet on center. J-pots may be planted closer at the discretion of the City Arborist or the consulting arborist.

*Timing/Implementation:* Prior to project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department

## Animal Species

**MM 3.2.16-1** The following measures will be implemented as part of the proposed project to avoid and minimize project effects to aquatic habitat (vernal pools and isolated seasonal wetlands) supporting special-status aquatic invertebrate species:

- During project development, the size of the work area limits will be minimized~~reduced to the smallest amount feasible~~ within sensitive habitat areas.
- ~~Temporary impacts from aquatic habitat disturbance will be avoided by installing protective silt fencing between the aquatic habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the aquatic habitats during construction.~~
- Orange Environmentally Sensitive Area (ESA) fencing and silt fencing will be installed between the construction limits and the seasonal wetlands and vernal pool.
- Appropriate hazardous materials management practices will be implemented to reduce the possibility of chemical spills or releases of contaminants.
- Standard BMPs will be implemented during and after construction to protect water quality in sensitive habitat areas during construction, including: appropriate hazardous materials management practices to reduce the possibility of chemical spills

or releases of contaminants; and standard staging area practices for sediment-tracking reduction such as vehicle washing and street-sweeping.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and USFW.*

**MM 3.2.16-5a** Prior to the start of construction activities that would disturb western spadefoot toad habitat, a biological monitor shall survey for the presence of adult toads. If adult toads are present, then they shall be relocated prior to disturbance of habitat, ~~if feasible~~. This relocation shall be done in consultation with CDFW.

*Timing/Implementation: Prior to project construction in potential toad habitat areas*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and CDFW*

**MM 3.2.16-5b** The City shall provide a Worker Environmental Awareness Program (WEAP) for all employees working within the BSA so that they are aware of resources in the area, required measures and practices for protecting biological resources, and contacts and procedures in case wildlife is injured or encountered during construction.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department*

**MM 3.2.16-7** The City shall include information on the western pond turtle in its WEAP for all employees working within the BSA as described in the mitigation measure above.

Prior to the start of construction activities that would disturb western pond turtle habitat, a biological monitor shall survey for the presence of turtles. If turtles are present, they shall be relocated prior to disturbance of habitat. This relocation shall be done in consultation with CDFW.

*Timing/Implementation: Prior to project construction in potential turtle habitat areas*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and CDFW*

**MM 3.2.16-9a** A qualified biologist shall perform burrowing owl surveys in order to determine burrow locations within 30 days prior to construction using CDFW and California Burrowing Owl Consortium guidelines. The breeding period for burrowing owls is between February 1 and August 31 with the peak being between April 15 and July 15 (the recommended survey window). If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed.

- Surveys for occupied burrows shall be completed within all construction areas and within 250 feet out from the proposed project work areas (where possible and appropriate based on habitat). All occupied burrows will be mapped on an aerial photo.
- At least 15 days prior to the expected start of any project-related ground disturbance activities or the restart of activities, the City shall provide the burrowing owl survey report and mapping to the CDFW.

*Timing/Implementation: Prior to project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and CDFW*

**MM 3.2.16-9b** If burrowing owls are identified during preconstruction surveys, the following actions shall be taken by the City to offset impacts during construction:

1. All occupied burrows within 160 feet of all project construction during the non-breeding season of September 1 through January 31, or all occupied burrows within 250 feet of all project construction during the breeding season of February 1 through August 31, shall be clearly marked with flags to identify burrow locations.

2. If unpaired owls or paired owls are present in or within 160 feet of areas scheduled for disturbance or degradation (e.g., grading) and nesting is not occurring, owls are to be removed by a qualified biologist per CDFW-approved passive relocation protocols. Passive relocation requires the use of one-way exclusion doors, which must remain in place at least 48 hours prior to site disturbance to ensure owls have left the burrow prior to construction.
3. If paired owls are nesting in areas scheduled for disturbance or degradation, nest(s) shall be avoided from February 1 through August 31 by a minimum of a 250-foot buffer or until fledging has occurred. Following fledging, owls may be passively relocated by a qualified biologist.
4. When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on a protected lands site.

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and CDFW*

**MM 3.2.16-11** For trees/brush that must be removed to construct the proposed project, the City will target the removal of vegetation to occur outside the nesting season between September 1 and March 1. If trees/brush cannot be removed outside the nesting season, preconstruction surveys will be conducted prior to vegetation removal to verify the absence of active bird nests within 50 feet of construction activities. Two surveys will be conducted, at least one week apart, with the second survey occurring no more than two days prior to tree removal.

If no active nests are found, vegetation removal may proceed. If active nests are found, CDFW shall be notified, and the vegetation shall not be removed until the nest is no longer active, as determined by a CDFW-approved biologist. No construction activities shall take place within a 100-foot radius of the active nest (or another distance determined appropriate during consultation with CDFW).

*Timing/Implementation: Prior to project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works  
Department and CDFW*

## **Threatened and Endangered Species**

**MM 3.2.17-3** The following measures will be implemented as part of the project to avoid and minimize project effects to aquatic habitat (vernal pools and isolated seasonal wetlands) supporting threatened and endangered aquatic invertebrate species:

- During project development, the size of the work area limits will be minimized within sensitive habitat areas.
- Temporary impacts from aquatic habitat disturbance would be avoided by installing protective silt fencing between the aquatic habitats and the construction area limits to prevent accidental disturbance during construction and to protect water quality within the aquatic habitats during construction.
- Standard BMPs would be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

A comprehensive plan for avoidance, on-site mitigation, off-site mitigation, or other compensation will be developed in cooperation with relevant state and federal agencies. To compensate for the permanent direct impacts to listed vernal pool crustacean habitat (isolated seasonal wetlands), the City of Rancho Cordova will purchase mitigation credits at a USFWS-approved conservation bank to offset the loss of isolated seasonal wetland habitat as a result of the project at a 3:1 ratio (3 acres of mitigation for every 1 acre lost). Because the project would not directly fill any vernal pools, no direct impacts would occur; therefore, no mitigation would be necessary to compensate for direct impacts to vernal pools under USFWS guidelines. To compensate for indirect impacts to 0.34 acres of vernal pools and indirect impacts to 0.23 acres of isolated seasonal wetlands, the City of Rancho Cordova will purchase mitigation credits at a USFWS-approved conservation bank to offset the loss of indirectly

impacted vernal pool and isolated seasonal wetland habitat as a result of the project at a 2:1 ratio (2 acres of mitigation for every 1 acre indirectly impacted).

*Timing/Implementation:* Prior to project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department, USFWS

**MM 3.2.17-4**

Avoidance and minimization efforts for this species ~~were will be~~ coordinated with the USFWS during Section 7 Consultation between Caltrans and USFWS, and ~~are will likely be~~ in accordance with the July 9, 1999, *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* developed by the USFWS. The following measures will be implemented as part of the project prior to construction to avoid and minimize effects to VELB habitat:

- During project development, the size of the work area limits will be ~~minimized reduced to the smallest amount feasible~~ within sensitive habitat areas.
- Effects from accidental disturbance during construction would be avoided by installing protective fencing between the shrubs identified for preservation and the construction area limits to prevent accidental disturbance during construction. Pursuant to the USFWS VELB conservation guidelines (USFWS 1999), elderberry shrub areas that will not be disturbed within a 100-foot buffer zone from the edge of project construction will be fenced and designated as avoidance areas during project construction. Minimum fence setbacks of 20 feet from the dripline of each elderberry plant may be allowed with USFWS approval.
- Water trucks shall be used to water areas of exposed dirt to control dust from the project site.
- Signs shall be erected along the edge of elderberry avoidance areas noticing construction crews that the area is VELB habitat and must not be disturbed. These signs shall remain for the duration of construction.

- A WEAP shall be implemented to educate construction workers about the presence of VELB habitat in and near the project area, and to instruct them on proper avoidance. Each elderberry stem measuring 1 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) shall be replaced, in a USFWS-approved conservation area, with elderberry seedlings or cuttings at a minimum ratio of 1:1 and as great as 6:1 (new plantings to affected stems).

*Timing/Implementation:* Prior to and during project construction

*Enforcement/Monitoring:* City of Rancho Cordova Public Works Department and USFWS

**MM 3.2.17-5**

~~While final-USFWS concurred with the proposed~~ requirements and replacement ratios for elderberry plants removed by the project ~~will occur during consultation with USFWS, it is anticipated that mitigation.~~ Mitigation will be completed as follows:

Transplant Elderberry Plants That Cannot Be Avoided: Elderberry plants must be transplanted if they cannot be avoided by the proposed project. All elderberry plants with one or more stems measuring 1 inch or greater in diameter at ground level, including at a minimum the 23 shrubs within the project footprint, will be transplanted to a USFWS-approved conservation area. At USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible, the mitigation ratios in **Table 3.2.17-1** [for reader ease, this table has been copied from Chapter 2 and is included on the following page] may be increased to offset the additional habitat loss.

Trimming of elderberry plants (e.g., pruning along roadways, bike paths, or trails) with one or more stems 1 inch or greater in diameter at ground level may result in ~~mortality~~ mortality of beetles.

Therefore, trimming is subject to appropriate mitigation ratios as outlined in **Table 3.2.17-1**. All transplanting or trimming shall occur in accordance with procedures outlined in the 1999 USFWS VELB

Guidelines, and shall be protected and monitored according to the guidelines.

**Table 3.2.17-1  
Mitigation Ratios for Elderberry Shrubs Affected by the Project**

<b>Location</b>	<b>Stems (maximum diameter at ground level)</b>	<b>Exit Holes on Shrub Y/N (quantify)<sup>1</sup></b>	<b>Elderberry Seedling Ratio<sup>2</sup></b>	<b>Associated Native Plant Ratio<sup>3</sup></b>
Non-riparian	Stems ≥ 1 inch and ≤ 3 inches	No	1:1	1:1
		Yes	2:1	2:1
Non-riparian	Stems > 3 inch and < 5 inches	No	2:1	1:1
		Yes	4:1	2:1
Non-riparian	Stems ≥ 5 inches	No	3:1	1:1
		Yes	6:1	2:1

Source: City of Rancho Cordova, Natural Environment Study, May 2008.

1- All stems measuring 1 inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

2- Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (1 inch or greater in diameter at ground level) affected by the project.

<b>3- Ratios in the Associat ed Native Plant Ratio column correspo nd to the number of associat ed native species to be planted per elderberr y (seedling or cutting) planted. Riparian</b>	<b><u>Elderberry Stem Size</u></b>	<b><u>Exit Holes</u></b>	<b><u># of Stems</u></b>	<b><u>Seedling Ratio</u></b>	<b><u># of Replacement Elderberries</u></b>	<b><u>Associated Native Plant Ratio</u></b>	<b><u># of Associated Seedlings</u></b>
No	>1" and <3"	No	223	1:1	223	1:1	223
No	>3" and <5"	No	35	2:1	70	1:1	70
No	>5"	No	20	3:1	60	1:1	60
No	>1" and <3"	Yes	68	2:1	136	2:1	272
No	>3" and <5"	Yes	9	4:1	36	2:1	72
No	>5"	Yes	10	6:1	60	2:1	120

<b>Total Stems Affected</b>	<b>365</b>				
<b>Total Replacement Plantings</b>			<b>585</b>		<b>817</b>
<b>Conservation Credits Required for Plantings (total replacement plantings/10)</b>				<b>141</b>	

*Source: Biological Assessment 2014*

*1 All stems measuring 1 inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.*

*2 Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (1 inch or greater in diameter at ground level) affected by the project.*

*3 Ratios in the Associated Native Plant Ratio column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.*

**Plant Additional Seedlings or Cuttings:** Each elderberry stem measuring 1 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) shall be replaced, in a USFWS-approved conservation area, with elderberry seedlings or cuttings at a minimum ratio of 1:1 to and as great as 6:1 (new plantings to affected stems). Compensation ratios are listed and explained in **Table 3.2.17-1**. If the USFWS determines that the elderberry plants on the proposed project site are unsuitable candidates for transplanting, USFWS may allow the City to modify the stated ratios in **Table 3.2.17-1** for each elderberry plant that cannot be transplanted.

A mix of native plants associated with the elderberry plants at the project site or similar sites will be planted at ratios ranging from 1:1 to 2:1 [native tree/plant species to each elderberry seedling or cutting (see **Table 3.2.17-1**)]. These native plantings must be monitored with the same survival criteria used for the elderberry.

Terms and Conditions: The incidental take of VELB anticipated for this project will result from direct effects to 31 elderberry shrubs with 365 stems ~~one~~ 1 inch or greater in diameter at ground level that will be transplanted. In order to be exempt from the prohibitions of Section 9 of ESA, Caltrans must ensure compliance with the following terms and conditions, which implement the measures described above.

1. Caltrans shall include full implementation and adherence to the avoidance and minimization measures proposed in the BO and re-stated in this document, as: As a condition of any permit issued for the project.
2. In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached, Caltrans shall adhere to the following reporting requirement:

- a. For those components of the action that will result in habitat degradation or modification whereby incidental take will occur, i.e., the removal of elderberry shrubs, Caltrans will notify the USFWS as soon as the removal is completed, providing documentation that the removal did not exceed the 31 elderberry shrubs with 365 stems one inch or greater above ground level anticipated. For the duration of the project construction, Caltrans shall also notify the USFWS if there are any changes in project implementation that result in habitat disturbance not described in the Project Description and not analyzed in the BO.

*Timing/Implementation: Prior to project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works Department and USFWS*

**MM 3.2.17-6** During project development, the size of the work area limits will be ~~minimized~~reduced to the smallest amount feasible within sensitive habitat areas.

To avoid impacts to nesting habitat, the removal of potential nest trees will be limited to only those necessary to construct the proposed project.

For trees that must be removed to construct the proposed project, the City will target the removal of trees to occur outside the nesting season, which is between September 1 and March 1. If trees cannot be removed outside the nesting season, preconstruction surveys will be conducted prior to tree removal to verify the absence of active raptor nests within 500 feet of construction activities. Two surveys will be conducted, at least one week apart, with the second survey occurring no more than two days prior to tree removal.

If no active nests are found, tree removal may proceed. If active nests are found, CDFW shall be notified, and the tree shall not be removed until the nest is no longer active, as determined by a CDFW-approved biologist. No construction activities shall take place within a 500-foot radius of the active nest (or another distance as determined appropriate during consultation with CDFW).

*Timing/Implementation: Prior to and during project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works  
Department and CDFW*

**MM 3.2.17-7** Measures to minimize impacts to Swainson's hawk foraging habitat include restoration of foraging habitat temporarily disturbed by project construction activities. After construction is completed, all temporarily disturbed areas will be stabilized with hydroseed and replanted with a mixture of native and nonnative plants (as deemed appropriate by a CDFW-approved biologist).

*Timing/Implementation: After project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works  
Department*

**MM 3.2.17-8** To compensate for the permanent loss of 13.13 acres of potential foraging habitat, it is anticipated that the City will purchase mitigation credits from a CDFW-approved Swainson's Hawk Mitigation Fund at a 1:1 ratio.

*Timing/Implementation: Prior to project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works  
Department and CDFW*

## **Invasive Species**

**MM 3.2.90** In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

*Timing/Implementation: During project construction*

*Enforcement/Monitoring: City of Rancho Cordova Public Works  
Department and CDFW*

## Appendix H. Mobile-Source Air Toxics— Information That Is Unavailable or Incomplete

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The following text is based on the *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA - Appendix C* (September 30, 2009), which can be found at the following web address:

[http://www.fhwa.dot.gov/environment/air\\_quality/air\\_toxics/policy\\_and\\_guidance/100109guidmem.cfm](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/100109guidmem.cfm)). Note that under the NEPA Pilot Program (23 U.S.C. 327), Caltrans has assumed from the FHWA responsibilities for environmental review; in carrying out those responsibilities Caltrans is subject to the procedural and substantive requirements of U.S. Department of Transportation, including FHWA official guidance and policy. For purposes of this appendix, FHWA remains in the text because the text is addressing national-level FHWA policy statements and guidance.

### **Sec. 1502.22 INCOMPLETE OR UNAVAILABLE INFORMATION**

When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.

- a. If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.
- b. If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement:
  1. a statement that such information is incomplete or unavailable;
  2. a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment;
  3. a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment; and

4. the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts that have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.
- c. The amended regulation will be applicable to all environmental impact statements for which a Notice to Intent (40 CFR 1508.22) is published in the Federal Register on or after May 27, 1986. For environmental impact statements in progress, agencies may choose to comply with the requirements of either the original or amended regulation.

#### **INCOMPLETE OR UNAVAILABLE INFORMATION FOR PROJECT-SPECIFIC MSAT HEALTH IMPACTS ANALYSIS**

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The U.S. Environmental Protection Agency (USEPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. It is the lead authority for administering the Clean Air Act and its amendments and has specific statutory obligations with respect to hazardous air pollutants and MSAT. The USEPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. It maintains the Integrated Risk Information System, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (USEPA, <http://www.epa.gov/ncea/iris/index.html>). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA, which can be found at

([http://www.fhwa.dot.gov/environment/air\\_quality/air\\_toxics/policy\\_and\\_guidance/100109guidapd.cfm](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/100109guidapd.cfm)). Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, <http://pubs.healtheffects.org/view.php?id=282>) or in the future as vehicle emissions substantially decrease (HEI, <http://pubs.healtheffects.org/view.php?id=306>).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts—each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the USEPA's MOBILE6.2 model, the California EPA's EMFAC2007 model, and the USEPA's DraftMOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter (PM) emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of USEPA's guideline CAL3QHC model was conducted in an NCHRP study ([http://www.epa.gov/scram001/dispersion\\_alt.htm#hyroad](http://www.epa.gov/scram001/dispersion_alt.htm#hyroad)), which documents poor model performance at 10 sites across the country—three where intensive monitoring was conducted plus an additional seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with National Ambient Air Quality Standards for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (<http://pubs.healtheffects.org/view.php?id=282> ). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The USEPA (<http://www.epa.gov/risk/basicinformation.htm#g> ) and the HEI (<http://pubs.healtheffects.org/getfile.php?u=395>) have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the USEPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires USEPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld USEPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision-makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

Appendix I. Sacramento Area Council of  
Governments Interagency Consultation  
Documentation

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## Regional Planning Partnership

June 28, 2007

### Action Summary Minutes

#### 1. Attendance

Jerry Barton, EDCTC	Dave Mason, Metro Chamber
Dean Blank, Sacramento County	David Melko, PCTPA
Jose Luis Caceres, SACOG	Stephanie Patrick, James Burchill & Associates
Matt Carpenter, SACOG	Larry Robinson, SMAQMD
Jason Crow, SACOG	Mark Thomas, City of Rancho Cordova
Azadeh Doherty, City of Sacramento	Susan Wilson, Caltrans
Matt Jones, YSAQMD	Olin Woods, SACOG
Nick Lagura, City of Citrus Heights	

- 2. Action Summary of the May 24, 2007, Meeting.** The summary was approved by consensus.
- 3. Information Sharing.** Jason Crow shared information on the going-away celebration for Dave Young. It will be held on July 10<sup>th</sup> from 5-8pm. Anyone interested in attending should contact Jim Brown at (916) 340-6221 or [jbrown@sacog.org](mailto:jbrown@sacog.org). Jason also mentioned that Greg Chew will be providing a short presentation at the July meeting to receive input on SACOG's community design program. At their June meeting, the SACOG Board of Directors voted to join the California Climate Action Registry. Larry Robinson announced that the chair of the California Air Resources Board, Dr. Robert Sawyer, had resigned. The stated reason was that the Governor's office was unhappy with the delay in air quality attainment for the San Joaquin Valley.
- 4. Draft Metropolitan Transportation Plan 2035 Project List.** Matt Carpenter noted that the SACOG Board has now released a draft project list for a 45-day public comment period (which will actually commence July 2<sup>nd</sup>). Work continues on the MTP EIR and the Vision List. In July, the Board is expected to seek consensus on the Vision List. Staff will work on the "spreading" of projects to ensure that funding of projects is not significantly front-loaded in the early years of the MTP. This is expected to continue over the next two weeks, with a draft "spread" MTP available for review and comment on July 18th. Mark Thomas asked about the alternate projects. Matt explained that some projects had been "lost" when the Board added other projects, so the "lost" projects were moved to the alternate section of the Vision List. David Melko asked about alternative transit projects and what alignment the I-80 light rail to Antelope project would follow. Matt noted that it would follow the UP right-of-way and that the 3 various light rail alignments into Placer County are more or less mutually exclusive (i.e. it's not likely that all three would be built). Azadeh Doherty asked when the next opportunity would be to modify the project list. Matt said that the draft "spread" list would come out on July 18. There will be amendments to the MTIP, but the next major revision won't come until

the 2011 MTP cycle. Azadeh also asked if the \$100m noted for downtown improvements could be used for a study. Dean Blank asked when comments would be needed on the draft spread document. Matt said they would be needed by August 1<sup>st</sup>. A revised respread would then be available by mid-August.

5. **PM<sub>10</sub> Qualitative Analysis for Rancho Cordova Parkway Interchange Project.** Jason Crow introduced this item. Mark Thomas explained that the City is in the EIR/EIS process with a hearing scheduled for this fall. The new interchange will be a south-only facility between Sunrise and Hazel. It will include a two-mile roadway (Rancho Cordova Parkway) to connect to White Rock Road, as well as auxiliary lanes on U.S. Highway 50 and a bike/pedestrian overcrossing that will connect Gold River with a new light rail station at “Mineshaft.” There are no major intermodal, industrial or truck-related land uses in the vicinity. The area it will serve is primarily residential. David Melko made a motion to approve the staff recommendation finding that the interchange is not a PM<sub>10</sub> project of air quality concern, it was seconded by Jerry Barton and approved unanimously.
6. **2007 Delivery Plan.** Olin Woods provided a handout of the SACOG delivery plan, which was unchanged from the version distributed at the May meeting. According to Olin, “we are 25% there.” Caltrans’ original deadline of July 2<sup>nd</sup> has now been changed to July 31<sup>st</sup>. It is recommended that projects sponsors turn in their requests as early as possible. One change is that the Sacramento Metropolitan Air Quality Management District has decided to fund the Cascade Sierra Solutions project with local money, rather than with a CMAQ grant. There are rumors of other projects dropping out of the delivery plan, but none have yet been confirmed. As was the case last year, the State has lots of money available in its safety program (HSIP – formerly HES). Unlike the loans available for RSTP and CMAQ, this funding is available for free, no payback required, for sponsors with eligible projects ready to go. SACOG has arranged for a loan of \$750,000 from San Benito County, and may investigate a loan from StanCOG.
7. **Other Matters.** Jose Luis Caceres announced that MTIP amendment #5 has been approved, and we expect that amendment #7 will receive approval on or by June 30. A new administrative amendment has been in the works, and will be submitted once amendment #7 is approved. Last month, Steve Luxenburg mentioned that there was a way for SACOG to receive a conditional compliance finding from FHWA if it was found that our MTP was approximately 90% compliant with the new requirements in SAFETEA-LU. Upon further consultation with FHWA, it now appears that SACOG will not be able to demonstrate compliance prior to the adoption of the new MTP.
8. **Adjournment.** The next meeting is scheduled for Thursday, July 26, 2007, at 2:00 PM.

# Appendix J. Public Scoping Summary Report

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**CITY OF RANCHO CORDOVA  
RANCHO CORDOVA PARKWAY INTERCHANGE  
SUMMARY OF PUBLIC OPEN HOUSE #1  
AND  
PUBLIC COMMENTS**

**WEDNESDAY, JULY 27, 2005  
5:00 P.M. - 7:00 P.M.  
CSUS AQUATIC CENTER, ROOMS 203 & 204  
1901 HAZEL AVENUE, GOLD RIVER**

On Wednesday, July 27, 2005, the City of Rancho Cordova held its first Public Open House for the Rancho Cordova Parkway Interchange Project at the California State University, Sacramento (CSUS) Aquatic Center (1901 Hazel Avenue, Rooms 203 & 204). The open house provided the opportunity to begin communication with the public on the interchange project. The open house format allowed the community to play an active role in the preliminary design and environmental phases of the development through one-on-one discussions, a question and answer session, and written comment forms. Approximately 160 community members participated in the open house. Attendees included City of Rancho Cordova Mayor Ken Cooley, representatives from Supervisors Roberta MacGlashan and Don Nottoli's Office, Grapevine Independent, Sacramento Bee, Gold River News, and area businesses and residents.

**Workshop Outreach**

Prior to the workshop, the project team made extensive efforts to contact and invite community members and stakeholders to the public workshop. Efforts included:

- Mailing approximately 2,315 invitations to neighbors and key stakeholders
- 110 reminder phone calls
- 165 email reminders
- Hand delivering newsletters to key locations such as City Hall
- Meeting announcements in local publications and Web sites such as:
  - Grapevine Independent
  - Gold River Online - [www.goldriver.com](http://www.goldriver.com)
  - Sacramento Bee Rancho Cordova Community Section
  - 50Corridor.com
  - Cordova Community Council - [www.cordovacommunitycouncil.com](http://www.cordovacommunitycouncil.com)
  - Cordova Neighborhood Church - [www.cnchurch.org](http://www.cnchurch.org)
  - Project Web site - [www.ranchocordovainterchange.net](http://www.ranchocordovainterchange.net)
- Placing two sandwich board signs with helium balloons attached outside of the CSUS Aquatic Center.

Wendy Hoyt called the meeting to order and introduced Mayor Ken Cooley. Mayor Cooley thanked the attendees for participating in the process and provided opening

comments. Cyrus Abhar, City Director of Public Works, and DMJM Harris, the City's consultant than gave a Power Point presentation.

**The following comments were received during the question and answer session following the formal presentation:**

### **Bicycle Access Issues**

- Do we have information today about bicycle access into the Gold River community?
- [Gold River resident] Thank you Mayor, for improvements to Rancho Cordova. The concept of bicycle access into Gold River was not listed in the newsletter. Why did the newsletter not throw out the possibility? It took a local group to let everyone know in Gold River about this possibility.
- I am concerned about having bicycle access. Most Gold River residents are opposed to new connections into Gold River. Gold River residents pay private fees to upkeep the bicycle and pedestrian paths.
- Bicycle access and pedestrians would be intrusive. It is like bringing strangers into your neighborhood. We pay dues to keep the community safe.
- It baffles me that people are afraid of bicycles through their communities. It is a long way between Hazel Avenue and Sunrise Boulevard. If there is a connection, it might offer an opportunity for Gold River residents to get to Gold River. Access could go on non-private property.

### **Construction Issues**

- [Comstock Village resident] Would construction mainly be done at nighttime? When there was construction across Highway 50 at night, it kept me up all night.

### **Developer Issues**

- I am a writer for the Gold River News. If developers did not fund this project, would it be built?
- Where would the money come from if it were not the developer's money?
- Who are the private funders? Are the developers going to be open to the alternatives? Because it is private money, does that limit our input and the environmental analysis?

### Interchange Issues

- The California Air Resources Board 2005 Guidelines recommend that freeways not be placed within 500 feet of homes. Will these four alternatives place a freeway interchange within 500 feet?
- Are the plans here tonight the only alternatives we are looking at? What about tunneling instead of all the aerial interchange like at Sunrise Boulevard and Interstate 80?
- The Sunrise Boulevard interchange is a terrible interchange, it needs to be improved, and this should be a part of the feasibility study. Should people write a letter to get this considered?
- {Eureka Village resident} The unique concept with the two major loops – how will you address health and safety for residents and the community? How will the City address these issues?
- It seems like we cannot build this interchange without increasing traffic, air pollution, and noise. What type of compensation will be given to residents for diminished property value?

### Project Process Issues

- It is unbelievable that new development projects goes forward as far as those planned in the south without infrastructure in place. Irresponsible planning! It is insulting to ask for input when it is a done deal.
- [Eureka Village resident] I have not heard anything about the California Environment Quality Act (CEQA) or the National Environment Quality Act (NEPA) process. Who is the governing board that makes the final decision?
- Regarding CEQA, does this process address issues such as quality of life, noise, etc.?
- We will not support elected officials who support this project.
- [Gold River resident] We do feel that it is a done deal. This is a City decision, but we are not part of the City (Rancho Cordova). We feel like we are surrounded even though we are not a part of the City. The area that is the most impacted is not in Rancho Cordova. There are other options out there that are better than this. We need to look at them.

- This land was dedicated years ago and the Gold River community knew about it. Talk to your Board of Directors.
- What is the projected cost of the project? And is the private sector going to pick that up?
- It seems like the City has already narrowed down the alternatives.
- {Gold River resident] I disagree with the statement of “doing a feasibility study”. The money that it will cost should go towards improving Sunrise Boulevard and Hazel Avenue. The feasibility study should also address issues at Hazel Avenue and Sunrise Boulevard, not just the new interchange.
- [Eureka Village resident] I am surprised about the fact that we have not received any other opportunities or been presented with information on previous studies prior to this open house. Why has circulation studies not been given to the community for review? Why are we now just hearing about this project?

### Traffic Issues

- This interchange will dump thousands of cars onto Highway 50, which is already congested. Is there anything else being done to reduce congestion on Highway 50?
- The County documents say that if the interchange is built, traffic on Sunrise Boulevard will increase. The County says no growth without the interchange.
- I have lived in Rancho Cordova since 1976. In the late 70s, we had a countywide committee to do a cross down loop. At that time, they knew Sacramento would grow tremendously and a new bill was needed. Had it been done, it would have relieved traffic congestion. Shingle Springs is building a casino that would cause major traffic. We should attend those meetings.
- [Eureka Village resident] The City is looking at Highway 50 as a key problem area. How about looking at a different highway in the south to relieve Highway 50? Because of September 11<sup>th</sup> and terrorists in the world, is the state looking at this project and preparing for terrorists with the light rail right under the interchange? Is there anything being done if something happens to the trains during operation? Will this issue be addressed in the environmental document?
- The traffic studies done in the last 18 months – are they available for review?

The following written comments and questions (verbatim) were submitted via comment cards at the open house:

**Bicycle Access Issues**

**Comment #1:**

I am very opposed to bicycle and pedestrian access to Gold River. I have lived in Gold River for 18 years and I enjoy the trails. We walk our dogs and get exercise on our trails - we DO NOT ride bicycles. Bicycles would make the trails dangerous for pedestrians and our dogs. This interchange promises to spoil our way of life and our sizable investments.

**Submitted by:**

Rita Williams  
11574 Criptal Lake  
Gold River, CA 95670  
(916) 638-2439

**Comment #2:**

To provide bicycle access into Gold River will affect the safety of the community.

**Submitted by:**

John Wang  
11675 Tenderfoot Drive  
Gold River, CA 95670  
(916) 635-2226

**Comment #3:**

I have heard about the potential of pedestrian and bicycle access through the sound wall and directly into Eureka Village. I am very opposed to this. We as homeowners of Gold River, pay to maintain the bicycle paths used within Gold River to access the American River, and individuals coming across the Parkway Interchange will use these paths, even if signs say they cannot.

**Submitted by:**

Douglas A. Johnson  
11680 New Albion Drive  
Gold River, CA 95670  
(916) 635-6111  
[doug.johnson@lbdg.com](mailto:doug.johnson@lbdg.com)

**Comment #4:**

Please provide bicycle/pedestrian access across Highway 50, Folsom Boulevard, RT and the FSC. There are currently only two bicycle/pedestrian crossings between Hazel Avenue and Sunrise Boulevard, and one is not considered safe by most (FSC trail tunnel). Ideally the project would provide access along the new road, as well as connections to the FSC trail. A bicycle connection would provide a valuable commute route between Gold River and Rancho Cordova, and provide an important connection to future bicycle routes heading south into Rancho Cordova. The Gold River connection could utilize the existing Buffalo Creek Corridor to Coloma (just west of the project site).

**Submitted by:**

Tony Powers  
1204 Forrest Street  
Folsom, CA 95630  
(916) 353-1745  
[folsompowers@comcast.net](mailto:folsompowers@comcast.net)

**Comment #5:**

In the event that an interchange is built, please do not allow bicycle access as the bicycles can already use Hazel Avenue or Sunrise Boulevard.

**Submitted by:**

Greg Grichuhin  
2120 Gold Ledge Court  
Gold River, CA 95670  
(916) 638-8806  
[ggrichuhin@ledgen.com](mailto:ggrichuhin@ledgen.com)

**Comment #6:**

No bicycle/pedestrian path.

**Submitted by:**

Fong  
Tenderfoot/Eureka Village  
(916) 356-2360

**Comment #7:**

Yes, the casino will have an adverse impact on Highway 50 and family life. El Dorado Hills needed help from Rancho Cordova long ago to prevent this incursion and added burden it will cause to Highway 50. We support bikers, but to put a break in the sound wall will cause noise aberrations. Also, our walking paths are not built for high traffic bicycle use, but for walkers and children going and coming from school. They should not have to compete with bikers. Many of the streets in Gold River are privately built

and maintained. There is a bicycle path west of Gold River that connects the light rail station and the American River Parkway. The noise of building this flyover and the traffic it will carry will surely cause stress and lower our quality of life. We appeal to you for consideration.

**Submitted by:**

Margaret "Peg" Barker  
2168 Compton Circle  
Gold River, CA 95670  
(916) 631-1425  
[prbmjb@sbcglobal.net](mailto:prbmjb@sbcglobal.net)

**Comment #8:**

As for the bicycle access, Gold River Homeowners pay to build/maintain these. Part of the reason we live in this area is because of the serenity this allows. This should not even be considered.

**Submitted by:**

Ralph Fuchslin  
11627 Prospect Hill Drive  
Gold River, CA 95670  
(916) 858-1817

**Comment #9:**

There are two existing bicycle/pedestrian entryways across and under Highway 50 at Lake Natoma and Citrus Avenue. We do not need another opening into the sound wall onto our private Lot B greenbelt area and onto our private Gold River trails, which we pay dues monthly to maintain. We are being asked to give up a lot without getting anything in return for Eureka Village. Also, there is a third bicycle entrance already in place along the canal from Sunrise Boulevard to the classic homes (near Hazel Avenue).

**Submitted by:**

Janet and Mitch Pickering  
11701 New Albion Drive (Eureka Village)  
Gold River, CA 95670  
(916) 635-6717  
[mjpic@sbcglobal.net](mailto:mjpic@sbcglobal.net)

We are opposed to a bicycle connection into Gold River, as there are currently 3 accesses from south of Highway 50 to the American River Bike Trail. The access directly into Gold River will result in increased traffic on the private walking trails through Gold River. These private walking trails are owned and maintained by Association fees. These trails are vital to Gold River values. As regular bike trail users ourselves, we

know the accesses to the trail are sufficient for any users coming from south of Highway 50. The values in Gold River are already in jeopardy because of the interchange. Please do not further jeopardize the community with direct bike trail access.

**Submitted by:**

Roger and Patrice Wilbur  
11478 Green Bluffs Court  
Gold River, CA 95670  
[pmwilbur@ucdavis.edu](mailto:pmwilbur@ucdavis.edu)

**Comment #10:**

I am adamantly opposed to bicycle or pedestrian access. Gold River residents pay a premium for living in this community. The trails are private. Also Gold Country has turned into a speedway with drag racing at night. We do not need more people or bikers. Bikers are welcome to purchase a home in Gold River. The crime level is rising so we do not need pedestrian access either. People using the park in Comstock Village leave trash on the weekends - it is a public park.

**Submitted by:**

Karen Rust  
11621 Union Mills Way [Comstock Village]  
Gold River, CA 95670

**Comment #11:**

I am all for bicycle connectivity as you might imagine.

**Submitted by:**

Jeane Borkenhagen  
Sacramento Metropolitan Air Quality & Management District  
777 12<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Sacramento, CA 95814  
(916) 84-4885

**Future Construction Issues**

**Comment #1:**

The noise level in the last 15 years has grown substantially which includes the light rail. I would oppose night blasting. It was difficult sleeping through the light rail construction. I am concerned what the effect of blasting would be. Gold River is on rock and any substantial blasting may cause shifting, which may cause cracking of foundations or pools. I would need assurance this would not occur.

**Submitted by:**

Karen Rust  
11621 Union Mills Way [Comstock Village]  
Gold River, CA 95670

**Impact on Gold River Issues**

**Comment #1:**

1. The interchange will add noise and pollution to Gold River no matter how you handle it.
2. Rancho Cordova, as a neighbor of Gold River, should think of something else to increase their income instead of taking advantage of Gold River.

**Submitted by:**

John Wang  
11675 Tenderfoot Drive  
Gold River, CA 95670  
(916) 635-2226

**Comment #2:**

Highway 50 is already a parking lot – you should build south of Highway 50 to fix this problem. There is no doubt having this will diminish the value of homes in Eureka Village and some adjacent villages. Living on top of the interchange will diminish the quality of life for some Gold River residents.

**Submitted by:**

Karen Rust  
11621 Union Mills Way [Comstock Village]  
Gold River, CA 95670

**Comment #3:**

I am very concerned about the following:

1. Noise.
2. Pollution – Asbestos from vehicle brakes and auto emissions.
3. Danger from spills caused by truck accidents.
4. And mostly reduced property value.

**Submitted by:**

Douglas A. Johnson  
11680 New Albion Drive  
Gold River, CA 95670  
(916) 635-6111  
[doug.johnson@lbdg.com](mailto:doug.johnson@lbdg.com)

**Comment #4:**

I am concerned that the interchange will adversely affect the community of Gold River. The level of noise coming from an increased number of vehicles entering the freeway is my first concern. The second is the bike path that was proposed. I believe that it would make our community more vulnerable to homeless and unsavory citizens that are found near the light rail station. My final comment has to do with the lighting of the interchange. I would stress a low level of lighting for this project as neighbors.

**Submitted by:**

No name provided.  
(916) 638-3978

**Comment #5:**

I do not support this project. As a Gold River homeowner (2 homes), I feel that this affects my property value, safety of my children, and takes away the purpose of having bicycle trails that we pay monthly to maintain. I am opposed to both building the highway and bicycle trail. Bad ideas!

**Submitted by:**

Paula Harker  
2184 Dutch Creek Court  
11836 South Carson Way  
Gold River, CA 95670  
(916) 851-9574

**Comment #6:**

Many concerns, but dialogue is a start. Where is the freeway between Sunrise Boulevard and Watt Avenue that will alleviate traffic getting across the river (and help with Highway 50 congestion)? Light rail does not offer connecting buses/shuttles to use them. By the time/air pollution of getting in your car and driving to Sunrise rail station, you may as well drive to work. A break in the sound wall for bicycle/pedestrian traffic in Gold River is unacceptable. Look forward to environmental reports.

**Submitted by:**

No name provided

**Comment #7:**

I am absolutely opposed to the interchange and pedestrian access to Gold River due to:

- Pollution and traffic (even pedestrian) to our residential neighborhood.

- Reduced value of my house.
- Noise level increase – both during construction and post development.
- Potential for more crime and security measures at my expense.

**Submitted by:**

Susan Johnson  
11680 New Albion Drive  
Gold River, CA 95670  
(916) 635-6111  
[sue.johnson@lbdg.com](mailto:sue.johnson@lbdg.com)

**Comment #8:**

You call us NIMBY's! This project will impact not just our backyards, but our front yards as well. I cannot think of anyone who should accept this intrusion into the community. Yes, this project will help the added major stress to Sunrise Blvd. that 60,000 new homes will bring. The added burden to Highway 50 will be horrendous. I do not agree with your premise that having more houses in Rancho Cordova will keep the traffic local. Highway 50 will be greatly overburdened. This will impact Citrus Heights, Orangevale, Fair Oaks, and the homes.

**Submitted by:**

No name provided.

**Comment #9:**

Highway 50 is already a parking lot – you should build south of Highway 50 to fix this problem. There is no doubt having this will diminish the value of homes in Eureka Village and some adjacent villages. Living on top of the interchange will diminish the quality of life for some Gold River residents.

**Submitted by:**

Karen Rust  
11621 Union Mills Way [Comstock Village]  
Gold River, CA 95670

**Comment #10**

I think the noise from the Parkway Interchange will be horrendous and traffic will be backed up even more as it tries to merge onto two roads that are river crossings.

**Submitted by:**

Pat Gray  
11927 Prospect hill Drive  
Gold River, CA 95670-7527  
(916) 631-9414

landpgray@ad.com

### **Interchange Issues**

#### **Comment #1:**

Could your project consider building an underground interchange instead of high road over house roof?

#### **Submitted by:**

Ching Chi  
11528 Soda Spring Way  
Gold River, CA 95670  
[ching.chi@gmail.com](mailto:ching.chi@gmail.com)

#### **Comment #2:**

I am opposed to the Parkway Interchange as planned. I would support an underground structure or a build out of Mather or Hazel. Highway 50 is already a parking lot - you should build south of Highway 50 to fix this problem.

#### **Submitted by:**

Karen Rust  
11621 Union Mills Way [Comstock Village]  
Gold River, CA 95670

#### **Comment #3:**

Need to have a complete list of alternatives and associated costs. What about underground as opposed to overhead (as is being done on Sunrise Boulevard and Business 80)? What about a southern beltway particularly if you are looking towards the future? What about Folsom Boulevard?

#### **Submitted by:**

Ralph Fuchslin  
11627 Prospect Hill Drive  
Gold River, CA 95670  
(916) 858-1817

#### **Comment #4:**

No to the interchange – the only solution is mass transit increases.  
How about a bus-only lane on Highway 50?  
More light rail trains.  
Make the developers pay for transit, like electric trolleys, bus only lanes, and more rails.  
Use Southern Pacific easement. No more increases to lanes and the interchange.

**Submitted by:**

Steve O'Brien  
11773 Mineral Bar  
Gold River, CA 95670  
(916) 492-3298  
[svobrien2002@yahoo.com](mailto:svobrien2002@yahoo.com)

**Comment #5:**

I am dramatically opposed to building the interchange in Gold River (Eureka Village).  
Please extend Hazel Avenue through the Aerojet property.

**Submitted by:**

Greg Grichuhin  
2120 Gold Ledge Court  
Gold River, CA 95670  
(916) 638-8806  
[ggrichuhin@ledgen.com](mailto:ggrichuhin@ledgen.com)

**Comment #6:**

No stops or signals on the exchange.

**Submitted by:**

Fong  
Tenderfoot/Eureka Village  
(916) 356-2360

**Comment #7:**

Twelve years ago we moved to Gold River because the house suited our needs. We were told the plans to have Highway 50 exit into Gold River had been discontinued. We were not told a flyover was planned to impinge on land north of Highway 50. We have enjoyed being a part of a small community with defined borders – a feeling of community. However, we were disappointed by some in Gold River by their attitude toward Rancho Cordova. We need to work together.

**Submitted by:**

Margaret "Peg" Barker  
2168 Compton Circle

Gold River, CA 95670  
(916) 631-1425  
[prbmjb@sbcglobal.net](mailto:prbmjb@sbcglobal.net)

### **Project Process Issues**

#### **Comment #1:**

I think Wendy Hoyt and Cyrus and the Mayor did a very good job moderating/handling a very difficult meeting.

The ARB Handbook has reared its head.

#### **Submitted by:**

Jeane Borkenhagen  
Sacramento Metropolitan Air Quality & Management District  
777 12<sup>th</sup> Street, 3<sup>rd</sup> Floor  
Sacramento, CA 95814  
(916) 84-4885

#### **Comment #2:**

Gold River Interchange Committee (GRIC) would like to be involved in all aspects of this project. Requests by special interest groups needs to be discussed with GRIC prior to becoming alternatives. Please provide me with copies of the 18-year traffic study report that Mr. Abhar mentioned during his presentation tonight (July 27, 2005). Also, provide GRIC with other studies (as a Draft and NOT final) as they become available. We also would like to be involved with the landscape aspects of the Interchange as well as the design alternatives.

#### **Submitted by:**

Ali Memar  
GRIC Co-Chair  
11770 Tenderfoot Drive  
Gold River, CA 95670  
(916) 274-0503  
[tajrish@yahoo.com](mailto:tajrish@yahoo.com)

#### **Comment #3:**

Extremely poor planning for the informational meeting, taking into consideration how many people are affected. 1. Meeting room was not suitable (too small). 2. Parking was not suitable (not nearly enough space).

#### **Submitted by:**

Janet and Mitch Pickering

11701 New Albion Drive (Eureka Village)  
Gold River, CA 95670  
(916) 635-6717  
[mjpic@sbcglobal.net](mailto:mjpic@sbcglobal.net)

**Comment #4:**

Please hold additional meetings at a location with adequate parking. Walking from west of Hazel Avenue is not good.

**Submitted by:**

No name provided

**Comment #5:**

Include Gold River Community as a voting member. Have Rancho Cordova send directed emails when specific planning meetings are held.

**Submitted by:**

Fong  
Tenderfoot/Eureka Village  
(916) 356-2360

**The following written comments and questions (verbatim) were submitted via comment cards through US Postal Service:**

**Bicycle Access Issues**

**Comment #1:**

I am against putting a hole in the sound barrier. We who live in Gold River pay for the upkeep of the bicycle path. I also believe a tunnel under Highway 50 and Folsom Boulevard would be the answer or a freeway south of White Rock Road could bypass all congestion on Highway 50.

**Submitted by:**

Barbara MacDonald  
11711 Prospect Hill Drive  
Gold River, CA 95670  
[barbwmacd@comcast.net](mailto:barbwmacd@comcast.net)

**Comment #2:**

We are very much opposed to opening the Gold River bicycle trails to outsiders because these trails are too narrow to accommodate all the additional traffic that would occur. The pavement width of the Gold River trails is only about 8.5 feet with few walkable

shoulders. The county bicycle trail and other standard trails have about 20 feet spread including level shoulders and a centerline.

It is bad enough now on the Gold River trails when two bicyclers going in opposite directions need to pass each other while weaving between kids, dogs, joggers, and Sunday socializers. With increased traffic from all these new developments, this could become a very dangerous situation for everyone involved!

**Submitted by:**

Craig & Catherine Bissell  
2144 Woods Creek Court  
Gold River, CA 95670  
(916) 853-9073  
[ccbiss@comcast.net](mailto:ccbiss@comcast.net)

**Comment #3:**

Bicycle and pedestrian access into Gold River ANYWHERE is a very bad idea. Bicyclists and pedestrians can use Sunrise Boulevard or Hazel Avenue.

**Submitted by:**

Richard Haavisto  
2130 Gold Haven Court  
Gold River, CA 95670-8163  
(916) 852-1391  
[richjerh@sbcglobal.net](mailto:richjerh@sbcglobal.net)

**Interchange Issues**

**Comment #1:**

I live in Eureka Village, and I attended the public meeting on July 27, 2005. I oppose the entire interchange concept. Why not explore Jackson Highway 16 and Grant Line Road options? Or extend Hazel Avenue down to White Rock Road? Of the four "options" displayed, only #3 (the T-intersection) comes close to being acceptable. Also, when I first heard about this interchange, I am sure it only included access to westbound Highway 50, and a southbound off-ramp for eastbound Highway 50 to southbound Parkway.

**Submitted by:**

Richard Haavisto  
2130 Gold Haven Court  
Gold River, CA 95670-8163  
(916) 852-1391

richjerh@sbcglobal.net

The following written comments and questions (verbatim) were submitted via comment cards through facsimile (as of August 3, 2005):

**Bicycle Access Issues**

**Comment #1:**

I am not in favor of the interchange covering parts of Eureka Village in Gold River, but I do understand the need due to increasing traffic at Sunrise and Highway 50. I am 100% opposed to a pedestrian/bicycle opening in the sound wall by Eureka Village allowing passageway through Eureka Village. Privacy of Eureka Village residents was affected in the price we paid to purchase our home and I do not want to lose this privacy or the value of my home.

**Submitted by:**

Catherine Piotrowski  
11759 Tenderfoot Way  
Gold River, CA 95670  
(916) 505-6268  
[dkpiotrowski@earthlink.net](mailto:dkpiotrowski@earthlink.net)

**Comment #2:**

NO! No pedestrian/bicycle opening in the wall to Eureka Village. Both value and privacy would drop. Not acceptable!

**Submitted by:**

Dan Piotrowski  
11759 Tenderfoot Way  
Gold River, CA 95670  
(916) 853-6262  
[dkpiotrowski@earthlink.net](mailto:dkpiotrowski@earthlink.net)

**Comment #3:**

Why would I want to pay over \$120 per month for the upkeep of nature trails and have complete strangers have total freedom to use them? No use of our Gold River bicycle trails please!

**Submitted by:**

Bill & Pat Myers  
11543 Prospect Hill Drive  
Gold River, CA 95670

**Project Process Issues**

**Comment #1:**

I do not believe this project has been well thought out given the amount of traffic that will be generated from the new housing tracts off Sunrise Boulevard and Douglas Road. One small on-ramp at Gold River will not bear all this traffic and in itself will become congested - just as the re-vamped Highway 50/Sunrise Boulevard off-ramp did. Would the funds not be spent better augmenting existing roads (i.e., Mather Field, Jackson Highway, Douglas Road, Folsom Boulevard, etc.)? The access for bicycles to "private" roads and trails is unacceptable.

**Submitted by:**

Kathy Orsburn  
11530 Prospect Hill Drive  
Gold River, CA 95670  
(916) 852-1656  
[krorsburn@aol.com](mailto:krorsburn@aol.com)

**The following written comments and questions (verbatim) were submitted via email (as of August 3, 2005):**

**Bicycle Access Issues**

**Comment #1:**

Hi Kim:

I enjoyed the informative public meeting at the CSUS center this past Wednesday in regards to the Rancho Cordova Parkway Interchange. The majority (99%) of the Gold River residence OPPOSES the bicycle & pedestrian access for all the following right reasons:

1. Every homeowner pays dues to maintain the entire Gold River Community. Parks, signs, open space areas, and trails to the American River Parkway. Many of the Gold River villages have private maintained roads. We as residence are currently experiencing additional vehicles being parked in the various villages so non-residence can use our trails and access to the American River. More traffic from any source is not welcomed.

2. Respect the privacy of the residence.
3. Why put a bicycle & pedestrian path on an entrance to the freeway leaving an opening in the sound wall to invite use and traffic?
4. Perhaps an alternative for a safe bicycle & pedestrian overpass should be added to the current structure (new caged path) at the Sunrise Boulevard overpass Interchange.

It appears that the Parkway Interchange is going to be built. The least intrusive, most hidden is preferred.

Please keep us informed on additional public meetings and the final conclusion on this matter.

Regards,

Richard Ferreira  
Gold River, CA 95670  
916-859-0166  
raf49er@yahoo.com

Appendix K. Second Public Open House  
Newsletter and Meeting  
Summary

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## RANCHO CORDOVA PARKWAY INTERCHANGE PROJECT PUBLIC OPEN HOUSE #2

Thursday, June 7, 2007, 5:30 p.m. to 7:30 p.m.  
CSUS Aquatic Center, Classrooms 201-204  
Meeting Summary

### Project Team Attendees

Cyrus Abhar, City of Rancho Cordova  
Mark Thomas, City of Rancho Cordova  
Steve Hetland, Caltrans  
Theron Roschen, County of Sacramento  
Jeff Clarke, County of Sacramento  
Rodney Pimentel, DMJM Harris  
Neil Harris, DMJM Harris

Tony Magpantay, DMJM Harris  
Angie Shields, DMJM Harris  
Jean Freking, DMJM Harris  
Melissa Logue, Pacific Municipal Consultants  
Wendy Hoyt, HDR|The Hoyt Company  
Kim Pallari, HDR|The Hoyt Company  
Tammy Nguyen, HDR|The Hoyt Company

On Thursday evening, June 7, 2007, the City of Rancho Cordova held the second public open house for the Rancho Cordova Parkway Interchange Project. The open house was held from 5:30 p.m. to 7:30 p.m. at the CSUS Aquatic Center, Classrooms 201-204.

The City of Rancho Cordova and the community outreach consultant firm, HDR|The Hoyt Company, made multiple efforts to contact the community and stakeholders to invite them to the meeting. Approximately 6,015 newsletters announcing the open house were mailed to community members and key stakeholders, as well as hand delivered to key locations such as the Rancho Cordova City Council's office, Supervisor MacGlashan's Office, and the Rancho Cordova City Hall. Media announcements were sent and published in the *Grapevine Independent*, as well as the *Sacramento Bee*. Approximately 150 reminder phone calls were made and 300 emails were sent to key community members and stakeholders prior to the meeting. As a result of all these

efforts, approximately 135 members of the community attended the meeting along with project staff and team members.

Special attendees included Rancho Cordova Councilmember Ken Cooley, County Supervisors Roberta MacGlashan and Don Nottoli, County District 4 Chief of Staff Ted Wolter, County Transportation Director Tom Zlotkowski, Planning Commissioners Ernest Vance and Matthew Cummings, as well as Rebecca Garrison with the 50 Corridor TMA, Gold River Community Association President Mike Childress, Steve Watanabe with the Gold River Interchange Committee, and Shelly Blanchard from the *Grapevine Independent*.

The meeting was set up as an informal open house that allowed attendees to walk around the room, view a variety of project displays and illustrations of the study area and proposed alternative, and talk one-on-one with the project team staff and consultants. The meeting format included the following agenda:

- I. Open House (5:30 p.m. – 6:00 p.m.)
- II. Formal Presentation (6:00 p.m. – 6:30 p.m.)
- III. Moderated Question & Answer Session (6:30 p.m. – 7:10 p.m.)
- IV. Open House (7:10 p.m. – 7:30 p.m.)

At 6:00 p.m., community outreach consultant Wendy Hoyt opened with welcoming remarks, noted the elected officials and key stakeholders present, and gave an overview of the open house process and layout. She then introduced Councilmember Ken Cooley who gave a few brief remarks and thanked the attendees for coming. Cyrus Abhar then introduced the project team staff and consultants, followed by Rodney Pimentel who gave the audience a brief overview of the project's background through a PowerPoint Presentation, with Theron Roschen reviewing the history of the project.

Prior to opening the floor to questions and comments (see below), Wendy thanked community members for their critical participation and continued patience during the project planning process and then outlined the next steps.

Once all questions and concerns had been addressed, the meeting format reverted back to the open house style, and attendees were encouraged to continue visiting with project staff to discuss their specific questions in more detail.

*During the question and answer session, HDR|The Hoyt Company recorded all comments and questions. These comments have been categorized and placed in no particular order below.*

**BICYCLE ACCESS:**

- I have lived in Gold River for 18 years and bicycle to downtown Sacramento everyday. I logged 1,200 miles just in May alone. Since the Sunrise Boulevard bicycle lanes have been removed, there is no way, no connection for bicyclists to get south on Highway 50. Until a light rail station is put in place, there is no bicycle/pedestrian facility. Every time I am on my bicycle, my neighbors run me off the trail. There needs to be a connection from the American River Parkway south to Sunrise Boulevard.
- Regarding the bicycle access, we as homeowners pay for improvements and maintaining quality. There are other bicycle paths along the American River and at the canal. I noticed at the American River Parkway, bicyclists do not obey stop signs. I disagree with direct access, but agree there needs to be some type of existing corridor to connect.
- I am a Gold River resident as well as the President of SABA. I represent thousands of bicycle groups and I ride my bicycle to work everyday (across from the State Capitol). I ride the entire way on class one bicycle lanes and I am all for getting people out of their vehicles. If this project is built, I want the absolute best bicycle access possible. Coloma trail is dangerous and there needs to be a light rail station there. We also need access at the Folsom South Canal.
- I agree there needs to be connectivity of the bicycle trail, but it does not need to be connected to a highway.
- If the bicycle access goes in, you will have to cross private property to get to the street. The trail is completely maintained and paid for by residents. Adding connectivity will increase traffic, as well as additional demands on insurance liability, wear and tear, and safety issues. There are already existing class one bicycle trails within the four-mile stretch.
- The bicycle paths are not adequate for transportation. I am concerned about safety and injuries. Bicyclists tend to move along and there are a lot of elderly walking and children on our paths.

**FUNDING:**

- I understand that this is developer funded, but once the property values go down, we residents will eventually have to pay for the interchange. Is the City willing to put down on paper that they will not tax residents? The City will eventually find a way to charge us.

**INTERCHANGE/TRAFFIC/CONGESTION:**

- I am a Rancho Cordova resident and think the interchange is horrible. It will bring in more traffic. The bicycle path is also silly. There are other roadways that need to be addressed. Citrus Road needs improvements.
- How will the interchange help congestion? Traffic is currently going north. There is nothing in the south, and there will be nothing until the development is built. How will the interchange interface with bicyclists and pedestrians? What is the percentage of traffic counts south of Highway 50?
- Instead of pain and suffering, your trumpet slide equals death.

**LRT STATION:**

- 20 years ago, there was a proposed transit center with transit and buses. That proposal was destroyed by Regional Transit, Supervisors, etc. with no vision. That transit center would have alleviated traffic. The opportunity is still alive if the public still demands it.
- Which business will be put out in place of the new light rail station – the car dealer or the mineshaft property that is selling patios? There is no access along the proposed light rail station.

**OTHER ALTERNATIVES:**

- We need to look at broader transportation needs – move traffic laterally onto Highway 50, parallel to Highway 50 (east and west) without dumping more lanes and traffic. There are other alternatives that make more sense that need to be taken into consideration. Please look at other alternatives and keep an open mind of other proposals.
- The money is better spent at Hazel Avenue. The City is expanding Hazel Avenue next year – spend money shooting Hazel Avenue down south, rather than building a parkway.
- I would like the Hazel Avenue connection looked at more, as well as the east/west connections. Why not build underground (tunnel)? Why over a highway?
- I am a landscape architect and regional planner. I add my support to moving the interchange to Hazel Avenue to move traffic south. If this has not yet been analyzed, I would like this to be addressed in the EIR. I believe soundwalls are not effective, they are ludicrous, and do not work. A mile and a half parkway is not a parkway.
- Zinfandel Drive goes all the way down and could be used. Same as Mather and Hazel Avenue.
- Put exits into Rancho Cordova or downtown at Capitol Village.

**NOISE/HEALTH:**

- Since the extra lane on Highway 50 was constructed, the noise level has risen dramatically. Is there any way to reduce that noise?

- I am a Eureka Village resident and the issue that has not been addressed is health effects of the interchange. I am a father and grandfather. Back in 1999, there was a senate bill passed, SP-99 – that protected children living near freeways. Building this parkway will have significant health impacts on our children. Please take into consideration our children. There have been studies that children living near freeways grow up with diseases as an adult due to air pollution.
- Regarding health impacts, are there any thoughts on excluding trucks from crossing the interchange?

### **PROCESS/GUIDELINES:**

- What date is the project decided and who makes the final decision on the process? What are the steps to take to not let the project move forward? If the City of Rancho Cordova is the decision maker, Gold River residents who are impacted have no say. Does the County of Sacramento not own land?
- The ARB Guidelines strongly urge interchange projects be 500 feet from homes and sensitive receptors. Does this proposal fit those guidelines?
- How long is the commenting period for the EIR and how will we be notified? Please make the EIR outreach very noticeable so that we can have a say.
- Rancho Cordova has a problem with their EIR history. Trusting Rancho Cordova with EIR enforcement is not the best place.

### **GENERAL COMMENTS:**

- Thank you for showing up. I am a Gold River resident and ask that you not put all the eggs in one basket. I am not worried about the bicycle trail, but realistically, is the project a good idea? We need to rely on history and stop repeating it. We should not build freeways anymore, as everyone elsewhere has begun tearing down elevated freeways. Neighbors do not want it. This is old thinking, and expensive. Why should we trust Rancho Cordova with fixing Sunrise Boulevard? This project will cost \$100-\$200 million and this “monster” would be torn down in 10 years anyway.
- I am a Gold River resident and have serious concerns with the project in general. I feel like the options presented have been jammed down our throat and you are saying “this is the way it is, too bad”. I ride the trail a lot and access is not needed. There are plenty of accesses across Highway 50. The project is unnecessary and not needed.
- I am a CorPAC member. As far as public input, we have asked the City twice for a presentation. This is the second meeting in two years and we have been deliberately excluded.
- Please have the next meeting on Tenderfoot Drive where the project will occur.

- Our Mayor, David Sander, is not here tonight. He is running for Assembly and sure will not get Gold River votes. We were taxed with no representation.
- Who designed the project goals? It is designed into the Gold River community so Rancho Cordova does not have access. It is being dumped on us.
- Bad public policy even though we are spending developer money.
- As long as you are going to screw us, could you at least call it the Gold River Parkway Interchange?
- Is a copy of the PowerPoint available?
- Will the meeting summary be posted on the Web site?

During sign-in and throughout the evening, attendees were given the opportunity to write comment cards, which could be turned in to the comment box during the meeting or brought home to mail or fax later.

*The following comment cards were submitted at the meeting. These verbatim comments have been categorized and placed in no particular order below.*

#### **BICYCLE ACCESS:**

##### **Comment #1:**

Bike trail is a poor idea. No benefit to Gold River residents. Higher crime, lower property values will result.

##### **Submitted by:**

R. Raley

##### **Comment #2:**

As a Gold River resident, we are strongly opposed to the bike trail aspect of this plan. Gold River is a secure community due to lack of access to each 'Village' in Gold River. The bike trail would provide easy access from those intent on crime in the area (could park along industrial area of Folsom Boulevard and ride or walk into Gold River). Also, no reason for Gold River residents to use bike access to south side of Highway 50. Small percentage of residents that could use access to south side doesn't justify increased crime exposure to rest of the Gold River residents. Please delete the bike trail access portion of the project to maintain home values and quality of life in Gold River. Thanks.

##### **Submitted by:**

Phil Hock, P.E.

11709 New Albion Drive

Gold River, CA 95670

(916) 812-7280

[pnchock@aol.com](mailto:pnchock@aol.com)

**Comment #3:**

Don't want bike trail. Access already at Hazel and Sunrise. Most Gold River trails are private, paid for by Gold River residents.

**Submitted by:**

Anonymous

**Comment #4:**

1. What is the estimated bicycle traffic that will be using the bike trail which will connect to existing private nature trail in Gold River?
2. New bicycle traffic will require more frequent maintenance of Gold River natural trails. Who pays for this increased maintenance?

**Submitted by:**

Anonymous

**Comment #5:**

The bicycle lanes are insufficient. This needs to be class one bike lanes on both sides of the interchange.

**Submitted by:**

Jim Kirstein

214 Keller Circle

Folsom, CA 95630

(916) 983-0850

[jimkirstein@earthlink.net](mailto:jimkirstein@earthlink.net)

**Comment #6:**

I live in Gold River and do support the inclusion of bicycle access. Will there also be access to the existing Folsom South Canal bike path? There should be.

**Submitted by:**

John B. Hervey

11355 New England Place

Gold River, CA 95670

(916) 852-8683

[jbhervey@yahoo.com](mailto:jbhervey@yahoo.com)

**Comment #7:**

Interchange is needed to reduce traffic on 50, Sunrise and Hazel. Please have bike access to the canal. Canal is a safe way to get to business park in Rancho.

**Submitted by:**

Laura Osborne  
2144 Roaring Camp Drive  
Gold River, CA 95670  
(no mail please)

**Comment #8:**

Please ensure bike access to canal. Please have safe path over 50. Interchange is needed. Thank you for your work.

**Submitted by:**

Tom Rintoul  
2144 Roaring Camp Drive  
Gold River, CA 95670  
[t-rintoul@sbcglobal.net](mailto:t-rintoul@sbcglobal.net)  
(mail/email okay)

**Comment #9:**

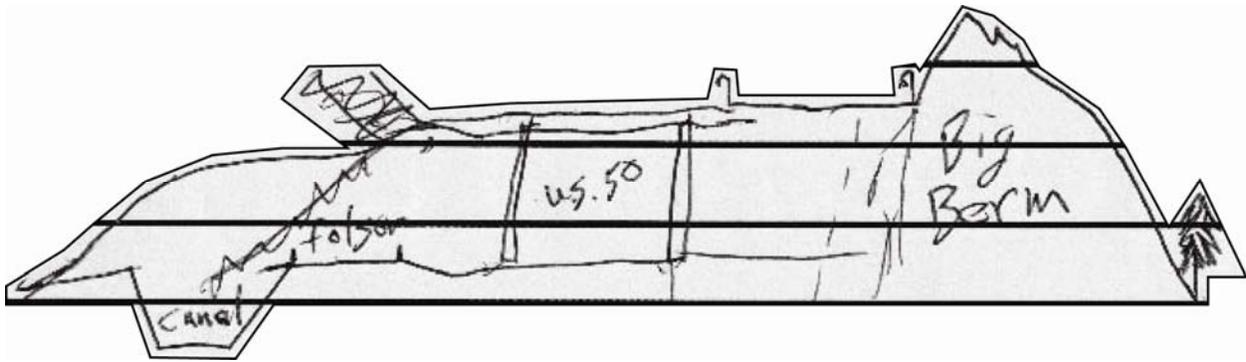
Please remove bike access north into Gold River!

**Submitted by:**

Anonymous

**Comment #10:**

No bike trail into Gold River please. Otherwise no problem. Also Big Berm would be cool. It may help both sound and looks.

**Submitted by:**

Anonymous

**Comment #11:**

Bicycle access – causer increased traffic on private nature trails in Gold River. Increased asphalt maintenance, increased landscape maintenance, increased liability insurance cost – all owned by Gold River residents.

**Submitted by:**

Mike Childress

11720 Gold Parke Lane

Gold River, CA 95670

(916) 635-1993

[gmrca@rcip.com](mailto:gmrca@rcip.com)**TRANSIT:****Comment #1:**

Public transportation has not been “offered” to GR, mainly on Gold Country Boulevard. In these times when traffic is bad, gas prices high and air pollution hazardous, why can we not have a bus service to connect GR to the light rail system?

**Submitted by:**

Zohreh Whitaker

2041 Campton Circle

Gold Rive, CA 95670

(916) 412-4987

[totalhood@aol.com](mailto:totalhood@aol.com)

**NOISE:****Comment #1:**

Soundwall needed facing 50 off of "Carson Creek Village". Present soundwall not effective any longer due to increase of traffic. If a lane is added, more reason to have another soundwall.

**Submitted by:**

Mario Gong  
(916) 852-7803

**Comment #2:**

The City asked my permission for noise study, and had conducted. Please let me know how and where I can view the study result. Thanks. I'm concerned about the noises caused by cars/trucks breaking and speeding up on ramps and traffic stops.

**Submitted by:**

Thuvan Ha  
11848 S. Carson Way  
Gold River, CA 95670  
[happythuvan@yahoo.com](mailto:happythuvan@yahoo.com)

**HEALTH:****Comment #1:**

A health risk assessment needs to be conducted that complies with the Children's Environmental Health Protection Act (SB25) which requires:

- 1) an ambient air quality standards review;
- 2) a toxics air contaminant evaluation; and
- 3) an air monitoring assessment.

A technical advisory committee needs to be convened (which includes an Air Resources Board health specialist)\* to evaluate the effects of the build-out modeled pollutants on the hundreds of children that live in Eureka Village, Prospect Village and beyond.

**Submitted by:**

Lonn Maier

11672 New Albion Drive  
Gold River, CA 95670  
(916) 732-6566  
[lmaier@smud.org](mailto:lmaier@smud.org)  
(Ken Bowers, Ph.D.: 916-323-1510)\*

**Comment #2:**

Due to increased pollution, I do not agree with going forward with the interchange. First increase capacity on Hazel.

**Submitted by:**

Ed Ruble  
(916) 631-8558  
[aaer@sbcglobal.net](mailto:aaer@sbcglobal.net)

**OTHER ALTERNATIVES:**

**Comment #1:**

There are more interchange alternatives that need to be considered:

- 1) an underground on-ramp;\*
- 2) an above-grade on ramp that is elevated directly above the westbound HOV lane that feeds into the same HOV lane; and
- 3) re-design the Hazel/50 interchange to accommodate traffic directed from south of 50 to Hazel.

\*Please don't tell us because of contaminants it's not possible. Refer to the BART system and the downtown railyard project, both in contaminated soils.

**Submitted by:**

Lonn Maier  
11672 New Albion Drive  
Gold River, CA 95670  
(916) 732-6566

**Comment #2:**

As an alternative to adding the proposed interchange across Highway 50 between Hazel and Sunrise, I propose full development and assessment of improvements/expansion of the Hazel interchange to carry traffic to and from the

south. Pursuant to CEQA, such an alternative would be environmentally superior and likely much less costly. Please address this alternative in the pending EIR and decision processes.

**Submitted by:**

Ron Gauzfried  
Gold River, CA 95670  
[gauzfire@aol.com](mailto:gauzfire@aol.com)

**Comment #3:**

These meetings seem to be “going through the motions” while serious consideration of alternatives (Hazel, Mather, Zinfandel) or impacts (health, safety, children, environment) are glossed over. It’s like a train that won’t be stopped based on blueprints that are not proven or absolutes. The pedestrian/bike access adds insult to injury for Gold River residents to foot the bill, risks and more traffic/noise in our neighborhoods – when plenty of access already exists.

**Submitted by:**

Anonymous

**OTHER:**

**Comment #1:**

Put slide show on Rancho Web site.

**Submitted by:**

Theron Roschen

*The following comment was submitted prior to the meeting via email:*

From: Bruce Kaspari [<mailto:Bruce.Kaspari@comcast.net>]  
Sent: Friday, June 01, 2007 3:58 PM  
To: Pallari, Kim  
Subject: Rancho Cordova Parkway Interchange

Kim,

I am a member of Sacramento County's Policy Planning Commission and received the invitation attend the Open House on Thursday, June 7th. Unfortunately I have a

schedule conflict and cannot attend. However, this project is very much of interest to me.

As new development and redevelopment occurs near the western border of Ranch Cordova and the unincorporated area, traffic is of a very real concern. The approval of future development projects could very well hinge on the successful implementation of this alternate routing of vehicles.

I hope you will be able to keep me informed as the project moves forward.

Bruce Kaspari  
Cell: 916-505-4065  
Res: 916-689-1275  
Email: Bruce.Kaspari@Comcast.net

*The following comments were submitted post meeting via email:*

From: Gene Steuben [mailto:Gene@WetlandErosionTechnologies.com]  
Sent: Friday, June 08, 2007 8:28 AM  
To: Pallari, Kim  
Subject: Comments on Proposed Rancho Cordova Parkway Interchange  
  
Attn: Kim Pallari

I am a resident of Gold River and live in Eureka Village and I want to let you know that I oppose this Interchange and support the comments of other residents who voiced their opposition to this draft proposal that was presented last night.

I kept hearing that it is for the future residence to the south and yet your proposal did not show where the road ties in to the other roads that are already being used. This area to the south has Grant Line Road on the East, White Rock & Douglas on the North, Jackson Road on the South, and Sunrise & Kiefer on the West that can all be upgraded to handle the future increased traffic from the new development. This will also give multiple ingress and egress points to serve the area.

The Extension of Hazel Ave. is already in the works and there was nothing on that extension, which is where this proposed interchange should tie in.

To sum up my thoughts on this project: This is an old antiquated plan that will do nothing for the residence of Gold River that is being pushed by the City of Rancho Cordova.

Thank you,

Gene Steuben

From: Doug Johnson [<mailto:Doug.Johnson@lbdg.com>]

Sent: Sunday, June 10, 2007 8:48 AM

To: Pallari, Kim

Cc: SWATANABE@dbw.ca.gov; gmgrca@rcip.com

Subject: Rancho Cordova Parkway Interchange

Kim:

I attended the June 7th Rancho Cordova Parkway Interchange meeting. I am against the project but, if it must be built, I would like to offer an alternative to the bicycle access across the Interchange directly into Eureka Village.

I have used the Folsom South Canal bicycle path many times, accessing it Tributary Point Drive (the road across the canal between Gold Country Blvd. and Tributary Point Dr.). This path allows travel from Gold River all the way to Sunrise Blvd (between Sunrise Gold Circle and Sunrise Park Drive) without crossing a single automobile intersection. The bicycle path is actually the service access road for the Folsom South Canal and is completely fenced to keep anyone from falling into the canal. The path crosses from the North to the South side of U.S. 50 via a tunnel under the Freeway and Light Rail Tracks that is large enough for a pick-up truck to drive through.

During the June 7th meeting, the possibility of a Light Rail Station was announced that would be located in the area of the Interchange, at the present location of the Mineshaft. The alternative I propose is to construct a grade level bridge across the Folsom South Canal that would allow pedestrians and bicycles to cross from the undeveloped land to the South of the Folsom South Canal to the area where the Light Rail Station would be constructed. This bridge would also allow bicyclists access to the Folsom South Canal Bike Path and access into Gold River (and the American River Bike Trail), through an existing avenue. The currently proposed plan (bike path across the Interchange) poses bicyclists to the vehicular traffic on the Interchange. Many residents of Gold River are very much against this plan since it requires the bicyclists and pedestrians to enter Gold River through a residential area (Eureka Village) and do so across private property.

This same proposed bridge across the Folsom South Canal would also allow for Light Rail Parking on the undeveloped (South) side of the Canal. Gold River residents could use the Folsom South Canal Bike Path to access the Light Rail Station via bicycle or by walking.

One thing I would recommend if this plan is adopted; please spend some money to recoat and patch the Folsom South Canal Bike Path - it is a great resource that could use a little help.

Thanks for your time.

Doug Johnson

From: Paul R. Barkin [mailto:prbmjb@sbcglobal.net]  
Sent: Monday, June 11, 2007 4:20 PM  
To: Pallari, Kim  
Cc: gric@50commuters.com  
Subject: Gold River Interchange

The City of Rancho Cordova is to be commended for making efforts to expose the process to all sides of thought. As you can well imagine, the residents of Gold River, who are most affected are also the most concerned. While it is true that the current interchange land had been ceded to Sacramento County, it is safe to say that that a large majority of Gold River residents had not been consulted regarding the transfer. Thus, it is understandable that for many this is their first exposure to it.

After the Rancho Cordova Parkway Interchange Public Open House it became apparent that the greatest need is for East-West movement of traffic to those areas of residence South of Highway 50, to offer a more convenient East-West movement to the Sunrise-Douglas area.

- 1) The relatively short road to the interchange will dump even more automobiles onto an already crowded Highway 50 increasing the traffic on this highway not only to Gold River, but also to Rancho Cordova.
- 2) Perhaps more helpful would be another East-West highway through the Sunrise-Douglas part of Rancho Cordova that would help relieve traffic on Highway 50, and offer the residents of this area a much easier way to move West and East to their homes.
  - a. This would keep traffic noise no louder than it already is for Gold River.

- b. It would not increase the level of pollutants and irritants to Gold River. Children who are most susceptible (as is shown with the increase of asthma in children) would be protected from another great dose of pollutants and irritants.
- c. It would keep the safety of Highway 50 at its current level, and prevent a decrease of safety with the interchange.

The two years required for the building of the interchange will create for the residents of Gold River a day *and night* cacophony of construction sounds, where another East-West highway would go through comparatively undeveloped land with much less disruption of the resident's lives.

It is now possible for bicycles to go under Highway 50 (without needing to go onto Sunrise Boulevard), or over Highway 50 at Hazel to find trails to the American River Parkway. These could be improved, and bicycle trails could be installed South of Highway 50 to either, or both, of these routes.

- 1) This would prevent breaching the sound wall to Gold River.
- 2) Noise from the Interchange would not be allowed, because there would be no opening.
- 3) The pedestrian and bicycle trails, both around and through, and many of the streets in Gold River are built and maintained at the expense of the homeowners. They are not public thoroughfares.
- 4) Children use these routes to go to and come home from school. Their safety is paramount. They should be protected from fast expert and inexpert non-resident bicycle riders.

It is not correct to sacrifice an already existing community with this interchange for the dubious benefits to an area yet to be developed, and particularly when alternatives remain to be explored.

Paul and Margaret Barkin  
2168 Campton Circle  
Gold River, 95670  
[prbmjb@sbcglobal.net](mailto:prbmjb@sbcglobal.net)

From: Ralph Fuchslin [<mailto:snake98@pacbell.net>]  
Sent: Saturday, June 16, 2007 4:12 PM  
To: Pallari, Kim  
Subject: Comments - Rancho Cordova Parkway Interchange

## Comments concerning the Rancho Cordova Parkway Interchange

Kim:

Below are my comments concerning the Rancho Cordova Parkway Interchange meeting held on June 7, 2007. Please ensure this is included with all other comments for this project.

I am opposed to this project and have provided some specifics below. I would like to see the feasibility studies that were done for all of the proposed options. At the meeting, the options were reviewed very quickly and no details were provided. Are these posted somewhere where they can be reviewed?

Specifically, I would like to see the details as to why the tunnel option was not considered. At the meeting, we were told that a tunnel would not be considered by the State of California, as it would disturb contaminated ground waters. Who specifically at the State is blocking this option and why? Where is the feasibility study? Why is Gen Corp (one of the large developers in this project) not being forced to take the lead in ensuring the ground water contamination would be cleaned up prior to developing a tunnel thus making this a potential option?

Below are some specific concerns about this project

### 1) Proposed Bicycle / Pedestrian Access

Bicycle / Pedestrian access to and from Gold River using the proposed interchange would allow non-Gold River residents direct access to Gold River Community Association owned and maintained green belts and associated bicycle trails. This access would also mean a break in the sound wall and pose immediate security concerns.

I oppose this access into Gold River as it is absolutely not needed and have documented the current bicycle / pedestrian access points either over or under Highway 50 that are all ready available. In the app. 5 mile distance from Sunrise Blvd to Iron Point Road / Willow Creek (by the Folsom Outlet Mall), there are currently 6 access points already in place, 4 of which are class 1 dedicated bike / pedestrian access. All of the points except #2 are physically close to current Light rail stations as well. Clearly there is no need to have any additional bicycle / pedestrian access in this area. I am a bicyclist and use the trails in this area extensively and feel very comfortable in saying this from both a bicyclist perspective as well as a Gold River homeowner perspective. If this bicycle / pedestrian access is to stay in this project, there will need to be some serious discussions (PRIOR TO any finalized plans) as to why given the current amount of access available

and given this proposal is attempting to provide public access into privately owned and insured greenbelt area and trails.

### **Current Access over/under Highway 50**

- 1) Sunrise Blvd - Over 50
- 2) \* Folsom Canal - Off Sunrise south of Folsom Blvd (Between Sunrise Park Drive and Sunrise Gold Circle) goes under Highway 50 and ends on Tributary Crossing
- 3) \* Citrus - Access under 50
- 4) Hazel Ave - Over 50
- 5) \* AeroJet Road - Over 50
- 6) \* Iron Point Willow Creek (Folsom)

The amount of access over/under 50 is more than adequate and another access point is clearly not needed.

### **2) Proposed Project Alternative**

This alternative is not acceptable, as it does not solve any of the problems stated in the purpose and need section of the document.

#### **Stated purpose and need # 1**

“Relieve existing traffic congestion on U.S. Highway 50, Sunrise Blvd, Hazel Ave and White Rock Road.”

How does this project assist in easing traffic congestion on Highway 50 when in fact it is adding to the already congested conditions? The experts at the meeting all agree that this will in fact add more traffic to an already highly congested condition.

#### **Stated purpose and need # 2**

“Improve traffic operations at the U.S. Highway 50 / Sunrise Blvd and U.S. Highway 50 Hazel Ave interchanges.”

The addition of more traffic will **IMPROVE** the operations of Highway 50 / Sunrise Blvd and Hazel Ave? Again, common sense and your experts tell us this is not true.

#### **Stated purpose and need # 3**

“Achieve and maintain acceptable level of service on U.S Highway 50 and existing access points for current and future conditions.”

Again, the addition of a significant amount of additional traffic at this point will any derogate the level of service that exists today.

**Stated purpose and need # 4**

“Provide additional access from planned developments.”

This is the real reason for this project. The City of Rancho Cordova and the Developers stand to make a significant amount of money in tax revenues and profits from the homes being built and are doing so at the expense of everyone who uses Highway 50 and the homeowners in Gold River. This is true.

**Stated purpose and need # 5**

“Provide access to regional transit facilities.”

There is already access to existing regional transit facilities and it is unclear as to how this project would provide any access to these or any new facilities.

**Stated purpose and need # 6**

“Provide pedestrian access across U.S. Highway 50.

As I stated above, the amount of pedestrian access already in place is extraordinary. I do not know of any 5-mile stretch of Highway 50 that has the amount of access currently in place from Sunrise Blvd to Iron Point Road. This is a completely unnecessary and unwanted option.

This project will bring vehicle traffic close to single-family homes and result in a significant increase in noise and vibrations for a 2-year construction period and continue on indefinitely with heavy traffic noise. This is not acceptable to the homeowners in the Gold River area.

The high traffic volume being closer to single-family homes will result in a significantly increased volume of vehicle emissions, brake dust and all associated pollutants to the homeowners in the area. These pollutants are known to pose significant health risks. This is of particular concern with stop signals on the proposed interchange.

Additionally, the safety of the local homeowners from possible traffic accidents such as the gas truck accident on the MacArthur Maze on I-80 is a real concern. Had that accident happened on this proposed interchange, the possible human injuries/death could have been devastating.

Please let me know where I can find the information requested.

Thank you,

Ralph Fuchslin  
116 27 Prospect Hill Drive  
Gold River, CA 95670  
916-858-1817

*The following comment cards were submitted post meeting via US Postal Service:*

**Comment #1:**

Because of the height of the overpass, we feel it will cause more traffic noise in Gold River. We are against the off-ramp. But if you have to do one, we pick Alternative #3.

**Submitted by:**

Mike McGill  
2107 Roaring Camp Drive  
Gold River, CA 95670  
[Mike4300@hotmail.com](mailto:Mike4300@hotmail.com)

**Comment #2:**

We are against the parkway interchange!! We are opposed to the bike trail on Tenderfoot Drive. We feel that the two bike overpasses by Hazel and Sunrise are adequate!

**Submitted by:**

Ron & Sue Raley  
11705 New Albion Drive  
Gold River, CA 95670  
(916) 631-8522  
[Rr2078@hotmail.com](mailto:Rr2078@hotmail.com)

**Comment #3:**

I am totally against the project, especially the bike route. It is highly desirable to first fully develop other East-West arteries south of freeway 50 and the Zinfandel & Matherfield and Hazel Road north/south roads. The response to my suggestion for an underground interchange, if it has to be built, is not acceptable. If there can be under sea (British Channel, Hong Kong, etc.) and under the bay tunnels (SFO), why can't we have underground interchange, if we have to have one? There are plenty of bike routes and

we cannot allow one along Gold Flat because of the many reasons given by the President of GR Homeowners' Association. The environmental impact and Federal & State regulation for child health and safety of hundreds of kids using the park ought to be kept in mind.

**Submitted by:**

Onkar S. Bindra  
11712 New Albion Way  
Gold River, CA 95670

**Comment #4:**

At the June 7 meeting, I factitiously said since we (Gold River) are getting screwed, the Parkway should be called the Gold River Parkway.

On a more serious note, it is incredibly disingenuous and arrogant to characterize the purpose of these meeting as a means of getting community input. These are presentations! In the two years between meetings, the planning has gone from 8 alternatives to one! During this time, there have been consultations with Sacramento County, Rancho Cordova and Folsom, but none with Gold River and yet none of these "stakeholders" are affected by the interchange and overpass.

This feels and smells like process. Send out the fliers, hold the meetings, document that all these meetings took place and concisely record what was said. This is not consultation; this is fiat by Power Point. Extra points though for inviting us to discuss the kinds of filigree and colors to use on the elevated leviathans.

The so called Rancho Cordova Parkway starts in Gold River and is a freeway to future growth, the environmental and noise pollution impact of this project impacts Gold River as it exists now, in real time, not some future date, and yet Gold River is not one of the Stakeholders. This even though Gold River has the largest stake in the interchange project, its footprint, its noise and air pollution. This is of course is explained away because the land was set aside many years ago for such a project and besides since you knew this day would come you have no say. Really, how could they know what kind of project it would be in 1990 if it is just in the planning stages now? I see nowhere in the setting aside of land a basis for imposing air and noise pollution n one city to benefit the growth aspirations of another. Rancho Cordova's own Noise policy would not allow this for its own residents.

Let's talk about the land set aside. So we are doing this because some land was aside in 1990? It turns out that it really is about shunting future southbound traffic to a glorious

new Rancho Cordova and it is not even the best alternative for a north south interchange. Hazel, Zinfandel, and Mather make more practical traffic management sense. It makes no sense to continue on this course, better to sell that land and explore more rational and effective alternatives.

One of the interesting aspects of the displays at the presentation is that they zoom in tight on the Gold River and immediate area south of 50. Where is the wide angle shot showing the future development and the Highway 50 from Mather Avenue to Hazel Avenue with alternative north/south interchanges? Where is the Vision of real traffic mitigation? Not there! You see this land was set aside in 1990 and that's that. Thank you for your input, please don't clap or boo so that we can show proper respect where respect is due.

Respectfully if this is the way it going to be, lets call it The Gold River Parkway so that we can feel good about our involvement in the planning process because when governments use the planning process in an abusive way they not only create ineffective solutions they engender resentment in those they are abusing. But hey the lands have been set aside since 1990.

**Submitted by:**

Gary Slade  
11371 Buckeye Hill Court  
Gold River, CA 95670  
(916) 853-1217  
[garygms@sbcglobal.net](mailto:garygms@sbcglobal.net)

**Comment #5:**

I am opposed to the proposed Parkway Interchange, as I feel it will increase unwanted traffic if anything. I do not feel it will be a good use of money.

**Submitted by:**

Mozhon Z. Hosseinion  
1945 Blossom Rock Place  
Gold River, CA 95670  
(916) 524-3958  
[mozhon@gmail.com](mailto:mozhon@gmail.com)

**Comment #6:**

I am opposing the project in its entirety.

**Submitted by:**

Susan M. Hosseinion  
1945 Blossom Rock Place  
Gold River, CA 95670  
(916) 631-0101  
[Shosseinion5@yahoo.com](mailto:Shosseinion5@yahoo.com)

**Comment #7:**

I am opposing the bicycle trail coming to the Gold River and furthermore. I am opposing the whole project. We need more public transportation than more highways.

**Submitted by:**

Ali Hosseinion  
1945 Blossom Rock Place  
Gold River, CA 95670  
(916) 524-3958  
[alihosseinion@gmail.com](mailto:alihosseinion@gmail.com)

## Appendix L. Species List

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**U.S. Fish & Wildlife Service**  
**Sacramento Fish & Wildlife Office**  
**Federal Endangered and Threatened Species that Occur in**  
**or may be Affected by Projects in the Counties and/or**  
**U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 140331120629

Database Last Updated: September 18, 2011

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## Quad Lists

### Listed Species

#### Invertebrates

*Branchinecta conservatio*

Conservancy fairy shrimp (E)

*Branchinecta lynchi*

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

*Desmocerus californicus dimorphus*

Critical habitat, valley elderberry longhorn beetle (X)

valley elderberry longhorn beetle (T)

*Lepidurus packardii*

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

#### Fish

*Hypomesus transpacificus*

delta smelt (T)

*Oncorhynchus mykiss*

Central Valley steelhead (T) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

*Oncorhynchus tshawytscha*

Central Valley spring-run chinook salmon (T) (NMFS)

winter-run chinook salmon, Sacramento River (E) (NMFS)

#### Amphibians

*Ambystoma californiense*

California tiger salamander, central population (T)

*Rana draytonii*

California red-legged frog (T)

#### Reptiles

*Thamnophis gigas*

giant garter snake (T)

#### Plants

*Arctostaphylos myrtifolia*

Ione manzanita (T)

*Calystegia stebbinsii*

Stebbins's morning-glory (E)

*Ceanothus roderickii*

Pine Hill ceanothus (E)

*Eriogonum apricum* var. *apricum*

Ione buckwheat (E)

*Eriogonum apricum* var. *prostratum*

Irish Hill buckwheat (E)

*Fremontodendron californicum ssp. decumbens*

Pine Hill flannelbush (E)

*Galium californicum ssp. sierrae*

El Dorado bedstraw (E)

*Orcuttia tenuis*

Critical habitat, slender Orcutt grass (X)

slender Orcutt grass (T)

*Orcuttia viscida*

Critical habitat, Sacramento Orcutt grass (X)

Sacramento Orcutt grass (E)

*Senecio layneae*

Layne's butterweed (=ragwort) (T)

#### Quads Containing Listed, Proposed or Candidate Species:

CARBONDALE (495A)

SLOUGHHOUSE (495B)

ELK GROVE (496A)

CLARKSVILLE (511A)

FOLSOM (511B)

BUFFALO CREEK (511C)

FOLSOM SE (511D)

CITRUS HEIGHTS (512A)

CARMICHAEL (512D)

## County Lists

### Sacramento County

#### Listed Species

##### Invertebrates

*Apodemia mormo langei*

Lange's metalmark butterfly (E)

*Branchinecta conservatio*

Conservancy fairy shrimp (E)

*Branchinecta lynchi*

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

*Desmocerus californicus dimorphus*

Critical habitat, valley elderberry longhorn beetle (X)

valley elderberry longhorn beetle (T)

*Elaphrus viridis*

delta green ground beetle (T)

*Lepidurus packardi*

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

##### Fish

*Acipenser medirostris*

green sturgeon (T) (NMFS)

*Hypomesus transpacificus*

Critical habitat, delta smelt (X)  
delta smelt (T)

*Oncorhynchus mykiss*

Central Valley steelhead (T) (NMFS)  
Critical habitat, Central Valley steelhead (X) (NMFS)

*Oncorhynchus tshawytscha*

Central Valley spring-run chinook salmon (T) (NMFS)  
Critical Habitat, Central Valley spring-run chinook (X) (NMFS)  
Critical habitat, winter-run chinook salmon (X) (NMFS)  
winter-run chinook salmon, Sacramento River (E) (NMFS)

## Amphibians

*Ambystoma californiense*

California tiger salamander, central population (T)  
Critical habitat, CA tiger salamander, central population (X)

*Rana draytonii*

California red-legged frog (T)

## Reptiles

*Thamnophis gigas*

giant garter snake (T)

## Birds

*Charadrius alexandrinus nivosus*

western snowy plover (T)

*Rallus longirostris obsoletus*

California clapper rail (E)

*Sternula antillarum (=Sterna, =albifrons) browni*

California least tern (E)

*Vireo bellii pusillus*

Least Bell's vireo (E)

## Mammals

*Reithrodontomys raviventris*

salt marsh harvest mouse (E)

*Sylvilagus bachmani riparius*

riparian brush rabbit (E)

*Vulpes macrotis mutica*

San Joaquin kit fox (E)

## Plants

*Arctostaphylos myrtifolia*

Ione manzanita (T)

*Calystegia stebbinsii*

Stebbins's morning-glory (E)

*Castilleja campestris ssp. succulenta*

Critical habitat, succulent (=fleshy) owl's-clover (X)

succulent (=fleshy) owl's-clover (T)

*Ceanothus roderickii*

Pine Hill ceanothus (E)

*Cordylanthus mollis ssp. mollis*

soft bird's-beak (E)

*Cordylanthus palmatus*

palmate-bracted bird's-beak (E)

*Eriogonum apricum var. apricum*

Ione buckwheat (E)

*Eriogonum apricum var. prostratum*

Irish Hill buckwheat (E)

*Erysimum capitatum ssp. angustatum*

Contra Costa wallflower (E)

Critical Habitat, Contra Costa wallflower (X)

*Fremontodendron californicum ssp. decumbens*

Pine Hill flannelbush (E)

*Galium californicum ssp. sierrae*

El Dorado bedstraw (E)

*Lasthenia conjugens*

Contra Costa goldfields (E)

*Neostapfia colusana*

Colusa grass (T)

*Oenothera deltooides ssp. howellii*

Antioch Dunes evening-primrose (E)

Critical habitat, Antioch Dunes evening-primrose (X)

*Orcuttia tenuis*

Critical habitat, slender Orcutt grass (X)

slender Orcutt grass (T)

*Orcuttia viscida*

Critical habitat, Sacramento Orcutt grass (X)

Sacramento Orcutt grass (E)

*Senecio layneae*  
Layne's butterweed (=ragwort) (T)

*Sidalcea keckii*  
Keck's checker-mallow (=checkerbloom) (E)

## Candidate Species

### Birds

*Coccyzus americanus occidentalis*  
Western yellow-billed cuckoo (C)

## Key:

- (E) *Endangered* - Listed as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

## Important Information About Your Species List

### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

### Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

### Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

## Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

## Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

## Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

## Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

## Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

## Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 29, 2014.



# United States Department of the Interior



In Reply Refer to:  
08ESMF00-  
2011-F-0889-2

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

JUL 15 2014

Ms. Kendall Schinke  
Chief, Environmental Management, S-1 Branch  
California Department of Transportation, District 3  
2379 Gateway Oaks Drive, Suite 150  
Sacramento, California 95833

Subject: Formal Consultation on the Proposed Rancho Cordova Parkway Project,  
Sacramento County, California (Caltrans Fed. ID# 03-1E2700)

Dear Ms. Schinke:

This letter is in response to the California Department of Transportation's (Caltrans), March 18, 2014, request for initiation of consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Rancho Cordova Parkway Project (proposed project), in Sacramento County, California. Your request, which included the February 2014 revised *Rancho Cordova Parkway Interchange Project Biological Assessment* (biological assessment), was received by the Service on March 20, 2014. On April 16, 2014, the Service requested additional information in order for consultation to be initiated. The additional information requested was received in our office on June 20, 2014. The biological assessment presents an evaluation of the proposed project's effects on species federally-listed under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 *et seq.*) (Act).

The federal action we are consulting on is the City of Rancho Cordova's (applicant) proposed construction of a new interchange over U.S. Highway 50 (US 50) and an arterial street named Rancho Cordova Parkway in coordination with Caltrans and the Federal Highway Administration (FHWA). The proposed project is receiving federal funding through FHWA and Caltrans has assumed FHWA's responsibilities under the Act for this consultation in accordance with Section 1313, Surface Transportation Project Delivery Program, of the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012. The MAP-21 is described in the National Environmental Policy Act assignment Memorandum of Understanding between FHWA and Caltrans (effective October 1, 2012) and codified in 23 U.S.C. 327. This response is provided under the authority of the Act, and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

Pursuant to 50 CFR §402.12(j), you submitted the biological assessment for our review and requested our concurrence with the findings presented therein, while also concurrently initiating formal consultation pursuant to 50 CFR §402.14(c). Based on the findings presented in the

biological assessment, your consultation letter concludes that the proposed project may affect, and is likely to adversely affect the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). The findings also conclude that the proposed project may affect, but is not likely to adversely affect the federally-listed as endangered vernal pool tadpole shrimp (*Lepidurus packardii*) (tadpole shrimp) and Sacramento Orcutt grass (*Orcuttia viscida*) and the federally-listed as threatened vernal pool fairy shrimp (*Branchinecta lynchi*) (fairy shrimp) (collectively, the vernal pool crustaceans) and slender Orcutt grass (*Orcuttia tenuis*) (collectively, the vernal pool grasses). The proposed project is not within designated or proposed critical habitat for any federally-listed species.

In considering your request, we based our evaluation of your findings on the following: (1) your March 18, 2014, letter requesting consultation; (2) the *Rancho Cordova Parkway Interchange Project Biological Assessment*, revised February 2014, prepared by the applicant, and received by the Service on March 20, 2014; (3) the June 18, 2014, letter providing additional information requested by the Service, prepared by Caltrans, and received by the Service on June 20, 2014, which transmitted the *2008-2009 Wet Season 90-Day Report of Findings Regarding Federally Listed Branchiopods for Westborough, Sacramento County, California* and *2009-2010 Wet Season 90-Day Report of Findings Regarding Federally Listed Branchiopods for Westborough, Sacramento County, California*, prepared by ECORP Consulting, Inc.; (4) telephone and email correspondence between the Caltrans and the Service; and (5) other information available to the Service.

#### *Vernal Pool Crustaceans*

After reviewing all the available information, we concur with your determination that the proposed project may affect, but is not likely to adversely affect the vernal pool crustaceans. The proposed project reached the 'may affect' level, and the subsequent requirement for a biological assessment, due to the fact that the proposed project is within the known range of the vernal pool crustaceans, suitable habitat is present within the action area, and vernal pool crustaceans may be present in the action area. Within the action area, there are six seasonal wetlands, totaling 0.81 acre, and one 0.34-acre vernal pool that may provide suitable habitat for the vernal pool crustaceans. The seasonal wetlands are shallow, low-lying depressions in historic mining dredge tailings that pond water during the rainy season and support generalist wetland plant species, such as Baltic rush (*Juncus balticus*) and annual rabbit's-foot grass (*Polygogon monspeliensis*). The vernal pool exhibits more specialized plant species, including slender popcorn flower (*Plagiobothrys stipitatus*) and dwarf wooly-heads (*Psilocarphus brevissimus*).

A total of 0.58 acre of seasonal wetlands will be filled during construction of the proposed project. The remaining 0.23 acre of seasonal wetlands and the vernal pool will not be filled. Caltrans' standard Best Management Practices (BMPs; Caltrans 2003) will be implemented throughout the proposed project area for the duration of construction, including erosion and sediment control. In addition, the applicant has proposed the following avoidance and minimization measures in order to prevent adverse effects to the vernal pool crustaceans.

- The size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.
- Orange Environmentally Sensitive Area (ESA) fencing and silt fencing will be installed between the construction limits and the seasonal wetlands and vernal pool.

- Appropriate hazardous materials management practices will be implemented to reduce the possibility of chemical spills or releases of contaminants.
- Standard staging area practices for sediment-tracking reduction will be implemented where necessary, including vehicle washing and street-sweeping.

There are eight known occurrences of the fairy shrimp in the California Natural Diversity Database (CNDDDB) within 5 miles of the action area, with the closest occurrence, approximately 0.75 mile to the north (CNDDDB 2014). There are 17 known occurrences of the tadpole shrimp in the CNDDDB within 5 miles, with the closest just over 1.5 miles to the southwest. Protocol-level wet season surveys were conducted for the surrounding Westborough property that included the action area for the proposed project in the periods of December 2008 through May 2009 and December 2009 and April 2010. No fairy shrimp or tadpole shrimp were detected during the surveys.

We accept the survey findings, and acknowledge that the wetland features within the action area did not appear to contain vernal pool crustaceans at the time of the surveys. We also recognize that vernal pool crustaceans are difficult to detect and are known to move throughout vernal pool ecosystems from a variety of transportation mechanisms (e.g., overland surface water flow; carried on avian and mammal vectors). So it is conceivable that vernal pool crustaceans or their eggs may have been present at the time of the surveys and not detected or could have been transported into the action area since the time of the last surveys, and therefore, construction of the proposed project could adversely affect any vernal pool crustaceans or eggs present. However, as the surveys are relatively recent and due to the avoidance and minimization measures proposed by the applicant, we believe that these potential effects are extremely unlikely to occur, and are therefore discountable for the purposes of this consultation.

#### *Vernal Pool Grasses*

We also concur with your determination that the proposed project may affect, but is not likely to adversely affect the vernal pool grasses. The proposed project reached the 'may affect' level, and the subsequent requirement for a biological assessment, due to the fact that the proposed project is within the known range of the vernal pool grasses, suitable habitat is present within the action area, and vernal pool grasses may be present in the action area. Botanical surveys were conducted in the summer of 1981, the spring of 1982, April 18 and August 8, 2005, and May 1, 2006. No vernal pool grasses were detected during any of the surveys. In addition, the wetland features within the action area do not appear to pond water long enough to support the life cycle of the vernal pool grasses. Furthermore, the closest known occurrences of the vernal pool grasses in the CNDDDB are within the Mather Core Area identified in the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (Service 2005), approximately 2.75 miles to the southeast for the Sacramento Orcutt grass and 2.75 miles to the south for the slender Orcutt grass (CNDDDB 2014).

We accept the survey findings, and acknowledge that the wetland features within the action area did not appear to contain vernal pool grasses at the time of the surveys. Therefore, due to the negative survey results, the limited hydroperiod of wetland features within the action area, and the distance from known occurrences, we believe that adverse effects to the vernal pool grasses are extremely unlikely to occur and are discountable for purposes of this consultation.

*Valley Elderberry Longhorn Beetle*

Finally, we concur with your findings that the proposed project may affect, and is likely to adversely affect the beetle. We also find that your written request, the accompanying biological assessment, and the additional information provided, fulfills the requirements for initiation of formal consultation. Therefore, this document provides our biological opinion on the effects of the proposed project on the beetle.

**Consultation History**

- November 17, 2007* Representatives of the Service and the applicant met to discuss the proposed project's potential effects on the beetle.
- July 11, 2011* The Service received the July 8, 2011, letter from Caltrans requesting initiation of formal consultation, which included the July 2011 biological assessment.
- May 23, 2012* A site visit was conducted with representatives of the Service, Caltrans, and PMC (consultant) to discuss the proposed project's effects on the beetle and the results of surveys for the vernal pool crustaceans. Based on the survey results, Caltrans proposed to revise their initiation letter and biological assessment.
- March 20, 2014* The Service received the March 18, 2014, revised letter from Caltrans requesting initiation of formal consultation, which included the February 2014 amended biological assessment.
- April 16, 2014* The Service sent a letter to Caltrans requesting additional information on the proposed project's effects on the vernal pool crustaceans, the vernal pool grasses, and the beetle.
- June 20, 2014* The Service received the June 18, 2014, letter from Caltrans providing the additional information requested.
- July 7, 2014* The Service received an email from Caltrans revising the proposed compensation for effects to the beetle.

**BIOLOGICAL OPINION****Description of the Proposed Action**

The applicant proposes to construct a new interchange over US 50 between Sunrise Boulevard and Hazel Avenue in the city of Rancho Cordova. The interchange will be a south-only connection and will also include construction of a new arterial street named Rancho Cordova Parkway (parkway), terminating at a new signalized intersection with White Rock Road. The proposed project also includes the construction of auxiliary lanes in both directions along US 50 from Sunrise Boulevard to Hazel Avenue, sound walls and retaining walls, and a bicycle and pedestrian path connecting the

new parkway with the community of Gold River north of US 50. Access will be from existing paved roadways or unpaved roads. Staging will take place within the defined construction limits or in surrounding areas that are not fenced as ESAs. Construction of the proposed project is expected to take approximately 3 years.

The proposed project area contains 105 elderberry shrubs (*Sambucus* sp.), the sole host plant for the beetle, with at least one stem one inch or greater at ground level. Forty of the shrubs are beyond 100 feet from the proposed construction limits and will not be adversely affected by proposed project activities. Thirty-four of the shrubs are located between 20 and 100 feet of construction activities and will be protected through the implementation of proposed avoidance and minimization measures. The remaining 31 shrubs are unable to be avoided and will be removed and transplanted to a Service-approved beetle conservation bank.

### Avoidance and Minimization Measures

Conservation measures for the beetle involve minimizing the impact of incidental take by transplantation of elderberry shrubs to a Service-approved conservation bank, along with additional plantings of elderberry stems and associated native vegetation, as described in *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (Guidelines) (Service 1999). The applicant proposes to compensate for the 31 shrubs removed as described in Table 1 below.

**Table 1: Compensation Ratios for Affected Elderberry Shrubs**

Riparian	Elderberry Stem Size	Exit Holes	Number of Stems	Seedling Ratio	Number of Replacement Elderberries	Associated Native Ratio	Number of Associated Seedlings
No	>1" and <3"	No	223	1:1	223	1:1	223
No	>3" and <5"	No	35	2:1	70	1:1	70
No	>5"	No	20	3:1	60	1:1	60
No	>1" and <3"	Yes	68	2:1	136	2:1	272
No	>3" and <5"	Yes	9	4:1	36	2:1	72
No	>5"	Yes	10	6:1	60	2:1	120
<b>Total Stems Affected</b>			<b>365</b>				
<b>Total Replacement Plantings</b>					<b>585</b>		<b>817</b>
<b>Conservation Credits Required for Plantings (total replacement plantings/10)</b>						<b>141</b>	
Note: This information is summarized from Table 6 in the biological assessment.							

In addition to implementing standard BMPs, including those minimizing soil erosion and dust, the applicant has proposed the following avoidance and minimization measures to avoid effects to the remaining shrubs. The avoidance and minimization measures proposed below are considered part of the proposed action evaluated by the Service in this biological opinion.

- The size of the work area limits will be reduced to the smallest amount feasible within sensitive habitat areas.

- Elderberry shrubs between 20 and 100 feet from the edge of construction limits will be fenced at least 20 feet from the dripline of each shrub and designated as ESAs.
- Signs will be placed along the edge of the elderberry ESAs noticing construction crews that the area is beetle habitat and must not be disturbed. These signs will remain for the duration of construction.
- A Worker Environmental Awareness Program will be implemented to educate construction crews about the presence of beetle habitat in and near the project area and to instruct them on proper avoidance measures.

### **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 Service considers the action area to include the construction footprint plus a 20-foot established temporary construction zone, as well as areas used for access and staging. The action area also includes all areas outside the construction footprint that will be temporarily impacted by dust and noise during project activities.

### **Analytical Framework for the Jeopardy Analysis**

In accordance with policy and regulation, the jeopardy analysis in this biological opinion relies on four components: (1) the *Status of the Species*, which evaluates the beetle’s range-wide condition, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of the beetle in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the beetle; (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 the beetle; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the beetle.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed federal action in the context of the beetle’s current status, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of recovery of the beetle in the wild.

The jeopardy analysis in this biological opinion places an emphasis on consideration of the range-wide survival and recovery needs of the beetle and the role of the action area in the survival and recovery of the beetle as the context for evaluating the significance of the effects of the proposed federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

### **Status of the Species**

For the most recent comprehensive assessment of the range-wide status of the beetle, please refer to the *Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus) 5-Year Review: Summary and Evaluation* (Service 2006). Since this review was published, the beetle has been proposed for

delisting through the publication of the *Removal of the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife; Proposed Rule* (Service 2012).

### **Environmental Baseline**

The 105 elderberry shrubs in the action area represent a small proportion of shrubs throughout the full range of the beetle. There is one known occurrence in the CNDDDB within the action area where an adult beetle was observed (CNDDDB 2014). A total of 26 exit holes, 7 appearing to be recent, were located on the stems of elderberry shrubs during surveys. The shrubs with exit holes are all located adjacent to US 50. A number of the elderberry shrubs in the action area are in close proximity to the heavily-traveled US 50 or the existing access roads and are therefore already regularly exposed to dust and other particulates. Argentine ants, a potential predator of the beetle, were observed on some of the elderberry shrubs along US 50.

### **Effects of the Proposed Action**

Seventy-four of the elderberry shrubs in the action area are not likely to be adversely affected based on the avoidance and minimization measures proposed by the applicant. Construction activities will adversely affect the remaining 31 elderberry shrubs with 365 stems one inch or greater in diameter at ground level. Any beetle larvae occupying the shrubs could be killed when the shrubs are transplanted, since the shrubs may be significantly pruned before transplantation and could experience stress due to changes in soil, hydrology, or microclimate. Mortality of transplanted elderberry shrubs would preclude their future use by the beetle. However, in addition to the transplanting of shrubs, the compensation proposed by the applicant will provide additional habitat for the beetle that will be protected in perpetuity.

### **Cumulative Effects**

Cumulative effects include the effects of future state, tribal, county, 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. A Specific Plan is under development for the Westborough property surrounding the parkway; however, the Service anticipates that any future proposed projects within the property will undergo section 7 consultation. The Service is not aware of any other future actions reasonably certain to occur in the action area that could result in cumulative effects.

### **Conclusion**

After reviewing the current status of the beetle, the environmental baseline for the action area covered in this biological opinion, the effects of the proposed project, the cumulative effects, and the proposed avoidance and minimization measures, it is the Service's biological opinion that the Rancho Cordova Parkway Project, as proposed, is not likely to jeopardize the continued existence of the beetle. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of the lack of cumulative effects, will not rise to the level of precluding recovery of the species or reducing the likelihood of survival of the species. The effects to the beetle are small and discrete, relative to the range of the species, and although the loss of habitat will contribute to the overall reduction of beetle habitat, the

avoidance and minimization measures will contribute to the long-term preservation and management of beetle habitat. The proposed project will contribute to the conservation of the beetle by preserving habitat at a conservation bank that will manage a large contiguous section of habitat for the benefit 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 the Service 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 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. Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If 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 grant or permit, 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**

The incidental take of the beetle anticipated for this project will result from direct effects to the 31 elderberry shrubs with 365 stems one inch or greater in diameter at ground level that will be transplanted. The life stage affected by this action will be the beetle larvae living within the stems of the elderberry shrubs. The life cycle of the beetle takes one or two years to complete, during which it spends most of its life in the larval stage. Due to the fact that it is not possible to know how many beetle larvae are in the stems of any elderberry shrub, the Service cannot quantify the total number of beetles that we anticipate will be taken as a result of the proposed action. In instances in which the total number of individuals anticipated to be taken cannot be determined, the Service may use the amount of habitat impacted as a surrogate; since the take of individuals anticipated will result from the transplantation of the elderberry shrubs, the quantification of suitable habitat serves as a direct surrogate for the beetles that will be lost. Therefore, the Service anticipates take incidental to this project as the 31 affected elderberry shrubs with 365 stems one inch or greater in diameter at ground level that will be transplanted.

## Effect of the Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the valley elderberry longhorn beetle.

## Reasonable and Prudent Measure

The Service has determined that the following reasonable and prudent measure is necessary and appropriate to minimize the effects of the proposed project on the valley elderberry longhorn beetle:

1. All conservation measures proposed in the biological assessment and as re-stated in the Project Description section of this biological opinion, must 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. Caltrans shall include full implementation and adherence to the avoidance and minimization measures proposed in the biological assessment and re-stated in this biological opinion as a condition of any permit issued for the project.
2. In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached, Caltrans shall adhere to the following reporting requirement.
  - a. For those components of the action that will result in habitat degradation or modification whereby incidental take will occur, i.e., the removal of elderberry shrubs, Caltrans will notify the Service as soon as the removal is completed, providing documentation that the removal did not exceed the 31 elderberry shrubs with 365 stems one inch or greater in diameter at ground level anticipated. For the duration of project construction, Caltrans shall also notify the Service if there are changes in project implementation that result in habitat disturbance not described in the Project Description and not analyzed in this biological opinion.

## REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the proposed Rancho Cordova Parkway Project in Sacramento County, California. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been 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 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. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have questions regarding the proposed Rancho Cordova Parkway Project, please contact Lily Douglas, Fish and Wildlife Biologist, or Kellie Berry, Chief, Sacramento Valley Division at (916) 414-6600.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Norris', with a long horizontal flourish extending to the right.

Jennifer M. Norris  
Field Supervisor

cc:

Dr. Kathleen A. Dadey, U.S. Army Corps of Engineers, Sacramento, California

**LITERATURE CITED**

- California Natural Diversity Database (CNDDDB). 2014. Biogeographic Data Branch, Department of Fish and Wildlife. Sacramento, California. Accessed 7 July 2014.
- California Department of Transportation (Caltrans). 2003. Caltrans Storm Water Quality Handbooks: Construction Site Best Management Practices (BMPs) Manual. Caltrans Publication Distribution Unit, Sacramento, California. March 2003.
- U.S. Fish and Wildlife Service (Service). 1999. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. Sacramento Fish and Wildlife Office, Sacramento, California. 15 pp.
- \_\_\_\_\_. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon. xxii + 574 pp.
- \_\_\_\_\_. 2006. Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office, Sacramento, California. September 2006. 28 pp.
- \_\_\_\_\_. 2012. Removal of the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife; Proposed Rule. Federal Register 77:60238-60276. October 2, 2012.

# Appendix M. List of Technical Studies

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The following technical reports are available for review from Monday through Friday from 8:00 a.m. to 5:00 p.m. at the City of Rancho Cordova Planning Department at 2729 Prospect Park Drive, Rancho Cordova, CA 95670.

- **Air Quality Report**—*Final Air Quality Impact Evaluation for the Rancho Cordova Parkway Interchange*. Don Ballanti. August 2010.
- **Community Impacts Memo**—*Community Impacts Memo for the Rancho Cordova Parkway Interchange Project*. City of Rancho Cordova. March 2011.
- **Noise Study Report**—*Memorandum: Revised Noise Analysis for the Proposed Rancho Cordova Parkway Interchange Project*. ATS Consulting. April 28, 2010.
- **Natural Environment Study**—*Natural Environmental Study, Rancho Cordova Parkway and Interchange Project*. City of Rancho Cordova. May 2008.
- **Historical Property Survey Report and Archaeological Survey and Evaluation Report**—*Historic Property Survey Report and Archaeological Survey and Evaluation Report for the Rancho Cordova Parkway Interchange Project*. City of Rancho Cordova. November 2007. It should be noted that not all information about cultural resources can be fully disclosed to the public. The location of an archaeological site is exempt from disclosure to the public by law, to protect sites from looters.
- **Initial Site Assessment**—*Initial Site Assessment for the Rancho Cordova Parkway Interchange Project*. ENGEO Incorporated. March 2007, revised January 2008.
- **Traffic Study Report**—*Traffic Operations Report*. Fehr & Peers. August 2010.
- **Visual Impact Assessment**—*Visual Impact Assessment for the Rancho Cordova Parkway Interchange Project*. City of Rancho Cordova. November 2007.
- **Water Quality Assessment**—*Draft Stormwater Quality Assessment Report for the Rancho Cordova Parkway Interchange Project*. City of Rancho Cordova. November 2006.

# Appendix N. Response to Comments

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## Introduction

No new significant environmental impacts or significant new information, beyond those already covered in the Draft EIR/EA for the Rancho Cordova Parkway Interchange Project, were raised during the public review period for the Draft EIR/EA. This Appendix contains responses to comments received on the Draft EIR/EA. These responses do not involve any new significant impacts or “significant new information” that would require recirculation of the Draft EIR/EA under CEQA standards.

## List of Commenters

The following individuals and representatives of organizations and agencies submitted comments on the draft EIR:

Letter	Individual or Signatory	Affiliation	Date
A	Aaron Dill	Resident	6/2/14
B	Brad Johnson	Resident	5/9/14
C	Bruce Kish	Resident	5/12/14
D	Andre Boutros	California Transportation Commission	5/23/14
E	Carol Greenfield	Resident	5/27/14
F	Trevor Cleak	Central Valley Regional Water Quality Control Board	4/25/14
G	Trevor Cleak	Central Valley Regional Water Quality Control Board	5/20/14
H	Christina Walsh	Resident	5/12/14
I	Craig Gini	Collins Electrical Company Inc.	No Date
J	Cynthia Nicholson	Resident	5/9/14
K	Gerald and Dee-Ann Siebum	Residents	5/13/14
L	Denise Azimi	Resident	5/19/14
M	Don Jones	Resident	5/13/14
N	Emily Lewis	Resident	5/12/14
O	Gail and Dennis Philippart	Residents	4/23/14
P	Gary and Loretta Grubb	Residents	5/12/14
Q	Norman Trump; Donald B. Mooney	Gold River Community Association; Law Offices of Donald B. Mooney	6/9/14; 6/6/14
Q-1	Daniel Smith	Smith Engineering & Management	5/7/14
Q-2	Walter Van Groningen	Brown-Buntin Associates Inc.	5/5/14
R	Jan Lant	Resident	6/9/14

<b>Letter</b>	<b>Individual or Signatory</b>	<b>Affiliation</b>	<b>Date</b>
S	Janet Hause & Eugene Black	Resident	5/12/14
T	Jeff Rucker	Resident	5/9/14
U	Jerry and Alona Thomas	Residents	5/11/14
V	Jerry and Alona Thomas	Residents	5/11/14
W	Jill McClean	Resident	4/30/14
X	Jim Bayless	Resident	5/9/14
Y	John and Sara Reither	Residents	6/9/14
Z	John Hervey	Resident	6/6/14
AA	Kathleen Willoughby	Resident	6/9/14
BB	Kathy Olcese	Resident	6/20/14
CC	Kathy Orsburn	Resident	6/3/14
DD	Keith and Ione Iverson	Residents	5/19/14
EE	Kevin Ramos	Resident	5/16/14
FF	Kristi Beckley	Resident	5/18/14
GG	Kristi Beckley	Resident	5/13/14
HH	Mark and Kristi Beckley	Residents	5/12/14
II	Kristy Chew	Resident	5/14/14
JJ	Kristy Chew	Resident	5/14/14
KK	Kristy Chew	Resident	6/8/14
LL	Len Fishman	Resident	5/19/14
MM	Lonn Maier	Resident	No Date
NN	Lonn Maier	Resident	No Date
OO	Lonn Maier	Resident	5/13/14
PP	Lonn Maier	Resident	6/8/14
QQ	Louise Rebello	Resident	5/12/14
RR	Marjorie Wood Taylor	Resident	5/12/14
SS	Marlene Anceli	Resident	5/2/14
TT	Michael, Sandy, and Kelley Smail	Residents	4/21/14
UU	Greg Matzen	Mother Lode Village Owners Association	5/28/14
VV	Nick Keck	Resident	5/22/14
WW	Nick Keck	Resident	5/8/14
XX	Paula and Steve Mumm	Residents	5/16/14
YY	Robb Armstrong	Sacramento County Regional County Sanitation District – Regional San	4/17/14
ZZ	Janet Hause	Resident	5/14/14
AAA	Bob Nolasco	Resident	5/14/14
BBB	Susan Mitchell	Resident	5/14/14
CCC	Stephanie Koenig	Resident	5/14/14

<b>Letter</b>	<b>Individual or Signatory</b>	<b>Affiliation</b>	<b>Date</b>
DDD	Jennifer Block	Resident	5/14/14
EEE	Paul and Margaret Barkin	Residents	5/14/14
FFF	Kristi Beckley	Resident	5/14/14
GGG	Socorro McCaslin	Resident	5/14/14
HHH	Anthony Pabon	Resident	5/14/14
III	Lonn Maier	Resident	5/14/14
JJJ	Donald Hess	Resident	5/14/14
KKK	Carol Greenfield	Resident	5/14/14
LLL	Richard Haavisto	Resident	6/3/14
MMM	Roberta MacGlashan	County of Sacramento Board of Supervisors, District 4	6/4/14
NNN	Rosemary Chamberlain	Resident	5/15/14
OOO	Roy Brewer	Brewer Lofgren Attorneys at Law	6/9/14
PPP	Russ Booth	Resident	6/9/14
QQQ	Kamal Atwal	Sacramento County Department of Transportation	6/5/14
RRR	Sara Summersett McGhee	Resident	6/2/14
SSS	Jennifer Block	Resident	5/14/14
TTT	Barbara Beddow	Resident	5/14/14
UUU	Kathy Siegfried	Resident	5/14/14
VVV	Carol Sigmann	Resident	5/14/14
WWW	James Siegfried	Resident	5/14/14
XXX	Angel and Greg Ball	Residents	5/14/14
YYY	Jody Bryan	Resident	5/14/14
ZZZ	Irene and Myron Gomes	Residents	5/14/14
AAAA	Martha Lysle	Resident	5/14/14
BBBB	Susan Mitchell	Resident	5/14/14
CCCC	Susan and Kevin Valine	Residents	5/14/14
DDDD	Sam Pickering	Resident	5/14/14
EEEE	Monode Kodsuntie	Resident	5/14/14
FFFF	Mitch Pickering	Resident	5/14/14
GGGG	Kristi Beckley	Resident	5/14/14
HHHH	Name Illegible	Resident	5/14/14
IIII	Stephanie Koenig	Resident	5/14/14
JJJJ	Colleen Ward	Resident	5/14/14
KKKK	Anthony Pabon	Resident	5/14/14
LLLL	Monode Kodsuntie	Resident	5/14/14
MMMM	No Name Provided	Resident	5/14/14
NNNN	Bob Blake	Resident	5/14/14

<b>Letter</b>	<b>Individual or Signatory</b>	<b>Affiliation</b>	<b>Date</b>
OOOO	Mike Wiegand	Resident	5/14/14
PPPP	Therese Volk	Resident	5/14/14
QQQQ	Dan and Susan Leonard	Residents	5/14/14
RRRR	Peter Brown	Resident	5/14/14
SSSS	Bob Blake	Resident	5/14/14
TTTT	Janet Pickering	Resident	5/14/14
UUUU	Kristi Beckley	Resident	5/14/14
VVVV	Scott Baron	Resident	6/8/14
WWWW	Scott Baron	Resident	No Date
XXXX	Scotty Brown	Resident	6/6/14
YYYY	Sigrid Bathen	Resident	6/8/14
ZZZZ	Larry Greene	Sacramento Metropolitan Air Quality Management District	6/9/14
AAAAA	Daniel Smith	Smith Engineering & Management	6/4/14
BBBBB	Socorro McCaslin	Resident	4/17/14
CCCCC	Stephanie Bird	Resident	5/8/14
DDDDD	Susan Mitchell	Resident	5/8/14
EEEEE	Susan Valine	Resident	4/23/14
FFFFF	Terri Meyer	Resident	5/8/14
GGGGG	Thomas Jones	Resident	4/24/14
HHHHH	Tom Manning	Resident	5/28/14
IIIII	Traci Corda	Resident	6/7/14
JJJJJ	Tracy and Bruce Counts	Residents	6/3/14
KKKKK	Leah Fisher	United States Army Corps of Engineers, Sacramento District	4/23/14
LLLLL	Chris Holm	Walk Sacramento	6/6/14
MMMMM	Onkar and Jaswant Bindra	Residents	6/12/14
NNNNN	Steve Kobely	Resident	6/13/14
OOOOO	George Usi	Resident	6/9/14
PPPPP	Denise Szyzlo	Resident	6/24/14
QQQQQ	Joseph Chow	Resident	6/23/14
RRRRR	Lenora Monaco	Promontory Point Homeowners Association	6/17/14
SSSSS	Jason Chou	Resident	7/1/14
TTTTT	Lisa Bernstein	Resident	7/3/14
UUUUU	Mary Jane Dean	Resident	7/3/14
VVVVV	Ron and Gloria Bowman	Residents	7/25/14

## **Master Responses**

Some subjects were mentioned frequently in comment letters on the Draft EIR/EA. Rather than provide individual responses to each of these comments, the Final EIR/EA includes “master responses” that discuss the topics based on all of the comments received.

The following themes are discussed in the master responses:

1. Bicycle/pedestrian connection to Gold River
2. Adequacy of the project description
3. Range of alternatives considered
4. Hazel interchange/Extension alternative
5. Baseline traffic data
6. Air quality and health effects
7. Noise measurements
8. Noise impacts and sound walls
9. Visual impacts
10. South-only connection will not relieve traffic congestion
11. Sidewalk on the bridge structure
12. Impact to homes values in Gold River
13. Development projects need the interchange
14. Adequacy of the public hearing

### **Master Response 1 – Bicycle/pedestrian connection to Gold River**

Comments on the Draft EIR/EA express concern that the proposed project includes bicycle and pedestrian access to the Gold River Community. The bicycle and pedestrian access to the Gold River Community is not an element of the proposed project. Comments also express concern that text and figures within the Draft EIR/EA show the connection to the Gold River Community as part of the project.

The bicycle and pedestrian access to the Gold River Community was considered as a design option. After working with all interested parties, the City removed the bicycle/pedestrian connection to the Gold River Community from the proposed project. This decision was documented in multiple locations in the Draft EIR/EA, including pages xiii and ix of the Summary. Section 1.2.3.5, Section 1.2.5.1, and Figure 1.2.5-2 of the Draft EIR/EA contained references to the Gold River Community bicycle/pedestrian connection which should have been removed prior to circulation. An errata to the Draft EIR/EA was released during the public review period revising these sections and the figure. The errata was posted on the project website and provided at the 5/14/14 public meeting. In addition to the revisions listed within the errata, further review determined that multiple figures within the Draft EIR/EA still referred to bicycle and pedestrian access to the Gold River Community. Revisions have been made to figures 1.1-1, 1.1-2, 2.1.1-2, 2.1.6-1, 2.2.1-1, 2.2.1-2, 2.2.3-1, 2.3.1-2a, 2.3.1-2b, 2.3.3-1, 2.3.4-2, 2.3.4-3, and 2.3.5-1 to remove the connection as a component of the project.

The bicycle/pedestrian connection to the Gold River Community has been removed from the project and will not be constructed with the proposed project.

### **Master Response 2 – Adequacy of the project description**

Comments on the Draft EIR/EA express concern regarding the adequacy of the project description based on the perception that the description fails to provide information regarding length, width, height, lighting height, or proximity to homes. Other comments state that ramp metering was not described as being part of the project.

The project description in the Draft EIR/EA meets the content requirements of Section 15124 of the CEQA Guidelines by identifying the precise location and boundaries of the project on detailed mapping. The project features are shown to scale in all the figures in the Draft EIR/EA and the interchange alternatives are shown in detail in the layout plan figures in Chapter 1. In addition, Section 1.2.4 of the Draft EIR/EA, beginning on page 21, provided detailed text descriptions of the proposed project. Lastly, the Draft Project Report for the proposed project, which was available during the public review period and is still posted to the proposed project website, contains detailed cross sections and plans in Attachment B--Project Geometrics and Attachment C--General Plan Sheets which show heights, lengths, and widths of project features. Proximity of the proposed project to homes in the project area is clearly indicated in multiple scaled figures throughout the Draft EIR/EA and Draft Project Report.

Although the design of the proposed project is not final, in general, the maximum height of the overcrossing structure above existing ground will be approximately 39 feet in the vicinity of Folsom Boulevard. Standard luminaries are approximately 35 feet above the pavement. Signal heights range from 10 to 15 feet above the pavement. Typically, if overhead signs are required, the bottom of the sign would be placed approximately 18.5 feet above the pavement. Assuming that the sign would be about 8 feet tall, the top of the sign would be approximately 26.5 feet above the bridge deck.

Ramp metering is part of the proposed project. On page 30 of the Draft EIR/EA, in Section 1.2.5.2 Transportation System Management and Transportation Demand Management Alternatives, the text states that “the following TSM measures have been incorporated into Alternative 3: ramp metering, auxiliary lanes, and bicycle/pedestrian lanes.” For clarification, text regarding ramp metering has also been added to Section 1.2.5.1 of the project description. The effects of ramp metering were included in the traffic analysis (see Sections 2.1.8 and 3.2.4 of the Draft EIR/EA and Traffic Operations Report, August 2010 prepared by Fehr & Peers) that was used in the air quality and noise analyses. Thus, ramp metering was included in the modeling that was done to evaluate potential air quality and noise impacts as well.

### **Master Response 3 – Range of alternatives considered**

Comments on the Draft EIR/EA express that a reasonable range of alternatives was not presented in the Draft EIR/EA. Comments also state that the alternatives considered were design variations rather than alternatives, and that no alternative was considered that would avoid significant impacts or impacts to the Gold River Community.

As noted in the Federal Highway Administration’s (FHWA) Technical Advisory T 6640.8A (October 30, 1987), the purpose of an EA is to determine whether or not an EIS is needed. The Technical Advisory provides the following instructions for the alternatives section of an EA:

Discuss alternatives to the proposed action, including the no-action alternative, which are being considered. The EA may either discuss (1) the preferred alternative and identify any other alternatives considered or (2) if the applicant has not identified a preferred alternative, the alternatives under consideration. The EA does not need to evaluate in detail all reasonable alternatives for the project, and may be prepared for one or more build alternatives.

Under CEQA Guideline 15126.6, “an EIR shall describe a range of reasonable alternatives to the project.” Under the rule of reason, only those alternatives that would avoid or substantially lessen any of the significant effects of the project must be

considered and of those alternatives, the EIR need examine in detail only those alternatives that feasibly attain the most basic objectives of the project. Factors that may be used to eliminate alternatives from detailed consideration are (1) failure to meet purpose and need and most of the basic project objectives, (2) infeasibility, (3) inability to avoid significant environmental impacts or (4) implementation of the alternative is remote and speculative and the effects cannot be reasonably ascertained.

Section 15126.6(f)(1) of CEQA Guidelines provides the following guidance regarding feasibility:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).

Thirteen alternatives were considered for the proposed project. Alternatives 1 through 7 are alternative interchange designs (design variations). The remaining alternatives considered are alternatives to not building an interchange at the proposed location along Highway 50. These alternatives were developed to reduce impacts specifically to the Gold River Community and included alternatives suggested in comments received in response to the Notice of Preparation.

Extensive analysis of alternatives, their environmental impacts or benefits, feasibility and reasons for elimination are included in the Draft EIR/EA in Section 1.2.5.4. Rejected alternatives were ultimately identified as either (1) failing to meet purpose and need and most of the basic project objectives, (2) infeasible, or (3) unable to avoid severe (significant) environmental impacts.

A summary of alternatives that do not build the interchange at the proposed location, and the reason for finding them potentially infeasible, is reiterated below. The complete analysis is contained in the Draft EIR/EA:

Alternative 8 - This alternative would provide continuous eastbound and westbound auxiliary lanes along U.S. 50 between the Sunrise Boulevard interchange and Hazel Avenue interchange. No new connection to U.S. 50 would be provided. This alternative would avoid environmental impacts associated with visual and lighting and operational impacts to the Rancho Cordova Parkway/U.S. 50 eastbound ramp. It also would be likely to reduce traffic noise impacts and construction air quality and air toxics as compared to

the proposed project. This alternative was removed from further consideration because it did not satisfy the purpose and need to provide additional access to U.S. 50, improve traffic operations on Sunrise Boulevard, and relieve existing traffic congestion on Sunrise Boulevard.

Capital Southeast Connector Alternative - This alternative, which was suggested during the NOP comment period, would not construct the proposed interchange project and instead would rely on the Capital Southeast Connector Project. This alternative would construct a 35-mile-long, four- to six-lane roadway/expressway facility from the Interstate 5/Hood Franklin Road interchange in Sacramento County to the U.S. 50/Silva Valley Parkway interchange in El Dorado County and is included in the SACOG 2035 MTP.

Although the Capital Southeast Connector Project would provide reduced traffic volumes in the project area of the U.S. 50 corridor, it alone would not provide sufficient capacity to adequately address existing and future congestion issues associated with U.S. 50 and the operation of interchanges at Sunrise Boulevard and Hazel Avenue. The Capital Southeast Connector Project would alleviate some of the traffic congestion associated with U.S. 50 and the Sunrise Boulevard and Hazel Avenue interchanges, but would not be capable of reducing enough congestion in these areas to allow them to operate sufficiently. It also would not address the more localized need for improving congestion on Sunrise Boulevard, White Rock Road, and Hazel Avenue south of U.S. 50. The proposed project and the Capital Southeast Connector Project (as well as other projects in the SACOG 2035 MTP) are intended to work in combination to provide improved transportation conditions in the region. In addition, based on the impact analysis in the Capital Southeast Connector Project EIR (State Clearinghouse No. 2010012066) which is incorporated herein by reference, the Capital Southeast Connector Project would result in similar impacts as the proposed project, as well as additional severe and unavoidable impacts to biological resources, cultural resources, and loss of prime farmland that would be avoided under the proposed project.

Expansion of Existing Arterials Alternative - This alternative was suggested during the NOP comment period and would expand major arterials between U.S. 50 and Jackson Highway (State Route 16) in substitution of a new interchange. Existing and proposed major arterials surrounding the project area, such as Sunrise Boulevard, Rancho Cordova Parkway, Americanos Boulevard, Kiefer Boulevard, Douglas Road, White Rock Road, Jackson Highway, and Grant Line Road, already are planned to be constructed and/or expanded under the City's General Plan Circulation Element (see Figure C-1 of the Circulation Element on the City's website, at

<http://www.cityofranhocordova.org/Index.aspx?page=104#a2>) to four- to six-lane roadway facilities and still would not be sufficient to provide adequate replacement roadway capacity for traffic utilizing U.S. 50. As such, this alternative would not meet the project purpose and need to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue (south of U.S. 50), because it would not provide the capacity necessary to accommodate future traffic volumes and alleviate congestion through these areas.

This alternative would avoid some site-specific impacts associated with the proposed project by not constructing a new interchange on U.S. 50, which would avoid localized effects to visual resources, localized air quality, and noise, but would result in new and/or different environmental effects elsewhere, associated with visual resources, cultural resources, biological resources, air quality, and noise, which are disclosed in the City of Rancho Cordova General Plan EIR (State Clearinghouse No. 2005022137) which is incorporated herein by reference.

Rancho Cordova Parkway “T” Intersection with Folsom Boulevard Alternative - This alternative, suggested during the NOP comment period, would extend Rancho Cordova Parkway to Folsom Boulevard only, rather than construct a new interchange. This alternative would avoid site-specific impacts associated with the proposed project. However, this alternative would increase traffic volumes on Folsom Boulevard and would still result in traffic utilizing the existing interchanges at Sunrise Boulevard and Hazel Avenue. This alternative would not meet the purpose and need to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, and Hazel Avenue (south of U.S. 50). In addition, an at-grade T-intersection between Rancho Cordova Parkway and Folsom Boulevard is not feasible due to the proximity of the Folsom South Canal and the RT Folsom Light Rail line. In order to provide the required vertical clearances over the canal and light rail, a connection to Folsom Boulevard is not practical.

Light Rail Extension Alternative - This alternative was suggested during the NOP comment period. It would eliminate the proposed interchange project and instead would provide a light rail line along Rancho Cordova Parkway. As identified in the August 2006 City of Rancho Cordova Transit Master Plan, Rancho Cordova Parkway is already designated as a potential future corridor for transit as well as bus rapid transit. Although these facilities would assist in reducing traffic operation impacts to the U.S. 50 corridor, they would not provide adequate ridership to meet the project purpose and need to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue (south of U.S. 50).

Alternative Site Analysis - Because one of the primary purposes of the proposed project is to relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue south of U.S. 50, the proposed new interchange must be located in the general vicinity of these roadways. Additionally, because a new interchange was envisioned by the County in the 1980s and land was set aside from the Gold River Community development at that time to accommodate a future interchange, the proposed location is one of the few areas along U.S. 50 between Sunrise Boulevard and Hazel Avenue where undeveloped space is available and no existing residences or commercial buildings are located. Because a substantial number of residences and/or commercial buildings would need to be relocated to accommodate an alternative site for a new interchange, other site alternatives are not considered to be practical or feasible.

Also, Caltrans' design guidelines call for new interchanges to meet minimum spacing between interchanges. The Caltrans Design Information Bulletin 77 (DIB 77) (Caltrans 1995) requirements establish a minimum distance of 0.93 miles between interchanges in urban areas. No locations within the U.S. 50 project area corridor, other than the proposed interchange location, would meet both the Caltrans DIB 77 spacing requirements and avoid or substantially lessen severe effects of the project. An example of an alternative considered but eliminated from further consideration based on interchange spacing requirements is the Citrus Road undercrossing area, which is an existing bicycle-only undercrossing under U.S. 50, located approximately 2,000 feet east of the Sunrise Boulevard interchange. Because this location is so close to the existing Sunrise Boulevard interchange, construction of a new interchange at this location not only would fail to meet Caltrans DIB 77 spacing requirements, but the proximity of these two interchanges to each other would result in unacceptable traffic operations at both interchange locations and along this segment of U.S. 50.

In addition to analyzing alternative locations for placement of the interchange structure, alternative alignments of the Rancho Cordova Parkway roadway between the interchange structure just south of the Folsom South Canal and White Rock Road also were examined, to identify whether an alternative alignment could substantially lessen severe environmental effects.

The area between the Folsom South Canal and White Rock Road is largely undeveloped open space with nonnative grassland. Most of the area historically has been dredged for gold, leaving an irregular surface of dredge tailing piles of cobbles and rock. Scattered throughout the area are isolated seasonal wetlands and vernal pools that may provide suitable habitat for protected aquatic invertebrate species, and elderberry bushes that provide habitat for the federally protected valley elderberry longhorn beetle (VELB).

Several native and nonnative trees also are scattered throughout the area. Because this area largely is undeveloped open space with wetland, elderberry, and tree habitats scattered throughout, the primary effects of constructing a road through it would be to biological resources.

Because biological resources are abundant and scattered throughout this area, with no areas or corridors that contain substantially fewer biological resources than others, alternative alignments of Rancho Cordova Parkway that would substantially lessen impacts of the project were not identified. An assessment was conducted to identify whether adjusting the alignment of the Rancho Cordova Parkway roadway to the east or west of the currently proposed alignment would serve to reduce effects to isolated seasonal wetlands and elderberry shrubs. The ability to modify the proposed alignment would be constrained in the north by the location where the overpass from U.S. 50 over the Folsom South Canal would touch down to ground level and be constrained in the south by the location of the future Rancho Cordova Parkway/White Rock Road intersection, as identified in the City's General Plan and the Rio del Oro Specific Plan. Additionally, the ability to modify the roadway alignment to avoid resources would be limited by the confines of safe and allowable curve radii (i.e., it is not feasible to design an alignment that would avoid resources but would result in dangerous curves in the roadway alignment). As such, alternative roadway alignment opportunities would be limited to the areas between these two points.

Elderberry shrubs are scattered throughout the project area. As such, alternative alignments of the Rancho Cordova Parkway roadway would result in effects to similar numbers of the shrubs as would be affected by the proposed project. No locations exist in the project area where substantially fewer numbers of elderberry shrubs occur, such that the proposed project could substantially reduce effects to this resource based on biological resource technical studies for the Westborough Planning Area as well as the Natural Environment Study (NES) prepared for the project.

Realigning the roadway to the east or west of the proposed alignment could result in slightly fewer effects to isolated seasonal wetland habitat in the project area, although no alternative would fully avoid either direct or indirect effects. All potential alignments would result in some amount of both direct and indirect effects to isolated seasonal wetland habitat. As such, no alternative was identified that would avoid or substantially reduce effects to isolated seasonal wetland habitat based on biological resource technical studies for the Westborough Planning Area as well as the NES prepared for the project. Replacement mitigation that would be required to compensate for the loss of isolated seasonal wetland habitat as a result of the proposed project would be high-quality, high-

value habitat, which, cumulatively, would result in improvement of wetland habitat available as compared to preservation of the marginal wetland habitat on-site.

Regardless of the proposed alignment of the Rancho Cordova Parkway roadway, areas surrounding the project area are proposed for full development as part of the proposed Westborough development. As such, under a cumulative condition, most elderberry and all isolated seasonal wetland habitat in the project area would be eliminated, regardless of preservation efforts made for the proposed Rancho Cordova Parkway roadway alignment.

In addition, the corridor alignment for Rancho Cordova Parkway has been set through the City's General Plan Circulation Element (see Figure C-1 of the Circulation Element), the approved Rio del Oro Specific Plan south of White Rock Road, and approved and developed conditions in the Sunridge Specific Plan south of the Rio del Oro Specific Plan. So, any significant change in alignment would present conflicts with City planning documents.

#### **Master Response 4 – Hazel Interchange/Extension Alternative**

Comments on the Draft EIR/EA suggested that a Hazel Avenue extension alternative should be evaluated. Commenters believe that improvements to the existing Hazel Avenue interchange and a southerly extension from Hazel Avenue to White Rock Road would serve the same purpose and need as the proposed project with fewer environmental impacts.

As discussed in Master Response 3, under the rule of reason, only those alternatives that would avoid or substantially lessen any of the significant effects of the project must be considered and of those alternatives, the EIR need examine in detail only those alternatives that feasibly attain the most basic objectives of the project. Factors that may be used to eliminate alternatives from detailed consideration are (1) failure to meet purpose and need and most of the basic project objectives, (2) infeasibility, (3) inability to avoid significant environmental impacts or (4) implementation of the alternative is remote and speculative and the effects cannot be reasonably ascertained.

The Hazel Interchange Only/Hazel Avenue extension alternative is examined below. The alternative does not warrant detailed examination under CEQA standards because 1) it would not meet the purpose and need and basic project objectives, 2) it is infeasible, and 3) it would not avoid significant environmental impacts.

### Inability to Meet Purpose and Need/Project Objectives

The objectives of the proposed project include the following:

- Relieve existing traffic congestion on U.S. 50, Sunrise Boulevard, White Rock Road, and Hazel Avenue south of U.S. 50.
- Improve traffic operations at the U.S. 50/Sunrise Boulevard and U.S. 50/Hazel Avenue interchanges.
- Maintain acceptable levels of service on U.S. 50 and at existing access points to U.S. 50 under existing and future conditions.
- Provide additional access to and from U.S. 50 and planned developments.
- Improve emergency access within the City of Rancho Cordova.
- Provide access to regional transit facilities and park-and-ride lots, where feasible.

To evaluate whether or not the Hazel Avenue extension alternative meets the project objectives, the effectiveness of the alternative was analyzed. The SACOG regional travel demand model (SACMET 2035 MTP/SCS version) was used to test the following two scenarios.

- With the U.S. 50/Rancho Cordova Parkway interchange and without a connection between US-50 and White Rock Road at Hazel Avenue (the EIR build alternative)
- Without the U.S. 50/Rancho Cordova Parkway interchange and with a connection between US-50 and White Rock Road at Hazel Avenue

It should be noted that the build alternative already assumes that an arterial connection between development south of U.S. 50 and the Hazel Avenue interchange, following Easton Valley Parkway to Hazel Avenue and north to U.S. 50, is in place as a condition of approval. This connection was evaluated in the Easton Project EIR (State Clearinghouse No. 2005062128). The proposed project will also include improvements along U.S. 50 at the Hazel Avenue interchange and eastward through the Folsom Boulevard Interchange. The overall plan is to build a stable network of arterials accessing an improved U.S. 50. The proposed project builds a connection to Hazel Avenue and assures good performance along U.S. 50.

For the second alternative, Rancho Cordova Parkway was assumed to have been built from White Rock Road to Easton Valley Parkway, a proposed arterial that would parallel Folsom Boulevard south of the light rail and railroad tracks. Hazel Avenue would be extended as a four-lane arterial from Easton Valley Parkway to White Rock Road.

Table 1 shows the cumulative year two-way peak hour volumes for a screenline<sup>1</sup> on Sunrise Boulevard, Rancho Cordova Parkway, and Hazel Avenue south of U.S. 50. Without the Rancho Cordova Parkway interchange, traffic volume demand at the Sunrise Boulevard interchange would increase. The demand at the Hazel Avenue interchange would increase also, about 4 to 5 times the increase at Sunrise Boulevard. Removing the U.S. 50/Rancho Cordova Parkway interchange would result in lower traffic volume accessing the freeway during the peak hours – 1,250 to 1,430 vehicles per hour in the AM and PM peak hours, respectively. Although a full regional traffic model was not run, it is reasonable to assume that those 1,250 to 1,430 vehicles per hour in the peak hours would be shifted from U.S. 50 to local streets and arterials in order to complete their trips. This would only shift regional traffic that can be better and more efficiently served on U.S. 50 to local streets and arterials where the demand cannot be served as efficiently.

**Table 1: Cumulative Year Model Peak Hour Two-Way Arterial Volume Comparison**

Location	RCP Interchange		Hazel Ave Extension		Difference	
	AM	PM	AM	PM	AM	PM
Sunrise Blvd: US-50 to Folsom Blvd	6,706	7,071	6,960	7,264	+254	+193
Rancho Cordova Parkway: US-50 to Easton Valley Pkwy	2,513	2,700	-	-	-2,513	-2,700
Hazel Ave: US-50 to Folsom Blvd <sup>1</sup>	3,757	4,187	4,763	5,265	+1,006	+1,078
Screenline Total	12,976	13,958	11,723	12,529	-1,253	-1,429

Note: <sup>1</sup>Under cumulative conditions, Hazel Avenue would be grade separated from Folsom Boulevard, so the reported volume is between US-50 and a quadrant roadway that would connect Hazel Avenue to Folsom Boulevard.  
Source: Fehr & Peers 2014

<sup>1</sup>A screenline is a group of count stations along a created line. Summing the traffic data along the line indicates the volume of traffic entering or leaving the area.

**Table 2: Cumulative Year Model Arterial Volume to Capacity Ratios Comparison**

Location	Direction	RCP Interchange		Hazel Ave Extension	
		AM	PM	AM	PM
Sunrise Blvd: US-50 to Folsom Blvd	Northbound	0.90	<b><u>1.16</u></b>	0.92	<b><u>1.18</u></b>
	Southbound	<b><u>1.33</u></b>	<b><u>1.20</u></b>	<b><u>1.39</u></b>	<b><u>1.24</u></b>
Rancho Cordova Parkway: US-50 to Easton Valley Pkwy	Northbound	0.76	0.75	-	-
	Southbound	0.49	0.60	-	-
Hazel Ave: US-50 to Folsom Blvd <sup>1</sup>	Northbound	0.60	0.86	0.86	<b><u>1.07</u></b>
	Southbound	0.65	0.54	0.73	0.69
Zinfandel Dr: US-50 to White Rock Road	Northbound	<b><u>1.17</u></b>	<b><u>1.39</u></b>	<b><u>1.16</u></b>	<b><u>1.37</u></b>
	Southbound	<b><u>1.22</u></b>	<b><u>1.04</u></b>	<b><u>1.22</u></b>	<b><u>1.05</u></b>

Notes: Bold and underline font indicate locations where demand exceeds capacity (the value is greater than 1). 1. Under cumulative conditions, Hazel Avenue would be grade separated from Folsom Boulevard, so the reported volume is between US-50 and a quadrant roadway that would connect Hazel Avenue to Folsom Boulevard.  
Source: Fehr & Peers 2014

The traffic volume increase at the Sunrise Boulevard interchange is limited by its capacity. Table 2 shows the demand volume-to-capacity (v/c) ratios for the two alternatives. At Sunrise Boulevard, the peak hour demand volume exceeds capacity for three of the four direction/peak hour scenarios and is higher than the demand value to capacity ratio for the Rancho Cordova Parkway Interchange condition. With the Rancho Cordova Parkway removed, the demand volume shifts to Sunrise Boulevard as the shortest path, but the interchange is already congested such that the higher demand cannot be accommodated. Even with the Rancho Cordova Parkway interchange, the demand volume at Sunrise Boulevard would exceed capacity. At the Hazel Avenue interchange, the extension increases the demand volume so that the volume would exceed the roadway capacity during the PM peak hour. Only with the Rancho Cordova Parkway interchange and associated arterial and U.S. 50 mainline and interchange improvements does the Hazel Avenue interchange meet the demand volume. The Zinfandel Drive interchange is an alternate route to the Sunrise Boulevard interchange, but this location is also predicted to be over capacity for both with the Rancho Cordova Parkway interchange and without it in 2035 as shown in the table.

**Table 3: Cumulative Year Model Peak Hour Freeway Volume and Volume to Capacity Ratio Comparison**

Location	RCP Interchange		Hazel Ave Extension		Volume Difference	
	AM	PM	AM	PM	AM	PM
Eastbound US-50 Sunrise Blvd to Rancho Cordova Parkway	5,327 (0.69)	7,171 (0.85)	5,511 (0.69)	7,419 (0.87)	+184	+248
Eastbound US-50 Rancho Cordova Parkway to Hazel Ave	6,422 (0.79)	7,983 (0.91)			-911	-564
Westbound US-50 Hazel Ave to Rancho Cordova Parkway	8,231 (0.94)	6,725 (0.79)	7,991 (0.87)	6,292 (0.75)	-240	-433
Westbound US-50 Rancho Cordova Parkway to Sunrise Blvd	7,678 (0.91)	6,220 (0.78)			+313	+72

Notes: The total peak hour volume is shown with the volume to capacity ratio for the general purpose lanes in parentheses.  
Source: Fehr & Peers, 2014

Table 3 shows the changes to U.S. 50 under these two scenarios. Overall, the Hazel Avenue extension option would result in lower volume on U.S. 50 between Sunrise Boulevard and Hazel Avenue since some traffic to and from the east that would have used the Rancho Cordova Parkway interchange has to use Hazel Avenue instead.

While the Hazel Avenue extension would provide some relief over the no-build alternative, the demand volume would increase at the already congested Sunrise Boulevard interchange and it would lead to an overcapacity issue at the Hazel Avenue interchange during the PM peak hour. In addition, the higher demand at the Hazel Avenue interchange would mean that the planned improvements for the interchange would need to be more extensive and costly than currently planned, and may not be feasible due to physical constraints. The County, City, and Caltrans have been working on a design solution for the Hazel Avenue interchange and have yet to agree on a design concept due to complex geometric constraints. Without the proposed project in place, resolving those geometric constraints would become even more challenging. It would also likely lead to regional trips being transferred to the local roadway system that is less able to handle regional movements efficiently. It would not be an equivalent substitute for the Rancho Cordova Parkway interchange. A more detailed analysis would be needed to determine the full set of impacts to Hazel Avenue, Sunrise Boulevard, U.S. 50, and the local roadway system, but this assessment shows that the Hazel Avenue extension does not meet the project purpose and need to improve traffic operations at the U.S. 50/Sunrise Boulevard and U.S. 50/Hazel Avenue interchanges. With the Rancho Cordova Parkway interchange alternative compared to the Hazel Avenue interchange only alternative

operations at the U.S. 50/Sunrise Boulevard and U.S. 50/Hazel Avenue interchanges, the volume to capacity ratios would be improved and more traffic volume would move through the interchanges.

Therefore, if the proposed project was not built and a Hazel Avenue extension alternative was constructed in its place, operations at the Hazel Avenue and Sunrise Boulevard interchanges would worsen. This would directly conflict with the project's objective to improve traffic operations at the U.S. 50/Sunrise Boulevard and U.S. 50/Hazel Avenue interchanges.

### Infeasibility

Section 15126.6(f)(1) of CEQA Guidelines provides the following guidance regarding feasibility:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).

The Hazel Avenue extension would be constructed largely through land owned by Aerojet which is currently extensively used for industrial, research, and development purposes. The roadway would have significant negative impacts on the current landowners, which would make any public acquisition of land difficult and costly. The specific negative impacts resulting from construction of the roadway through Aerojet property (as reference in communication from Aerojet dated \_\_\_\_ ) would include the following:

- a. The roadway would traverse an active industrial manufacturing and research and development campus that is the site for systems engineering, design and analysis, fluid management, materials, software and electronics, solid rocket motors and liquid engines, advanced propulsion systems, including hypersonics, and systems utilized in space and defense propulsion systems, including, for example, systems used in every manned lunar landing, launch and landing systems for exploration of Mars, and deep space probes.
- b. The roadway would traverse an active space and defense propulsion systems facility that has been a consistent source of jobs for the community, and an active and important member of the community, since the 1950s.

- c. The roadway would bisect that campus, making operations and collaboration within and between areas of the campus much less efficient.
- d. The roadway would create security issues related to being a contractor to the Department of Defense and many aerospace companies.
- e. The roadway might give rise to quantity distance issues related to the storage of energetic materials on the industrial manufacturing and research and development campus (see page 270 of the Draft EIR/EA for a discussion of quantity distance issues).
- f. The roadway would potentially conflict with ongoing remediation efforts related to Superfund issues.

All of the above would clearly impact the ability of one of the area's largest employers to continue to conduct business in Sacramento County. If the Aerojet Rocketdyne industrial manufacturing and aerospace R&D campus were to be relocated to accommodate an extension of Hazel Avenue through the campus, approximately 1,800 direct jobs would be lost in Rancho Cordova, Folsom, and unincorporated Sacramento County.

Therefore, the Hazel Avenue extension through Aerojet is not feasible since 1) the site itself is not suitable for a major roadway given the current and past uses which have led to the need for ongoing remediation for contaminated water and soils, 2) would significantly impact the economic viability of one of Sacramento's largest employers 3) would likely cause conflict with Department of Defense regulations regarding storage of energetic materials and 4) would entail very complicated and costly right-of-way acquisition such that the property for the roadway could not reasonably be acquired.

#### Would Not Avoid or Substantially Lessen Significant Environmental Impacts

As discussed in Master Response 3, any alignment through the area south of U.S. 50 in the vicinity of the proposed alignment would have similar effects to sensitive biological resources, such as wetlands, elderberry bushes, and VELB. The impacts to these resources would be potentially significant for the Hazel Avenue extension. In addition, the Hazel Avenue extension would potentially impact areas within Aerojet property that were not part of the carve-out lands and would have potentially greater concerns related to hazardous materials/wastes. It should also be noted that improvements to the Hazel Avenue interchange would likely significantly impact existing commercial uses, residential uses (Gold River), and the Nimbus Dam Recreation Area.

#### **Master Response 5 – Baseline traffic data**

Comments on the Draft EIR/EA express concern regarding the 2004 traffic data that was used in the project analysis.

The US-50/Rancho Cordova Parkway Interchange Traffic Report (Fehr & Peers, 2010) used traffic volume data collected in 2004 for the study locations. The 2004 volume data was compared to recent counts from two sources. Intersection counts were collected in 2013 by DKS Associates for the West Jackson Highway Master Plan EIR. The freeway mainline and ramp locations used data from Caltrans' PeMS online database from 2013 and 2014.

A comparison of intersection turning movement volumes from 2004 and 2013 are provided at the end of this appendix. Table 4 summarizes the study intersections along Sunrise Boulevard and along Hazel Avenue from U.S. 50 to Folsom Boulevard. The intersection volumes are 6 to 12 percent lower in 2013 compared to 2004.

**Table 4: Intersection Volume Comparison**

Corridor	2004		2013		Difference	
	AM	PM	AM	PM	AM	PM
Sunrise Blvd	18,598	19,461	17,392	17,731	-6%	-9%
Hazel Ave	11,565	12,994	10,410	11,408	-10%	-12%
Total	30,163	32,455	27,802	29,139	-8%	-10%

Source: Fehr & Peers, 2010 and 2014

Tables 5 and 6 present the freeway mainline and ramp volume comparisons for eastbound and westbound U.S. 50, respectively. Overall, volumes are generally lower for the 2013–2014 counts compared to the 2004 counts. In particular, the total entering volume (upstream mainline location plus all on-ramps) decreases for three of the four direction/peak hour scenarios. The one increase (3 percent) occurs for the westbound direction during the AM peak hour. The freeway was widened by one lane at the Hazel Avenue interchange in 2006, so the higher count is likely the result of that added capacity.

In the PM peak hour, the eastbound direction entering volume has a decrease of 2 percent. So, for the peak directions (westbound AM and eastbound PM), the change in volume from 2004 to 2013–2014 is small.

**Table 5 – Eastbound Freeway Mainline and Ramp Volume Comparison**

Location	2004		2013/2014		Difference	
	AM	PM	AM	PM	AM	PM
Mainline west of Sunrise Blvd	6,428	7,534	5,687	7,320	-12%	-3%
Mainline between Sunrise Blvd to Hazel Ave	5,972	6,877	4,847	6,444	-19%	-6%
Mainline east of Hazel Ave	5,718	6,002	4,718	6,232	-17%	4%
All On ramps	1,913	2,140	1,501	2,168	-22%	1%
All Off ramps	2,623	3,672	2,479	3,256	-6%	-11%
Total Entering Volume	8,341	9,674	7,188	9,488	-14%	-2%

Source: Fehr & Peers, 2010 and 2014

**Table 6 – Westbound Freeway Mainline and Ramp Volume Comparison**

Location	2004		2013/2014		Difference	
	AM	PM	AM	PM	AM	PM
Mainline east of Hazel Ave	4,713	4,370	5,400	4,399	15%	1%
Mainline between Hazel Ave to Sunrise Blvd	6,031	4,796	6,418	4,430	6%	-10%
Mainline west of Sunrise Blvd	7,405	5,709	7,788	5,222	5%	-9%
All On ramps	4,233	2,971	3,776	2,450	-11%	-18%
All Off ramps	1,541	1,632	1,388	1,627	-10%	0%
Total Entering Volume	8,946	7,341	9,176	6,849	3%	-7%

Source: Fehr & Peers, 2010 and 2014

If the existing conditions analysis were updated using the generally lower 2014 counts, the analysis results would have similar traffic operations to what was reported in the 2010 traffic report and the Draft EIR/EA. Because the traffic operations would be substantially similar to those used in the traffic-dependent technical studies, such as the air quality and noise studies, the results of those studies would also be substantially similar. In fact, the slightly higher 2004 traffic volumes may yield a slightly more conservative assessment of impacts than the 2013–2014 volumes. Therefore, even if the 2013–2014 conditions were used for the baseline conditions analysis, there would be no new or substantially more severe significant impacts on traffic operations from those disclosed and analyzed in the Draft EIR/EA.

In addition, under CEQA, the baseline conditions in the EIR analysis should be the conditions existing at the time the Notice of Preparation was published. (CEQA Guidelines Section 15125; *Neighbors for Smart Rail v. Exposition Metro Line*

Construction Authority (2013) 57 Cal.4th 439.) The Notice of Preparation was published in 2005. Therefore, the City's use of 2004 traffic data to establish baseline conditions in the Draft EIR/EA is consistent with CEQA standards. CEQA does not require the City to update its baseline conditions data during the time it takes the City to process the project and its EIR/EA through the administrative review procedure.

## **Master Response 6 – Air quality and health effects**

### Construction Emissions

The Draft EIR/EA identified that construction activities would result in the exposure of sensitive receptors to increased Toxic Air contaminants (TAC), primarily related to diesel particulate matter (DPM) from construction equipment. The potential exposure would only occur during construction activities, which are anticipated to last for approximately 15 months. Once construction activities are completed, the TAC construction emissions would no longer occur (refer to Response to Comment ZZZZ-2). Additionally, as identified in Response to Comment ZZZZ-8, with the modification of mitigation measure MM 3.2.11-1b, the City would require the construction contractor to utilize construction equipment that meets Tier 3 emission standards or greater which will greatly reduce the emissions of TACs from construction equipment. The construction emissions model anticipated the use of uncontrolled or Tier 1 diesel equipment based on the Roadway Construction Emissions Model (RECM) modeling. It is anticipated that the utilization of Tier 3 equipment would result in the reduction of DPM by approximately 90 percent compared to the emissions modeled in the Draft EIR/EA. However, in an abundance of caution, due to the location of construction activities occurring adjacent to the existing residential uses, the Draft EIR/EA acknowledges that sensitive receptors would be exposed to construction-related TAC and this would be a significant and unavoidable impact (please see impact 3.2.11-2 in the Draft EIR/EA).

The only other air pollutant emissions from construction activities that would exceed significance thresholds is nitrogen oxide (NOx). The associated public health impacts associated with increase illness from these emissions is discussed in Section 2.2.5.1 of the Draft EIR/EA. The Draft EIR/EA identified the impacts of construction emissions of NOx as significant and unavoidable since the payment of the SMAQMD fee for program for off-site mitigation was identified as infeasible. However, the City has agreed to pay the fee. The fee payment is used to fund emission reduction programs within the region through engine repowers, retrofits of existing equipment with new emission control technology, and development of cleaner fuel alternatives for construction equipment which will offset project emissions that will exceed the threshold. With the payment of the fee and the implementation of the air quality mitigation measures identified in the

Draft EIR/EA, the project construction emissions of NO<sub>x</sub> will be significantly reduced. With the proposed mitigation measures and the estimated construction period anticipated to only last 15 months, the project will not result in a significant increase in adverse health impacts due to its NO<sub>x</sub> emissions.

### Operational Emissions

The Draft EIR/EA for the proposed project acknowledges that studies have indicated a relationship between proximity to roadways and adverse health effects; see, for example, page 294 of the Draft EIR/EA. Potential health effects of criteria air pollutants are also discussed in Table 2.2.5-1. The proposed project is not anticipated to cause or contribute to any exceedances of either state or federal air quality standards but rather is anticipated to result in decreases in roadway emissions due to more efficient traffic flows. Since the project emissions will be below applicable SMAQMD significance thresholds for criteria pollutants, the project will not result in a significant increase in adverse health impacts due to operational emissions of criteria pollutants.

TACs from operations primarily relate to DPM from trucks and other diesel-powered vehicles. The proposed project would not result in a substantial increase in diesel vehicles and there are relatively low truck and traffic volumes in the area. For that reason, SACOG, SMAQMD, USEPA, CARB, Caltrans, FHWA, and FTA, determined that the proposed project was not a project of air quality concern. In addition, because of EPA-mandated controls (cleaner vehicles, cleaner fuels, and cleaner engines) mobile source air toxics (MSATs, which are the primary source of TACs) are now predicted in FHWA's 2012 Interim Guidance on MSAT Analysis in NEPA to decrease by 83 percent from 2010 to 2050. Thus, even though there may be some short-term, localized increases in MSAT emissions as a result of moving traffic closer to some sensitive receptors as acknowledged in the Draft EIR/EA, there is a sharp decline in MSATs, as compared to existing conditions, including DPM, beginning in 2015 and continuing to decline steadily into 2030 and beyond. Therefore, the Draft EIR/EA concludes that the impact on sensitive receptors due to exposure to TACs from operational emissions would be less than significant (see impact 3.2.11-9 of the Draft EIR/EA).

Many commenters referenced the CAPCOA guidance on *Health Risk Assessments for Proposed Land Use Projects*<sup>2</sup> (July 2009) and many commenters requested the inclusion of measures to reduce particulate matter and TACs/MSATs. Section 8.3.2.1 of the CAPCOA guidance provides information about the positive effects of vegetation next to roadways:

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<sup>2</sup> [http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA\\_HRA\\_LU\\_Guidelines\\_8-6-09.pdf](http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf)

The Sacramento Air District funded a study to measure the removal rates of particulate matter passing through leaves and needles of vegetation. Particles were generated in a wind tunnel and a static chamber and passed through vegetative layers at low wind velocities. Redwood, deodar cedar, live oak, and oleander were tested. The results from this study indicate that all forms of vegetation able to remove 65-85 percent of very fine particles at wind velocities below 1.5 meters per second (roughly 3 miles per hour) with redwood and deodar cedar being the most effective. This study supports the effectiveness of planting finely needled trees along sources of toxic particulate matter as an air toxics mitigation measure.

The CAPCOA guidance is not a regulatory document and its recommendations are not binding on the City. However, in response to comments received on the Draft EIR/EA, on the health risks of particulate matter and TACs/MSATS, the City has decided to include the planting of finely needled trees in the vacant lot along Tenderfoot Meadow as part of the project. Since the impact due to TAC emissions from operations is less than significant, this project component is not a mitigation measure under CEQA. The City will specifically include the tree planting in the plans approved for the project and require the tree planting to be done as part of the project.

### **Master Response 7 – Noise measurements**

Comments on the Draft EIR/EA express concern about the adequacy of the noise monitoring performed to establish existing conditions in the project area based on the contention that 15-minute monitoring time frames were insufficient and not taken during peak hour traffic. Other comments question whether or not project structures were considered in the noise analysis.

The noise measurements taken for the project were done in accordance with Caltrans Noise Protocol. Noise impact analysis is done based on the worst hourly traffic noise. The Caltrans Noise Protocol states that the peak traffic hour is generally not the noisiest hour since vehicles may be stopped or moving very slowly. The primary constituent in highway noise is tires moving along the pavement. Therefore, free-flowing traffic conditions just before or after rush hour often yield higher noise levels since this is the time when there are the most free-flowing vehicles (tires) moving along the highway surface. The 24-hour measurement is used to determine both the AM and PM peak hours, the worst hourly traffic noise, and to show that the 24-hour noise levels are consistent with the 15-minute measurements. The purpose of the short-term measurements is to capture the absolute sound levels at a specific time of day for a specific receptor of concern. The noise measurements included all noise sources in the vicinity, including

motorcycles and heavy diesel trucks gearing down and using air brakes. Further, the noise model did include proposed project structures and associated impacts of elevated noise sources, including the interchange ramp over the highway as seen on page 2 of the Noise Memorandum dated April 2010: “New overcrossing structure over U.S. 50, the Union Pacific Railroad, Folsom Boulevard, Folsom South Canal, and Buffalo Creek. The overcrossing structure will measure approximately 32 feet above ground level.”

### **Master Response 8 – Noise impacts and sound walls**

Comments on the Draft EIR/EA express concern over increased noise levels during operation of the proposed project and the adequacy of proposed mitigation measures. Many comments state that a 16-foot sound wall should be constructed from the Hazel Boulevard interchange to the Sunrise Boulevard interchange, completely replacing the existing sound wall. Comments also state that the acoustic shielding provided by the proposed U.S. 50 westbound on- and off-ramps is inaccurate. It was also suggested that the City of Rancho Cordova should be solely responsible for the maintenance of the new sound wall.

Noise analysis for the project found two receivers (R1 and R7) that will exceed the federal Noise Abatement Criteria (NAC); the NAC applicable to those receivers is 67 db. The existing noise levels at both receivers R1 and R7 already approach or exceed the NAC.

R1 – As shown in the Draft EIR/EA Table 2.2.6-6, the existing noise level at this receiver is 71 dB. In the year 2037 with no project, the noise level at this receptor will be 70 dB. In the year 2037 with the proposed project, the noise level at this receiver will be 68 dB. Although the noise levels at this receiver will decrease with the proposed project, the NAC (67 dB) will still be exceeded.

R7 – As shown in the Draft EIR/EA Table 2.2.6-6, the existing noise level at this receiver is 66 dB. In the year 2037 with no project, the noise level at this receptor will be 65 dB. In the year 2037 with the proposed project, the noise level at this receiver will be 66 dB. Although the noise levels at this receiver will remain similar to existing conditions with the proposed project, the future noise level will approach, defined as coming within 1 db of, the NAC (67 dB).

Under 23 CFR 772, when the federal NAC is approached or exceeded, noise attenuation must be considered to determine if it is reasonable and feasible. 23 CFR 772 does not include a mandate for a proposed project attenuation to get future predicted noise levels below the NAC at impacted receivers. An analysis of noise attenuation found that future

noise levels at R1 and R7 remain the same with the 7.9-foot existing sound wall plus a wall of the same height constructed on the ramps. A 16-foot sound wall was found to have a 4 dB decrease at R1 and a 3 dB decrease at R7. However, Caltrans requires a sound wall to reduce noise levels by 5 dB to be considered feasible.

As stated on page 315 of the Draft EIR/EA: According to the Caltrans protocol, for noise abatement to be implemented, it must be determined to be both “feasible” and “reasonable.” Noise abatement feasibility involves many engineering considerations. A minimum 5 dBA noise reduction must be achieved to be considered feasible. However, feasibility may also be restricted by topography, access requirements, presence of local cross streets, other noise sources in the area, and safety considerations.

The Caltrans protocol states that “reasonableness” of noise abatement consider cost of the abatement, absolute noise levels, changes in noise levels, noise abatement benefits, development along the highway, life cycle of the proposed noise abatement, environmental impacts of the proposed noise abatement, opinions of impacted residents, input from the reviewing public agencies, and the social, economic, environmental, legal, and technological factors.

Despite the finding of infeasibility, the City will build an 8-foot sound wall along the outside edge of shoulder of the westbound auxiliary lane, including the proposed ramps, which will be built by non-federal (local) funds.

Extending a new sound wall to the Hazel Boulevard and Sunrise Boulevard interchanges is also not required because the project will not have a significant noise impact and, therefore, imposing a mitigation requirement would violate legal standards. Under CEQA Guideline 15126.4: “There must be an essential nexus (i.e. connection) between the mitigation measure and a legitimate governmental interest (see also *Nollan v. California Coastal Commission*, 483 U.S. 825 [1987]). The mitigation measure must be ‘roughly proportional’ to the impacts of the project” (see also *Ehrlich v. City of Culver City* [1996] 12 Cal.4<sup>th</sup> 854). The proposed project will increase noise levels at R6 and R7 by only 1 dB; however, only R7 has an increase in future noise levels and will approach the NAC. For all other modeled receivers, the future noise levels are predicted to stay the same or decrease. As discussed in Section 3.2.12, the proposed project would not exceed any City thresholds of significance for noise. Nonetheless, the City has committed to the construction of an 8-foot sound wall. The City is not responsible for mitigating existing noise impacts or noise impacts not associated with the proposed project, since this impact exists even without the project. Construction of a 16-foot sound wall along the entire Gold River frontage of U.S. 50 is not required under CEQA because the project would not cause a significant impact under City noise standards.

It should also be noted that the smallest increase in noise levels that is perceptible to the human ear is generally a 3 dB noise increase per the FHWA. Therefore, residents are not expected to perceive the noise increases associated with the project. In addition, the proposed project will not exceed City or county thresholds of significance and is not considered a significant impact under CEQA. City noise thresholds of significance can be found in Chapter 13 (Noise Element) of the City of Rancho Cordova General Plan adopted in 2006. County noise thresholds of significance can be found in Chapter 12 (Noise Element) of the 2030 Sacramento County General Plan.

The Draft EIR/EA states that noise levels would decrease from the No Build condition at receivers R1, R2, and R5; that noise levels would stay the same at receivers R3 and R4; and that noise levels would increase by 1 dBA at receivers R6 and R7. The Draft EIR/EA does not claim that future noise levels would decrease overall, rather that the development of the new on-and off- ramps would serve as a line of sight barrier for the receivers located at R1, R2, and R5. Because these receptors would no longer have a direct line of sight of U.S. 50, noise levels at these receivers would decrease from the No Build condition.

The Draft EIR/EA evaluated the development of a 16-foot-high wall and found that the noise levels would not be decreased by 5 dB, as such, development of a wall of that height is not feasible according to Caltrans protocol, which implements FHWA noise regulations found at 23 CFR 772. Further, the increase in noise levels from the No Project condition to the With Project condition is less than the City of Rancho Cordova significance threshold for the purposes of CEQA. As identified in the Draft EIR/EA, the noise levels associated with the No Project condition would exceed the City's exterior noise limits. As such, for the purposes of CEQA, because the project would result in no change or a slight decrease in noise levels as compared to without the project, the project would not exceed the City's or Sacramento County significance criteria and no additional mitigation would be required.

Regarding maintenance of the sound wall, Caltrans will be responsible for maintaining the newly constructed sound wall (generally adjacent to the Tenderfoot Meadow). Caltrans will be responsible for the structure and for graffiti and other facing maintenance on the freeway side of the wall. The facing on the Tenderfoot Meadow side of the same wall will be the responsibility of the owner of the Tenderfoot Meadow. It is not known at this time who will be the ultimate owner of that property. It is currently owned by Sacramento County. The remaining wall outside the Tenderfoot Meadow area has a maintenance agreement that will not change as a result of the proposed project.

Lastly, the noise analysis prepared for the proposed project utilized the methodology set forth in the Caltrans *Traffic Noise Analysis Protocol* (Protocol). The Protocol includes guidance for identifying noise-sensitive receptors, the methods for conducting noise measurements, and the use of roadway noise models (the FHWA Traffic Noise Model [TNM]) for determining existing and future noise levels. The TNM model does not account for meteorological conditions; however, consistent with the Protocol, and as stated on page 309 of the Draft EIR/EA, the noise model was calibrated to account for site-specific factors based on observations taken during the noise measurements, including meteorological data. This calibration takes into account the effects of prevailing wind patterns as observed at the time of the measurements. Therefore, the noise analysis provided in the Draft EIR/EA did take into account the impact of wind currents.

### **Master Response 9 – Visual impacts**

Comments on the Draft EIR/EA express concern over aesthetic/visual impacts to the residents of Gold River based on the contention that the overcrossing structure will be highly visible from Gold River homes and mitigation measures provided in the Draft EIR/EA are inadequate. Comments also state that the visual simulations provided in Section 2.1.9 of the Draft EIR/EA were not sufficient and that trees should be planted to help block views of the new interchange.

Project impacts to residential viewers north of U.S. 50 were considered in Sections 2.1.9 and 3.2.5 of the Draft EIR/EA: “Residences located adjacent to the proposed interchange site would have high exposure to the proposed interchange structure, including the ramps, since the structure would be visible, though to varying degrees, from a number of properties. Residents who live directly adjacent to the interchange, particularly those with multiple storied homes, would have higher exposure to the appearance and lighting impacts from the interchange. Viewer awareness would be considered high for all of these viewers.” Visual impacts resulting from tree and vegetation removal and the proposed interchange structure were considered significant and unavoidable under CEQA in Section 3.2.5.

The proposed structure and associated lighting will impact residents of Gold River. All feasible mitigation measures to reduce or eliminate these impacts were considered and included. In order to help the public better understand what the views to the proposed interchange structure would be from Gold River, a new visual simulation was produced and displayed at the public hearing. The new visual simulation is shown below and is posted on the project’s website.

Visual mitigation measures (see measures 3.2.5-2, 3.2.5-3a, 3.2.5-3b, 3.2.5-3c, 3.2.5-4a, 3.2.5-4b, 3.2.5-4c, 3.2.5-5, 3.2.5-6a, 3.2.5-6b) included in the Draft EIR/EA include the following design requirements: tree protections and replacement, planting as a component of noise barrier design, aesthetic treatments on sound walls, public outreach efforts with affected viewer groups and other stakeholders, compliance with City, County, and Caltrans lighting and glare policies, and a photometric study to identify the potential for the lightshed of the project to affect adjacent residential properties. It should also be noted that the trees lining the existing sound wall will remain in place, further shielding the proposed project from viewers. In addition, the City has included in the project plans planting additional needle-leaved trees along the wall in the vacant lot along Tenderfoot Meadow in order to reduce potential air quality impacts; these trees would also provide additional visual mitigation.

If the proposed project is approved, the City will continue to work with the community and seek input on design and landscaping elements as the final designs are completed.



City of Rancho Cordova  
Planning Department

### **Master Response 10 – South-only connection will not relieve traffic congestion**

Comments on the Draft EIR/EA express concern over the ability of the proposed project to provide congestion relief in the project area with a south-only connection.

The U.S. 50/Rancho Cordova Parkway interchange is designed to accommodate travel demand from existing and planned developments in Rancho Cordova south of U.S. 50 to Jackson Road. The proposed project will also serve existing planned developments in unincorporated Sacramento County. The residential neighborhoods and commercial centers would need connections to the freeway network to travel efficiently throughout the region. The existing interchanges at Sunrise Boulevard and Hazel Avenue serve development both north and south of U.S. 50. At these two interchanges, travel demand to the north is particularly important since these roads have bridges at the American River. As a result, the Rancho Cordova Parkway interchange would serve as congestion relief to accommodate travel demand to the south since travel from the north would consume the capacity at the adjacent interchanges.

The proposed project is also consistent with the 50 Corridor Mobility Partnership and the US 50 Corridor System Management Plan (CSMP) which manage the U.S. 50 transportation network as a system rather than as independent units. As part of the CSMP, the Rancho Cordova Parkway Interchange Project creates substantial off-system benefits that relieve congestion, improve travel times, reduce the number of daily vehicle hours of delay, improve connectivity to the state highway system, provide viable transportation options, and has been identified in the CSMP as a key capital project. Therefore, the proposed project provides benefits to the regional transportation system.

### **Master Response 11 – Sidewalk on the bridge structure**

Comments on the Draft EIR/EA express concern over the proposed sidewalk on the bridge structure based on the perception that the sidewalk will encourage pedestrians to walk onto the on-ramps and onto U.S. 50, encourage people to throw things at cars from the overpass, and may be proposed as part of a future bicycle/pedestrian pathway connection to Gold River.

The sidewalk proposed for the east side of the bridge structure is intended to allow motorists that have automobile malfunctions on westbound U.S. 50 or the bridge to have a safe route from the bridge to pedestrian facilities south of the interchange. The bicycle/pedestrian pathway connection to Gold River is no longer part of the project and the proposed sidewalk is not intended as the starting point of a future connection (see Master Response 1). Comments on the safety hazards of pedestrians on U.S. 50 and

debris being thrown from the overcrossing are noted; fencing on overcrossing structures is a standard feature aimed at minimizing objects being thrown from the structures onto the highway facility and would be included as part of the proposed project. Standard signage will be placed where appropriate to caution the public that pedestrians and bicycles are not permitted on U.S. 50.

### **Master Response 12 – Impact to home values in Gold River**

Comments on the Draft EIR/EA express concern over the project’s impact to home values in Gold River.

Economic impacts, in and of themselves, are not environmental impacts and, therefore, are not required to be analyzed under CEQA. The issue of whether and to what extent the project would affect home values in Gold River is not a proper subject of a CEQA environmental analysis. However, the project’s human environment effects were addressed in the Draft EIR/EA on pages 77 through 81. Human environment effects analyzed include: Land Use, Parks and Recreational Facilities, Growth, Community Impacts, Relocations, and Environmental Justice. The Draft EIR/EA did note in Section 2.1.4 that construction of the project would have no impact on social values in the community, nor would it affect a community landmark or social gathering place, cause changes in population that are not already foreseen, or cause certain people to be separated or set apart from others. The project would not be expected to result in any adverse effects to any minority, low-income, disadvantaged, or low-mobility groups in the vicinity of the project. The project’s impacts on residents living adjacent to the proposed project was analyzed in the EIR/EA, such as noise (see Draft EIR/EA Sections 2.2.6 and 3.2.12, “Noise”), visual (see Draft EIR/EA Sections 2.1.9 and 3.2.5, “Visual/Aesthetics”) and Air Quality (see Draft EIR/EA Sections 2.2.5 and 3.2.11, “Air Quality”).

No land acquisition or relocation of existing residential units would be required on the north side of U.S. 50 that would require a determination of property value and compensation. Residents adjacent to the proposed interchange location have been located adjacent to U.S. 50 and the right-of-way reserved for this project since their construction and initial purchase and have not experienced any substantial physical deterioration that would be associated with blight. Construction of this planned improvement is not expected to result in substantial economic impacts to these residents that would result in a physical effect on the environment (e.g., blight). No substantial evidence has been provided to identify that such an impact would occur.

### **Master Response 13 – Development projects need the interchange**

Comments on the Draft EIR/EA express concern over planned development projects in the area that require the interchange as a condition of project approval. Comments also stated concerns that the City is prioritizing new and planned development over existing residential uses.

A need for additional access to U.S. 50 was required mitigation for the Sunrise-Douglas Community Plan and the Sunridge Specific Plan (approved in 2002, SCH#1997022055 which is incorporated herein by reference) originally approved by the County of Sacramento. The Sunrise-Douglas Community Plan and the Sunridge Specific Plan are no longer in effect in the city. Land uses under these plans have been superseded by the development-specific approvals and the City of Rancho Cordova General Plan. Requirements relating to the Rancho Cordova Parkway Interchange remain as a mitigation measure applicable to development projects located within the former Sunridge Specific Plan.

However, the Rancho Cordova interchange is not solely required to serve the development of the Sunrise-Douglas Community Plan area. The interchange is required to serve development in the City and region. The project has been part of the planned improvements in the Circulation Element of the City's General Plan since the incorporation of the City. It is an integral part of the overall circulation plan for traffic in the City for both existing and planned development. The project is also included in regional transportation planning documents. It is part of the planned improvements in the MTP/SCS 2035 (please see Master Response #10 for more information).

Land use and community impacts of new developments are addressed in project-specific environmental documents, which were or would be made available for public review and comment in accordance with CEQA Guidelines. This project would not entitle any development projects in the City. It should also be noted that air quality impacts associated with growth and development in the planning area have been analyzed in the City's General Plan EIR.

### **Master Response 14 – Adequacy of the public hearing**

Comments on the Draft EIR/EA express concern over the timing and format of the public hearing held on May 14, 2014, at City Hall from 5:30 PM to 7:30 PM. Comments state that the time of the hearing was inconvenient, attendees were not given the opportunity to express their concerns publicly, and that the City actively discouraged the public from commenting on the Draft EIR/EA.

Weekday evenings are widely considered the most appropriate time to hold public meetings/hearings as most workers still work weekdays from 8 AM to 5 PM. Unfortunately, it is not possible to schedule an event that is convenient for every member of the public. The public hearing was held in an “open house” format which did not include a formal presentation. Project information, City staff, project engineers, and other specialists were available at various stations. Questions were encouraged and answered on a one-on-one basis. Opportunities to comment on the Draft EIR/EA, both in writing and through testimony, were provided and not actively discouraged by City staff. Public comments on the Draft EIR/EA were taken at the hearing via court reporter. Comment cards were also supplied at the public hearing and notice of the public comment period was posted in the environmental document and the project website. Notice of the public hearing was provided via the project website, mailers, newspaper ad, and e-mails to residents and other stakeholders in the project area. One e-mail was received prior to the meeting stating that the timing was inconvenient. No other objections were received. Every effort was made to receive public input and provide adequate information regarding the project. Further opportunities for public comment will occur at the City Council hearing when the decision is made about whether to approve the proposed project and certify the EIR.

### **Common Letter Responses**

In addition to the master responses above, a master response has also been prepared to address a letter that was submitted by 24 residents. Please see comment letters: B, C, E, I, J, K, M, N, P, S, T, U, V, QQ, TT, WW, XX, XXXX, BBBB, CCCC, DDDD, FFFF, GGGG, and JJJJ. Seven comments are included in the letter. Responses to those specific comments are presented below.

#### *Common Letter Comment 1:*

*The proposed Rancho Cordova Parkway Interchange will significantly and negatively impact the quality of life and home values of all Gold River residents. In addition to numerous environmental impacts the interchange will create serious economic loss in terms of home values, and significant noise and visual disturbance. Please reevaluate your plans and stop the pending construction of this interchange.*

Response:

Your opposition to the Rancho Cordova Parkway Interchange Project and your concern for the quality of life in Gold River are acknowledged and included in the project record. Please see Master Responses 8, 9, and 12 for information regarding noise, visual, and

home value impacts. If the proposed project is approved, the City will continue to work with the community to gather input on elements of the final design.

*Common Letter Comment 2:*

*However, “IF” interchange construction moves forward, I strongly recommend that the City of Rancho Cordova provide a continuous 16-foot sound wall extending from the Hazel Blvd. interchange to the Sunrise Blvd interchange, along the freeway, running parallel to Highway 50 between the highway and the Gold River community. Creating a continuous and high sound wall consistent with several miles of sound walls currently visible along many other parts of Highway 50 is the community centered decision for many reasons, including:*

- For those uninitiated with the engineering behind sound; Sound is measured in decibels (dB) which are logarithmic (not linear) meaning that a one (1) decibel increase in sound or noise is substantially greater - much like an earthquake is measured with the Richter scale - another logarithmic scale. Sustained exposure to loud noise is a significant health hazard to the entire Gold River community.
- The current sound decibel level at Receptor 7 (South Carson Way) is 65 dB.

Response:

Please see Master Response 8 for a complete discussion of noise impacts and abatement, including sound walls.

*Common Letter Comment 3:*

*Decibel levels are predicted to increase to at least 66 dB with the proposed interchange. I believe that this measurement does not account for the countless motorcycles and heavy diesel trucks gearing down and using air brakes to slow down for their turn from the interchange onto the highway, or for heavy traffic exiting the highway onto the interchange ramp up and over the highway.*

Response:

All noise sources in the vicinity, including motorcycles and heavy diesel trucks gearing down and using air brakes, were measured during the time that noise measurements were taken. Please see Master Response 8 for a complete discussion of noise impacts and sound walls.

*Common Letter Comment 4:*

*The current sound wall is under 6-foot-tall and will NOT tie-in to the proposed new 8-foot-wall from each end. Additional 16-foot wall height and a continuous sound wall will dramatically lower traffic noise in Gold River (receptor 7) areas by at least 4 decibels, and will reduce visibility of the interchange ramp, street signs and street lights, all be part of the Rancho Cordova Parkway interchange.*

*Apparently a 5 dB sound reduction is required to qualify for a 16-foot-soundwall. I find it highly unlikely that a major and elevated highway interchange (which is much higher than the surrounding Gold River neighborhoods) would not benefit from at least a 5 dB sound reduction by installing a 16-foot-soundwall. The higher the interchange relative to the surrounding neighborhoods the more noise that will exist, and that noise will travel further throughout the entire Gold River community.*

*If a 16-foot-soundwall is deemed excessive, what is required to qualify for a 10ft, 12ft, or 14ft wall?*

*Any sound wall should be maintained indefinitely by the City of Rancho Cordova, not GRCA.*

Response:

Please see Master Response 9 regarding visual impacts and Master Response 8 regarding noise. The City has proposed to build an 8-foot sound wall along the outside edge of the shoulder of the westbound auxiliary lane, including the proposed ramps, which will be built by non-federal (local) funds. The new wall will be 8 feet tall, connecting to the existing sound walls (which are 8 feet tall above the surface of pavement) east and west of the new sound wall, creating a continuous wall.

Regarding maintenance of the sound wall, Caltrans will be responsible for maintaining the newly constructed sound wall (generally adjacent to the Tenderfoot Meadow). Caltrans will be responsible for the structure and for graffiti and other facing maintenance on the freeway side of the wall. The facing on the Tenderfoot Meadow side of the same wall will be the responsibility of the owner of the Tenderfoot Meadow. It is not known at this time who will be the ultimate owner of that property. It is currently owned by Sacramento County. The remaining wall outside the Tenderfoot Meadow area has a maintenance agreement that will not change as a result of the proposed project.

The height of the existing sound wall was provided by Caltrans based upon engineering plans.

*Common Letter Comment 5:*

Additionally, I request that Gold River homes and businesses in all neighborhoods adjacent to the highway be offered the following important economic and aesthetic considerations:

- Document current property conditions prior to construction such as pile driving, etc. to prevent, alleviate, or repair property damage to home foundations, pools, etc.

Response:

A pile driver may be necessary for installing bridge support piles during construction, potentially causing vibration to nearby receptors. As stated on Draft EIR/EA page 314: “If during construction it is determined that use of a pile driver would be the appropriate method for installing bridge support piles, attenuation measures shall be applied to reduce the project’s effects on adjacent sensitive receptors during construction.” This may include documentation of existing property conditions.

The effects of groundborne vibration can vary from no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. The effects of groundborne vibration are influenced by the duration of the vibration and the distance from the vibration source.

There are no federal, state, or local regulatory standards for vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, Caltrans has developed vibration criteria based on human perception and structural damage risks. For most structures, Caltrans considers a peak-particle velocity (ppv) threshold of 0.2 inches per second (in/sec) to be the level at which architectural damage (i.e., minor cracking of plaster walls and ceilings) to normal structures may occur. Below 0.10 in/sec there is “virtually no risk of ‘architectural’ damage to normal buildings.” Damage to historic or ancient buildings could occur at levels of 0.08 in/sec ppv. In terms of human annoyance, continuous vibrations in excess of 0.1 in/sec ppv are identified by Caltrans as the minimum level perceptible level for groundborne vibration. Short periods of groundborne vibration in excess of 0.2 in/sec ppv can be expected to result in increased levels of annoyance to people in buildings (Caltrans 2002).

The City will include the following in the plans approved for the project and require an analysis to be done as part of the project:

All construction activities that include impact equipment and activities such as pile driving, soil compaction, or vibratory hammers could potentially affect nearby structures. Where these activities occur within 200 feet of existing structures, an analysis of vibration impacts will be conducted. The analysis will address the potential for adverse vibration levels. The City will ensure that construction operations are designed to avoid or mitigate for vibrations above 0.02 inches/second (0.5 mm/second).

*Common Letter Comment 6:*

*Offer triple pane windows to homes along the freeway to minimize interchange and road noise from additional interchange traffic. Wrap these costs into a home energy credit program.*

Response:

As identified in Master Response 8 and the Draft EIR/EA noise analysis, only one residence would approach or exceed the FHWA noise abatement criteria and experience a noise level increase of 1 dB (identified at “R7” in the Draft EIR/EA) from the project. As shown in Table 2.2.6-6, the future noise levels with the proposed project are predicted to stay the same or decrease when compared to existing conditions. Triple pane windows are typically used only in cases where the predicted noise levels are severe (75 dBA or higher); the highest future noise level with the proposed project is at receiver R1, where the future predicted noise level is 68 dBA, which would be 3 dBA less than the existing noise at the receiver. Thus, triple pane windows would not be included as abatement for the proposed project.

*Common Letter Comment 7:*

*Provide thick vegetation and numerous trees immediately inside of the sound wall to absorb noise.*

Response:

As listed on page 210 of the Draft EIR/EA:

Where feasible, the following options shall be studied and implemented:

- Incorporating planting as a component of noise barrier design.

During consideration and design of potential aesthetic treatments and design elements, public outreach efforts will be conducted with the community and other stakeholders. As discussed in Master Response 6, the City has included a measure to plant finely needled trees in the vacant lot along Tenderfoot Meadow.

**Responses to Individual Comment Letters**

Written comments on the Draft EIR are included at the end of Appendix N. Responses to those comments are included in the table below. To assist in referencing comments and responses, the following coding system is used:

Letters are coded by letters and each issue raised in the comment letter is assigned a number (e.g., Comment Letter A, comment 1: A-1).

Where changes to the Draft EIR/EA text result from responding to comments, those changes are included in the text of this Final EIR/EA and demarcated with revision marks (line in margin).

Comment Letter	Comment Number	Response
A	1	Evaluating impacts within certain issue areas, such as air quality, noise, and traffic, results in low margins of error due to the specificity of the data available. Using precise traffic counts, thresholds, and computer modeling results in a low margin of error.
	2	The Draft EIR/EA evaluated both a “Build” and “No Build” Alternative. The City of Rancho Cordova and Caltrans will carefully consider environmental impacts, transportation needs, public input, and other factors before approving the proposed project. The project is not guaranteed to move forward and is not considered a “must go.”
	3	The need for the project is clearly defined in the Draft EIR/EA, Section 1.2.3, beginning on page 7. Existing and planned growth within the City and the surrounding communities is listed as one of the project needs. However, traffic operates at unacceptable levels of service in many areas under existing conditions, requiring improvements to address these conditions. An alternative access point to areas south of U.S. 50 is also needed.
	4	The project configuration was designed to meet the purpose and need listed in Sections 1.2.2 and 1.2.3 in the Draft EIR/EA. Thirteen other alternatives were considered but eliminated from further review for a variety of reasons (see Section 1.2.5.4). Total project cost is estimated to be \$92,000,000.
	5	Please see Master Response 10. While the proposed interchange would not provide an additional access for traffic north of U.S. 50, there would be some benefits to those north of U.S. 50 due to the easing of congestion and associated traffic queues at the Sunrise Boulevard and Hazel Avenue interchanges.
	6	Improvements to the Hazel Avenue interchange are already planned and were assumed to be built as part of the traffic modeling for 2037 design year. Please also see Master Response 4.
	7	Please see Master Response 4. While we appreciate your concern for connections to the American River bike trail and Lake Natoma recreational

Comment Letter	Comment Number	Response
		area, those connections are not part of the project purpose and need. The project purpose and need (see Section 1.2 of the Draft EIR/EA) is to relieve traffic congestion, improve traffic operations, maintain acceptable levels of service, provide access to and from U.S. 50, improve emergency access, and provide access to regional facilities.
	8	Please see Master Response 4.
	9	Please see Master Response 4; a Hazel Avenue interchange alternative would not meet the project objectives, is infeasible, would not result in improved traffic conditions over proposed project, and would not avoid or substantially lessen significant environmental impacts. As discussed in Master Response 3, many alternatives were studied and considered and meet the standards for a reasonable range of alternatives under CEQA.
B	1-7	Please see Common Letter Responses 1 through 7.
C	1-7	Please see Common Letter Responses 1 through 7.
	1	The City is actively working to identify and secure the necessary funding for the proposed project.
D	2	Thank you for your information regarding the Commission's needs when considering the proposed project's funding and new public road connection. When the environmental process is complete, Caltrans will provide written documentation to the Commission regarding the proposed project's consistency with applicable programming documents, such as the Regional Transportation Plan.
E	1-7	Please see Common Letter Responses 1 through 7.
	1	A Storm Water Pollution Prevention Plan will be prepared for the project; all applicable requirements of the Construction General Permit will be followed.
	2	BMPs, as described in Sections 2.2.2 and 3.2.8 of the Draft EIR/EA, will be implemented during project construction. The proposed project will implement LID methods and features where possible.
F	3	The project does not include industrial sites. No Industrial Storm Water General Permit will be required.
	4	The City will obtain a Section 404 permit as required for the project.
	5	The City will obtain a Section 401 permit as required for the project.
	6	The City will apply for a WDR permit if needed.
	7	The proposed project will be covered under the City's existing NPDES permit.
G	1	Please see responses to F1 through F7.
H	1	Please see Master Response 6.
	2	Please see Master Response 1.
I	1-7	Please see Common Letter Responses 1 through 7.
J	1-7	Please see Common Letter Responses 1 through 7.
K	1-7	Please see Common Letter Responses 1 through 7.
L	1	Please see Master Response 6.
M	1-7	Please see Common Letter Responses 1 through 7.
N	1-7	Please see Common Letter Responses 1 through 7.
O	1	Please see Master Response 6.

Comment Letter	Comment Number	Response
	2	Mitigation measures are proposed on page 317 of the Draft EIR/EA that would reduce construction noise impacts. In addition, a pile driver may be necessary for installing bridge support piles during construction, potentially causing vibration to nearby receptors. As stated on page 314 of the Draft EIR/EA: "If during construction it is determined that use of a pile driver would be the appropriate method for installing bridge support piles, attenuation measures shall be applied to reduce the project's effects on adjacent sensitive receptors during construction." Lastly, although construction of the project and associated noise would be temporary, this impact was found to be significant and unavoidable under CEQA. Please see Master Responses 7 and 8.
	3	Please see Master Response 9.
	4	Please see Master Response 12.
	5	Please see Master Responses 3 and 4.
P	1-7	Please see Common Letter Responses 1 through 7.
Q	1	The City and Caltrans disagree with the statement that the Draft EIR/EA is legally deficient. The document was prepared in accordance with all applicable federal, state and local laws, including the CEQA Guidelines and published case law, and presents decision-makers and the public with information about potential significant environmental effects. The citations to CEQA law do not contain specific comments on the project. The law speaks for itself and no responses are required.
	2	Please see Master Responses 1 and 2.
	3	Please see Master Response 2.
	4	Please see Master Response 2.
	5	<p>Please see Master Response 3. Please also note that the City, not Caltrans, is the lead agency under CEQA for the EIR portion of the Draft EIR/EA.</p> <p>The alternatives analysis in the Draft EIR/EA meets the legal requirements of both CEQA and NEPA. The Draft EIR/EA considers 13 alternatives to the proposed project, including seven alternatives that do not include building the interchange at the proposed location -No Project, Alternative 8, Capital Southeast Connector Alternative, Expansion of Existing Arterials Alternative, Rancho Cordova Parkway "T" Intersection with Folsom Boulevard Alternative, Light Rail Extension Alternative, and Alternative Site Analysis. The Draft EIR/EA also considers one alternative with alternative alignments to Rancho Cordova Parkway. For each of these alternatives, the Draft EIR/EA compares the environmental impacts of the alternative to the impacts of the proposed project. The Draft EIR/EA also contains an evaluation of the potential feasibility of each alternative. The commenters argue that because the Draft EIR/EA identifies many of the alternatives as potentially infeasible, the alternatives fail to meet the legal requirement for a reasonable range of alternatives. The comment is incorrect because it mischaracterizes the law and facts.</p> <p>The leading case addressing the issue of whether statements regarding infeasibility of alternatives in a draft EIR result in an inadequate alternatives analysis is <i>Mount Shasta Bioregional Ecology Ctr. v. Cnty. of Siskiyou</i> (2012) 210 Cal. App. 4th 184. In <i>Mount Shasta</i>, the court upheld an EIR that only analyzed a No Project Alternative and found all other proposed alternatives infeasible. The court ruled that an alternatives analysis is not inadequate if all alternatives considered by the agency during the scoping phase are determined to be infeasible and, therefore, are not analyzed in depth in the EIR. There is no rule specifying the number of alternatives that must be included in an EIR. The agency's determination that alternatives are infeasible will be upheld in court unless the challenger shows that no</p>

Comment Letter	Comment Number	Response
		<p>substantial evidence supports the agency determination. Courts also have specifically upheld the rejection of all off-site alternatives based on infeasibility due to failure to meet project objectives. (Jones v. Regents of Univ. of California (2010) 183 Cal. App. 4th 818). In Jones, the EIR did not need to consider an alternative consisting of moving the proposed new lab facilities to an off-campus location, because that would be inconsistent with the objective of maintaining a campus-like setting in order to encourage exchange of ideas between scientists and academics. The court ruled the agency could properly rely on the project objectives to reject any off-site alternative.</p> <p>The cases cited by the commenters do not stand for a different legal proposition and do not establish legal deficiencies in the alternatives analysis in the Draft EIR/EA. Watsonville Pilot Association v. City of Watsonville (2010) 183 Cal.App.4th 1059 does not even address the issue of rejection of alternative as infeasible. In Watsonville Pilot, the court ruled that an EIR was legally inadequate because it failed to consider a reduced project alternative. The court found the alternative analysis inadequate because all of the alternatives involved the same level of development or no development at all, and a reduced density alternative should have been considered. Here, in contrast, the Draft EIR/EA included seven alternatives to building the project at the proposed location. The Draft EIR/EA analyzed each of these alternatives, their environmental impacts as compared to the project, and their feasibility (including consistency with project objectives). Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692 also does not support commenters' arguments. In Kings County, the court found the project objectives to be overly narrow and improperly constrained the analysis of alternatives. The commenters do not make such a claim in their letter and they cannot. The project objectives in the Draft EIR/EA are not narrow and allow the proper analysis of alternatives as required under the law.</p> <p>The commenters also cite two court rulings from Sacramento County Superior Court – (1) Capay Valley Coalition and Yolo County Farm Bureau v. California Department of Transportation – Case No. 34-2010-80000414-CU-WM-GDS and (2) Environmental Council of Sac. et al. v. California Department of Transportation – Case No: 07CS00967. Neither of these cases are citable authority. Nevertheless, they are addressed below. In Capay Valley, the legal deficiency was the lack of substantial evidence to support the rejection of certain alternatives. In contrast, the Draft EIR/EA contains evidence to support its determination that certain alternatives are infeasible. In addition, if the City Council decides to approve the project, the Council will need to make specific findings on the rejection of certain alternatives based on the record as a whole. In Environmental Council, the court ruled that an EIR which considered only two similar “build” alternatives to the proposed project failed to include a reasonable range of alternatives. The court found that the EIR should have considered a transit-only alternative. In contrast, the Draft EIR/EA considered seven design alternatives with significantly different designs from the proposed project to try to reduce the significant impacts of the project. The Draft EIR/EA also considered seven alternatives to building the interchange at its proposed location, including a transit-only alternative. Therefore, the alternatives analysis in the Draft EIR/EA does not have the legal deficiencies identified in the Environmental Council case.</p>
	6	<p>A Program-level EIR was prepared and approved for the Capital Southeast Connector. However, project-level environmental documentation for individual segments have not yet been prepared or approved. The Capital Southeast Connector was included as an alternative because it was suggested during the Notice of Preparation comment period. The alternative was eliminated for further consideration due to greater environmental impacts and failure to meet the project purpose and need.</p>

Comment Letter	Comment Number	Response
	7	Please see Master Response 3.
	8	Please see Master Response 4.
	9	The dedication described did not limit the project analysis or alternatives discussion. The dedication of land was not a factor in the development of the alternatives for analysis. A number of alternatives analyzed in the Draft EIR/EA are not dependent on the dedication for implementation. The information on dedication was provided under “Background and History.” Providing background is appropriate for any project. An offer of dedication requirement for a private project does not constitute approval of proposed public improvement projects for CEQA or any other purposes.
	10	Please see Master Response 5.
	11	Please see Master Response 2.
	12	Prospect Hill Park has been added to the discussion of sensitive receptors in the project area. Parks are transitory in nature and users would not be subjected to extended periods of air pollutant exposure. The addition of the park as a sensitive receptor does not change the air quality analyses or conclusions in the Draft EIR/EA.
	13	Please see Master Responses 2, 4, and 6.
	14	Please see Master Responses 4 and 6. The SMAQMD guidance recommends the use of the closest monitoring station to the project area for both regional and localized analysis. There are no closer monitoring stations that would provide more complete information than the Del Paso Manor station.
	15	Please see Master Response 6.
	16	Please see Master Response 6.
	17	Please see Master Responses 4 and 5. See also response to Q14.
	18	Please see Master Response 6.
	19	Please see Master Responses 4 & 6. The criteria for determining whether a project is a project of air quality concern are the same for PM <sub>10</sub> and PM <sub>2.5</sub> and were specified in 2006 EPA guidance. That guidance states that, generally, a project is not a Project of Concern unless it changes capacity or alignment of a road with more than 125,000 AADT and 8% trucks, more than 10,000 truck AADT (8% of 125,000), or otherwise may substantially increase or concentrate diesel exhaust emissions. The project does not result in any of these conditions and is therefore not a Project of Air Quality Concern.
	20	Please see Master Response 5.
	21	Figure 2.2.6-1 has been revised to reflect this change.
	22	Please see Master Responses 5 and 7.
	23	The noise model included the reconfigured project, including the auxiliary lanes as part of the project.
	24	As identified in the last paragraph of page 301 of the Draft EIR/EA, “The noise-sensitive receptors in the project consist of single-family residences along the north side of U.S. 50. These houses are two-story construction and are set back 150–575 feet from the centerline of the U.S. 50 roadway.” However, the Draft EIR/EA identifies that receiver R1 is located 118 feet from the edge of the westbound lane of U.S. 50, and receiver R7 is located 102 feet from the edge of the westbound lane of U.S. 50. The analysis and TNM modeling utilized these distances for impact determination. Distances listed on pages 517-518 were measured from the centerline of the roadway

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		and are accurate.
	25	Please see Master Response 8. Noise levels associated with the project will not exceed the City's thresholds and are therefore consistent with the City's General Plan.
	26	Please see Master Responses 7 and 8.
	27	The Draft EIR/EA states that noise levels would decrease from the No Build condition at receptors R1, R2, and R5; that noise levels would stay the same at receptors R3 and R4; and that noise levels would increase by 1 dBA at receivers R6 and R7. The Draft EIR/EA does not claim that future noise levels would decrease overall, rather that the development of the new on- and off-ramps would serve as a line of sight barrier for the receivers located at R1, R2, and R5. Because these receptors would no longer have a direct line of sight to U.S. 50, noise levels would decrease from the No Project condition.
	28	Please see Master Response 8.
	29	Please see Master Response 8.
	30	Please see Master Response 9.
Q1	1	The text referred to is describing the Cordova Community Plan which does call for new roadway connections to enhance regional circulation and provide additional linkages (e.g., pedestrian structures) across U.S. 50. No revision was made. The pedestrian walkway is not part of the structure. See also Master Response 1.
	2	Revisions were made to Section 1.2.3.5 under sub-heading Bicycle and Pedestrian Access Improvements in the errata released on May 13, 2014.
	3	Revisions were made to Section 1.2.5.1 to remove this sentence.
	4	Revisions were made to Figure 1.2.5-2 in the errata released on May 13, 2014.
	5	Section 1.2.5.4 describes alternatives that were considered but eliminated from further discussion. At the time the alternatives were considered, they included the bicycle/pedestrian connection. No revision was made.
	6	Please see Master Response 8.
Q2	1	The noise analysis prepared for the proposed project utilized the methodology set forth in the Caltrans Traffic Noise Analysis Protocol (Protocol). The Protocol includes guidance for identifying noise-sensitive receptors and the methods for conducting noise measurements. An example of a complex project would be the development of a new highway covering several miles with varied terrain and land uses. For a project such as this, if the objective is to determine noise impacts of a highway project, sites should be selected in regions that will be exposed to the highest noise levels generated by the highway after completion of the project. As the proposed project involves the construction of an interchange and auxiliary lanes along an existing freeway within a limited area, there was no need to divide the area into subregions. The selection of the measurement sites and the modeled receptors was based upon the potential to expose residential uses within a limited area to the highest noise levels. Therefore, the use of two receptors for the noise analysis was done in accordance with the Protocol and was sufficient within a limited area.
	2	As identified in the last paragraph of page 301 of the Draft EIR/EA, "The noise-sensitive receptors in the project consist of single-family residences along the north side of U.S. 50. These houses are two-story construction and are set back 150–575 feet from the centerline of the U.S. 50 roadway." However, the Draft EIR/EA identifies that receiver R1 is located 118 feet

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		from the edge of the westbound lane of U.S. 50, and receiver R7 is located 102 feet from the edge of the westbound lane of U.S. 50. The analysis and TNM modeling utilized these distances for impact determination. Measurements were taken at the time of noise monitoring on-site and are likely more accurate than measurements taken using Google Earth.
R	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 13.
	3	An alternative that would expand existing arterials in the project region was considered (see Section 1.2.5.4) and found infeasible.
	4	Please see Master Response 4.
	5	Please see Master Response 14. Additionally, the City extended the 45-day public comment period, required under CEQA, to 60 days to provide the public with a longer time frame in which to review the Draft EIR/EA and provide comments to the City.
	6	Please see Master Responses 1 and 11.
S	1-7	Please see Common Letter Responses 1 through 7.
T	1-7	Please see Common Letter Responses 1 through 7.
U	1-7	Please see Common Letter Responses 1 through 7.
V	1-7	Please see Common Letter Responses 1 through 7.
W	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record. The project does not propose a connection to Gold River. Please see Master Response 1.
X	1	Your support of the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 1.
Y	1	Please see responses to Comments MMM-1 through MMM-7. Your concurrence with County Supervisor Roberta MacGlashan's comment letter is acknowledged and included in the project record.
Z	1	Revisions were made to Figure 1.2.5-2 and page 20 of the Draft EIR/EA to reflect that the bicycle/pedestrian connection to Tenderfoot Drive is no longer included in the Rancho Cordova Parkway Interchange Project.
	2	Revisions were made to Figure 2.2.6-1 to reflect this change.
	3	Section 1.2.3.5 of the Draft EIR/EA has been updated with the following information regarding the Folsom South Canal Trail: "The project would provide bicycle and pedestrian connections along Rancho Cordova Parkway between White Rock Road and Easton Valley Parkway ultimately connecting to the bicycle lane and bicycle trail system in the future Westborough development. When combined with the Westborough system, the project bicycle facilities would allow access to residential and commercial properties making several connections to the City's main trail system and the Folsom South Canal trail. Additional connections across the Folsom South Canal will provide bicycle and pedestrian access to Regional Transit's Sunrise light rail station and to the future Mine Shaft light rail station."
AA	1	The project will improve emergency access by providing additional, and shorter, routes for emergency vehicles accessing crisis locations and transporting patients to emergency care centers along the U.S. 50 corridor. Your particular comments regarding emergency access are acknowledged

Comment Letter	Comment Number	Response
		but do not pertain to the proposed project.
	2	This comment is acknowledged but it does not pertain to the proposed project.
	3	Your concerns are acknowledged but do not pertain to the proposed project.
	4	Your concerns are acknowledged but do not pertain to the proposed project.
	5	The proposed project's proximity to Prospect Park does not violate federal or state law. There is no law regulating proximity of freeways and interchanges to parks.
	6	The proposed interchange would be connected to the future Rancho Cordova Parkway which would extend south to White Rock Road. The parkway would be constructed at grade.
	7	John Webb was unavailable for signature at the time the document was released for public review. Susan Bauer is authorized to sign environmental documents on behalf of Caltrans.
	8	Comment noted.
	9	The Sacramento Valley Railroad (site CA-SAC-428-H) was determined to be outside of the vertical area of potential effects. The project would have no impact on this resource.
	10	All surface water bodies in the project area were described on page 225 of the Draft EIR/EA, including Buffalo Creek. Water Quality impacts are discussed in Sections 2.2.2 and 3.2.8. For CEQA, impacts related to water quality were found to be less than significant with implementation of mitigation measures.
	11	In the US Fish and Wildlife Service's (USFWS) Biological Opinion for the proposed project issued July 15, 2014, the USFWS acknowledged the proposed project's impacts to seasonal wetlands but determined that potential impacts to vernal pool crustaceans with implementation of mitigation and avoidance measures are extremely unlikely and therefore discountable. In addition, avoidance and minimization measures are provided on page 345 of the Draft EIR/EA.
	12	Please see response to Common Letter Comment 5.
	13	Comment noted.
	14	The proposed project would include a new concrete interchange structure and roadway, the operation of which would not result in additional fire risk.
	15	Please see Sections 2.2.4 and 3.2.10 of the Draft EIR/EA for a complete analysis of hazardous materials in the project area. The air quality section referenced in the comment does not evaluate hazardous materials.
	16	Controlled stops, such as a stop sign at the proposed interchange, are common at the beginning and end of freeway ramps. Please also see Master Response 8.
	17	Oak trees outside of the project area would not be impacted by the proposed project.
	18	The Draft EIR/EA was made available to public agencies, including the California Highway Patrol. The City and Caltrans have not received any comments or concerns from the CHP.
BB	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.

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		Please also see Master Response 12.
	2	Please see Master Response 13.
	3	Please see Master Responses 5 and 13.
CC	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record. Please see Master Response 6.
DD	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record. Please see Master Response 6.
	2	Please see Master Responses 2 and 6.
	3	Please see Master Response 6.
	4	Please see Master Response 11.
	5	We acknowledge your restatement of the Draft EIR/EA construction noise CEQA determination.
	6	Please see Master Responses 6 and 7.
	7	Please see Master Response 7.
EE	1	Your support of the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 1.
FF	1	Prospect Hill Park is described in Section 2.1.2 of the Draft EIR/EA. Text in the Air Quality Section (2.2.5) has been updated to reflect that Prospect Hill Park is a potential sensitive receptor. Gold River Discovery School is located 0.5 mile from the proposed project site. No revisions were made in relation to schools.
	2	Please see Master Response 6.
	3	Please see Master Response 6.
	4	The air quality analysis is based on the currently applicable federal and state air quality standards. Please see Master Response 6.
	5	Please see Master Response 6.
	6	Please see Master Response 14.
GG	1	Please see Master Response 14.
HH	1	Please see Master Response 6.
	2	Please see Master Response 6.
	3	Human environment effects were addressed in the Draft EIR/EA on pages 77 through 81. Please also see Master Response 6.
	4	Please see Master Responses 10 and 13.
	5	Please see Master Response 4. The opening of Gold River Road (or any roadway within Gold River) to through traffic has received overwhelmingly negative feedback from the Gold River Community.
	6	Human environment effects were addressed in the DEIR/EA on pages 77 through 81. Please also see response to comment A-5. Freeway access to Eureka Village residents is not part of the Project Purpose and Need.
	7	Please see Master Response 8.

Comment Letter	Comment Number	Response
	8	Please see Common Letter Responses 4 through 7.
	9	Please see Common Letter Responses 4 through 7.
	10	Please see Common Letter Responses 4 through 7.
	11	Please see Common Letter Responses 4 through 7.
II	1	Please see Master Response 11.
JJ	1	Please see Master Response 11.
	2	Please see Master Response 11.
	3	Please see Master Response 11.
	4	Please see Master Response 11.
	5	Please see Master Response 11.
KK	1	Please see Master Response 2.
	2	Current traffic counts are similar or less than the counts used in the traffic analysis and include the HOV lanes on U.S. 50. Please also see Master Response 5.
	3	Please see Master Response 2.
	4	The traffic memos referenced are currently available for review on the project website: <a href="http://ranhocordovainterchange.net/">http://ranhocordovainterchange.net/</a> and as stated in your letter were readily available upon request.
	5	Please see Master Response 5.
	6	Please see Master Response 6.
	7	Please see Master Response 6. PM <sub>10</sub> thresholds are shown in Table 2.2.5-1 of the Draft EIR/EA.
	8	Please see Master Response 6.
	9	Please see Master Response 6.
	10	If the proposed project is approved, the City will pay the construction air quality mitigation fee to the project.
	11	Please see Master Response 6. Exposure reduction practices listed in the SMAQMD's "Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways" (2011) include: increasing distance from roadways, site redesign, and tiered vegetative plantings. The City has decided to include the planting of finely needled trees in the vacant lot along Tenderfoot Meadow as part of the project as suggested in the SMAQMD's guidance.
	12	Please see Master Response 11.
	13	Please see Master Response 11.
	14	Please see Master Response 11.
	15	Please see Master Response 11.
	16	Please see Master Response 11.
	17	Please see Master Response 5.
	18	Please see Master Response 7.
	19	Please see Master Response 5.
	20	Please see Master Responses 5 and 7.

Comment Letter	Comment Number	Response
	21	Please see Master Responses 7 and 8.
	22	Please see Master Response 5.
	23	Please see Master Response 8.
	24	Please see Master Response 9.
LL	1	Your support of the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
MM	1	Please see Master Response 6.
	2	Please see Master Response 13.
NN	1	Please see Master Response 6.
	2	Please see Master Response 1.
	3	Please see Master Response 7.
	4	Please see Master Response 9.
	5	Please see Master Response 12.
	6	Please see Master Response 4.
	7	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	8	Please see Master Response 6.
OO	1	Please see Master Response 1.
PP	1	Please see Master Response 6.
	2	Both the City and Caltrans maintain the adequacy of the Draft EIR/EA and its compliance with CEQA and NEPA. Please see Master Response 6.
	3	Please see Master Response 6.
	4	Multiple figures in the Draft EIR/EA, including 2.1.1-1, 2.1.1-2, 2.1.6-1, and 2.1.10-1 illustrate the entire project area, including adjacent residential land uses.
	5	Please see Master Response 6.
	6	Please see Master Responses 6 and 10.
	7	Please see Master Response 6.
	8	Please see Master Response 2.
	9	The dedication described did not limit the project analysis or alternatives discussion. The dedication of land was not a factor in the development of the alternatives for analysis. A number of alternatives analyzed in the Draft EIR/EA are not dependent on the dedication for implementation. The information on dedication was provided under “Background and History.” Providing background is appropriate for any project. An offer of dedication requirement for a private project does not constitute approval of proposed public improvement projects for CEQA or any other purposes.
	10	Please see Master Response 1.
	11	Please see Master Responses 3 and 4.
	12	Noise impacts associated with the project do not exceed City thresholds and is therefore consistent with the City’s General Plan. Please see Master Response 8.
	13	Please see Master Response 7.

Comment Letter	Comment Number	Response
	14	Please see Master Response 7.
	15	Please see Master Responses 7 and 8.
	16	Please see Master Response 8.
	17	Please see Master Response 7.
	18	Certain parts of the Draft EIR/EA were updated as needed prior to its release for public review. However, CEQA does not require that analysis be updated due to passage of time after the release of the NOP. See Master Response 5.
	19	Please see Master Response 9.
	20	Please see Master Response 1.
	21	Please see Master Response 9.
	22	Please see Master Response 9.
	23	The City has and will continue to coordinate with SMAQMD. SMAQMD was part of the interagency review for the determination that the proposed project is not a project of air quality concern. Please also see Master Response 6.
	24	Please see Master Response 6.
	25	Please see Master Response 6.
	26	Please see Master Response 6.
	27	Please see Master Response 6.
	28	This comment is primarily related to a concern about air quality. Our response on the air quality concern is provided in Master Response 6. We would like to clarify the amount of traffic that would result if the project is built. Today, there are about 116 thousand vehicles driving on U.S. 50 at the proposed project location. In 20 years we anticipate that there will be about 147 thousand vehicles driving by without the project, and about 174 thousand vehicles passing by with the proposed project. There will be an increase in traffic with the project but that increase will be in addition to a substantial amount of existing traffic.
	29	Please see Master Response 5.
	30	Please see Master Response 12.
31	The Draft EIR/EA complies with CEQA and NEPA and adequately analyzes project impacts. The recirculation of a revised Draft EIR/EA is not required under CEQA and NEPA standards. Please see Master Response 4.	
QQ	1-5	Please see Common Letter Responses 1 through 7.
RR	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	3	Please see Master Response 10. Your concerns regarding noise, dirt, and dust are acknowledged and included in the administrative record. Mitigation measures to reduce noise impacts are provided in Sections 2.2.6 and 3.2.12. Mitigation measure MM 3.2.11-1a will be implemented to reduce dirt and dust during project construction.
	4	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.

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SS	1	Construction noise impacts are discussed in detail on page 313 of the Draft EIR/EA. Mitigation measures to reduce construction noise impacts are provided on page 317 of the Draft EIR/EA.
	2	Please see Master Response 6.
TT	1-3	Please see Common Letter Responses 1 through 7.
UU	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	An additional hard copy of the document was sent to the Mother Lode Village Owners Association upon receipt of this request. Copies of the Draft EIR/EA were made available for review at City Hall, the Sacramento Public Library, and the Gold River Home Owners Association. The document was also available electronically on the project website: <a href="http://ranchocordovainterchange.net/">http://ranchocordovainterchange.net/</a>
VV	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record. Please see Master Response 6.
	2	Please see Master Response 6.
	3	Ramp metering was included in the project analysis. The project description in Section 1.2.5.1 has been revised to reflect this. Please also see Master Response 2.
	4	Please see Master Response 11.
	5	We acknowledge your restatement of the Draft EIR/EA construction noise CEQA determination.
	6	Please see Master Responses 5 and 7.
	7	Please see Master Response 8.
WW	1-7	Please see Common Letter Responses 1 through 7.
XX	1-7	Please see Common Letter Responses 1 through 7.
YY	1	If the proposed project is approved, the City and Caltrans will coordinate with Regional San during the project design process.
	2	The Draft EIR/EA was revised to reflect this change.
ZZ	1	Please see Master Response 8 and 9.
AAA	1	The alignment of a freeway off-ramp must have a minimum angle (diverge angle) from the mainline as the two roadways separate. The angle at the eastbound off-ramp is the absolute minimum (after obtaining a design exception from Caltrans). The westbound off-ramp has a higher diverge angle and would take more of the commenter's property if incorporated into the project.
	2	The proposed fence line is not shown on the drawings. The ROW line/fence line will typically be 10 feet from the outside face of the barrier on the top of the wall to allow for maintenance access.
	3	The City is considering alternatives that will allow this property to maintain viable parking for the business at 11541 Folsom Boulevard. A variety of options will be considered including tree removal and remediation.
	4	The City is considering alternatives that will allow this property to maintain viable parking for the business at 11541 Folsom Boulevard. If the proposed project is approved, a variety of options will be considered including tree removal and remediation.

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BBB	1	Please see Master Response 4.
	2	Please see Master Responses 4 and 13.
	3	Please see Master Response 8.
	4	Please see Master Response 8.
CCC	1	Please see Master Responses 4 and 13.
	2	CEQA does not require technical perfection in an EIR, but rather adequacy, completeness, and a good faith effort at full disclosure. A court does not pass upon the correctness of an EIR's environmental conclusions, but only determines if the EIR is sufficient as an informational document. The Draft EIR/EA and supporting technical studies were completed in accordance with all applicable laws and regulations and used the currently accepted modeling and methodologies.
	3	Please see Master Response 12.
	4	As stated on page 198 of the Draft EIR/EA: "Some nighttime work would occur for work within the U.S. 50 corridor, and construction lighting would be required for these activities." Mitigation measures are provided on page 209 to reduce this impact.  As stated on page 313 of the Draft EIR/EA: "It should be noted that, due to the heavy traffic on U.S. 50 during daytime hours, detouring traffic on U.S. 50 to accommodate construction activities may not be feasible in all instances, and construction work outside of the recommended daytime hours may be necessary to construct the project." Mitigation measures are provided on page 317 to reduce this impact. Despite mitigation, impacts associated with noise levels during project construction were found to be significant and unavoidable under CEQA.
DDD	1	Please see Master Response 4.
	2	Please see Master Response 8.
EEE	1	As stated on page 313 of the Draft EIR/EA: "It should be noted that, due to the heavy traffic on U.S. 50 during daytime hours, detouring traffic on U.S. 50 to accommodate construction activities may not be feasible in all instances, and construction work outside of the recommended daytime hours may be necessary to construct the project." Mitigation measures are provided on page 317 to reduce this impact. Despite mitigation, impacts associated with noise levels during project construction were found to be significant and unavoidable.
	2	Please see Master Response 6.
	3	Most sound waves hitting a sound wall will be absorbed into the wall or berm or reflected back across into the highway. Some sound waves may be refracted—bent over—the sound wall; effects of refraction are included in the noise modeling. Please see Master Response 8.
	4	Comment cards were provided at the May 14, 2014, public meeting that included a mailing address for public comments. This information was also included in the Draft EIR/EA and on the project website.
	5	The proposed project is designed to alleviate traffic congestion in the project area. Changes in traffic patterns due to both planned/foreseeable development and the proposed project are considered in the Traffic Operations analysis results presented in Section 2.1.7 of the Draft EIR/EA. Tables 2.1.7-12 (page 132) and 2.1.7-16 (page 139) present Freeway Corridor average peak hour vehicle speeds for the End of Construction Year (2016) and Design Year (2037), respectively, both with and without the project. As presented in those tables, peak hour speed on U.S. 50 in both

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		the Construction Year and Design Year are improved or remain virtually unchanged with the project constructed.
FFF	1	Please see Master Response 14.
	2	Please see Master Response 14. It should also be noted that the May 14, 2014, public hearing was not a City Council meeting. The public hearing was held during the public review period of the Draft EIR/EA for the purpose of informing the public about the project and soliciting comments. The City Council will meet to evaluate the project at a later date.
	3	Please see Master Response 14. Also see Master Responses 6 and 8 regarding air quality and noise, respectively.
GGG	1	Please see Master Response 8.
HHH	1	Please see Master Responses 6, 8, and 9.
	2	Please see Master Response 9.
III	1	Please see Master Response 6.
	2	Please see Master Response 6.
	3	Please see Master Response 6.
	4	Section 1.2 of the Draft EIR/EA provide information regarding the purpose and need for the proposed project. Please also see Master Responses 6 and 13.
	5	Please see Master Responses 3, 4 and 6.
JJJ	1	Please see Master Response 5.
	2	Please see Master Responses 5 and 7.
	3	Please see Master Response 4.
	4	Please see Master Responses 3 and 4.
KKK	1	Existing conditions within and potential impacts to Gold River homeowners are discussed throughout the Draft EIR/EA. Please also see Master Response 12.
	2	Please see Master Response 8.
	3	The City Council will meet to evaluate the proposed project at a later date. Public comments will be heard during the council meeting. In addition, extensive public outreach efforts have been made throughout the duration of the proposed project.
LLL	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record. Please see Master Response 6.
MMM	1	Please see Master Responses 4 and 13.
	2	Please see Master Responses 3 and 4. Location consistency with the City General Plan was not the basis for choosing the project as the preferred alternative.
	3	Please see Master Responses 2 and 9.
	4	The designs, outreach, and studies described in this comment cannot be performed without greater detail of design. It is common for a project-level environmental document to be prepared utilizing 30% design. The detail required for photometric studies and aesthetic treatment design is not yet available. If the proposed project is approved, mitigation measures will ensure that the activities listed will occur prior to project construction. Since

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		the impact is considered significant and unavoidable, additional studies and outreach would not change the findings presented in the Draft EIR/EA. If the City decides to approve the proposed project, it will need to adopt a statement of overriding considerations for any significant and unavoidable impact of the proposed project.
	5	Please see Master Responses 6, 7 and 8.
	6	Please see Master Responses 8.
	7	Please see Master Responses 3 and 4.
NNN	1	Please see Master Response 6.
	2	Please see Master Response 1.
OOO	1	Revisions were made throughout the document to address the consistency of the use of terms and phrases used to describe the project area. The proposed project includes the construction of the interchange and Rancho Cordova Parkway.
	2	Revisions were made throughout Chapters 1 and 2 to address the consistency of the use of terms and phrases used to describe the Aerojet property and facility.
	3	Comment unclear. The paragraph in question states that Aerojet is identified on the National Priority List database.
	4	The end of paragraph 1 on page 265 of the Draft EIR/EA acknowledges that none of the listed properties would be expected to affect the project area with the exception of existing groundwater contamination from the Aerojet property. To further clarify that the proposed project would traverse Aerojet operable units, including the Boundary Operable Unit, we have added a cross-reference in that paragraph to the fuller discussion of the operable units found in Section 2.2.4.
	5	Revisions were made throughout Chapters 1 and 2 to address the consistency of the use of terms and phrases used to describe the Aerojet property and facility.
	6	Revisions were made in Section 2.2.4 under subheading Groundwater Contamination to address the issue raised in the comment.
	7	Revisions were made throughout Chapters 1 and 2 to address the consistency of the use of terms and phrases used to describe the Aerojet property and facility.
	8	The suggested revision was made.
	9	Revisions were made throughout the document to address the consistency of the use of terms and phrases used to describe the project area.
	10	Revisions were made throughout the document to address the consistency of the use of terms and phrases used to describe the project area. The reference refers to the interchange and the roadway extending south.
	11	If the proposed project is approved, the City agrees to provide a new security fence on the eastern edge of Rancho Cordova Parkway for compliance with DOD requirements and based on quantity distance arcs.
	12	The suggested revision was made.
	13	The City understands the need for a security fence on the western edge of Rancho Cordova Parkway within the Westborough property and, if the proposed project is approved, will coordinate that need at the time of construction based on the development status of Westborough.
	14	The suggested revision was made.

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	15	The suggested revision was made.
	16	Footnote 22 is an error and has been deleted from the document.
	17	The suggested revision was made.
	18	The suggested revision was made.
	19	The suggested revision was made.
	20	Comment noted. Aerojet will be notified if contaminated soil is encountered on Aerojet property.
	21	Revisions were made in Sections 2.2.4 and 3.2.10 in response to the editorial comments provided.
PPP	1	Please see Master Responses 6 and 9.
	2	The City has worked extensively with the Gold River Community regarding the proposed project and will continue to do so if the proposed project is approved.
	3	Please see Master Response 4.
	4	Please see Master Responses 3 and 4.
QQQ	1	The City agrees that Sacramento County is not a “responsible agency.” The document has been revised to reflect this. However, the County owns the property called the Tenderfoot Meadow and the County Board would be required to provide an approval to use the land for the project, prior to construction.
RRR	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record. See also Master Response 6 on air quality impacts.
	2	Please see Master Response 6.
	3	Please see Master Responses 2 and 8.
	4	Please see Master Response 1.
	5	Your restatement of the CEQA determination for construction noise is acknowledged.
	6	Please see Master Responses 5 and 7.
	7	Please see Master Response 8.
SSS	1	Please see Master Response 4.
	2	Please see Master Response 9.
	3	Please see Master Response 4.
	4	Please see Master Response 8.
TTT	1	Please see Master Response 14.
	2	Please see Master Response 8.
UUU	1	Please see Master Responses 4, 6, and 8.
	2	Please see Master Response 13.
VVV	1	Please see Master Responses 3 and 4.
WWW	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 13.

Comment Letter	Comment Number	Response
	3	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
XXX	1	Your support of the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
YYY	1	The height of the existing sound wall was provided by Caltrans based upon as-built plans.
	2	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	3	Please see Master Response 4.
ZZZ	1	Please see Common Letter Response 7 and Master Response 9. The City will be responsible for implementing and funding mitigation measures.
	2	Comment noted.
AAAA	1	Please see Master Response 6.
	2	Please see Master Response 8.
	3	Light rail was considered in the EIR. Please see Master Response 3.
BBBB	1	Please see Master Response 8.
	2	Please see Master Response 1.
	3	Please see Master Response 4.
CCCC	1	Please see Master Response 8.
	2	Please see Common Letter Response 7.
	3	Please see Master Response 9 and Common Letter Response 7.
	4	Please see Master Response 9.
	5	Please see Master Response 12.
	6	The City of Rancho Cordova hired consultant PMC to prepare the Draft EIR/EA.
	7	Please see Master Response 6.
DDDD	1	Please see Common Letter Response 7 and Master Response 9.
	2	Please see Master Response 10.
	3	Please see Master Responses 6 and 8.
	4	Comment noted.
EEEE	1	Please see Master Response 11.
FFFF	1	Please see Master Response 10 and response to comment A-5.
	2	Please see Master Responses 6 and 8.
	3	Please see Master Response 4.
GGGG	1	Please see Master Response 14.
HHHH	1	As stated on page 313 of the Draft EIR/EA: "It should be noted that, due to the heavy traffic on U.S. 50 during daytime hours, detouring traffic on U.S. 50 to accommodate construction activities may not be feasible in all instances, and construction work outside of the recommended daytime hours may be necessary to construct the project." Mitigation measures are provided on page 317 to reduce this impact. Despite mitigation, impacts associated with noise levels during project construction were found to be

Comment Letter	Comment Number	Response
		significant and unavoidable.
	2	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
IIII	1	Please see Master Responses 3 and 4.
	2	Please see Master Response 12.
JJJJ	1	Please see Master Response 1.
KKKK	1	Please see Master Responses 6, 8, 9, and 12.
LLLL	1	The future owner of the Tenderfoot Meadow (area between the possible future ramp and Tenderfoot Drive) would be responsible for maintenance. It is not known at this time who would own that land.
MMMM	1	Please see Master Response 13.
NNNN	1	Please see Master Response 1.
OOOO	1	Numerous meetings were provided prior to the release of the Draft EIR/EA. Please see Chapter 4 of the Draft EIR/EA.
PPPP	1	Please see Master Response 1.
QQQQ	1	Please see Master Response 8.
	2	Comment noted.
	3	Please see Master Response 12.
	4	Please see Master Response 9.
	5	Please see Master Response 4.
RRRR	1	Please see Master Response 9.
	2	Please see Master Responses 7, 8 and 9.
	3	Building a sound wall across the canal is not feasible because it would mean blocking the canal.
	4	Please see Master Response 8.
	5	Please see Master Response 4.
SSSS	1	Please see Master Response 8 and response to comment RRRR-3. The new sound wall would not extend to Buffalo Creek. It would terminate approximately 800 feet east of there, where it would tie into the existing wall following the southern edge of Gold River.
TTTT	1	Please see Master Response 8.
	2	Please see Common Letter Response 7 and Master Responses 6 and 9.
	3	Please see Master Response 9.
	4	Your opposition to the Rancho Cordova Parkway Interchanges is acknowledged and included in the administrative record. Please see Master Responses 6 and 8.
	5	Please see Master Response 4.
UUUU	1	Please see Master Response 6.
	2	Please see Master Responses 3 and 4.
VVVV	1	Please see Master Response 6.
	2	Please see Master Responses 7 and 8.

Comment Letter	Comment Number	Response
	3	Please see Master Response 6.
	4	Please see Master Responses 3 and 4.
WWWW	1	The purpose and need for the project is presented in Sections 1.2.2 and 1.2.3 in the Draft EIR/EA.
	2	Please see Master Responses 6 and 12.
	3	Please see Master Response 5.
	4	Please see Master Responses 7 and 8.
	5	Please see Master Response 5.
	6	Please see Master Response 5.
	7	Please see Master Response 5.
	8	Please see Master Response 7.
	9	Please see Master Response 7.
	10	The noise analysis evaluated both the peak hour noise as well as the 24-hour noise levels. Table 3.2.12-4 on page 505 of the Draft EIR/EA shows the predicted noise levels in terms of Ldn, which is representative of a 24-hour Leq with adjustments made to reflect the greater sensitivity of most people to noise during the nighttime. While not required by Caltrans, the Draft EIR/EA utilized the City of Rancho Cordova and the Sacramento County 24-hour noise standards in order to determine if the proposed project would result in a significant impact for purposes of CEQA. As shown in Table 3.2.12-4, impacts would be less than significant. Further, it should be noted that due to the natural decrease in traffic volumes during the early morning, evening and weekend, actual noise levels would also be decreased from the peak hour when more vehicles are on the road. Therefore, the noise impacts of the project have been adequately assessed for all time periods.
	11	Please see Master Response 7.
	12	Please see Master Responses 8 and 9.
	13	Please see Master Response 7.
	14	Please see Master Responses 5, 6, 8, and 12.
XXXX	1-7	Please see Common Letter Responses 1 through 7.
YYYY	1	Please see Master Responses 6 and 8.
	2	The U.S. 50/Rancho Cordova Parkway Interchange would not have connections to the transportation network north of U.S. 50. Coloma Road and Gold Country Boulevard are potential alternate routes for travelers avoiding congestion on U.S. 50 between Sunrise Boulevard and Hazel Avenue. The project would provide auxiliary lanes on U.S. 50, which would reduce congestion. As a result, the project would make it less likely for motorists to use alternate routes, such as Gold Country Boulevard.
	3	Please see Master Responses 6 and 8.
	4	Please see Master Response 13.
	5	This is a comment about cumulative growth, not the project. The project is proposed to alleviate effects of existing and planned growth.
	6	Please see Master Response 3, which discusses a light rail alternative.
	7	Please see Master Response 6.

Comment Letter	Comment Number	Response
	1	<p>Please see Master Response 1.</p> <p>The City agrees that the bicycle/pedestrian connection across U.S. 50 at the interchange would be of great value for non-auto trip making. We also appreciate the Air Quality District’s understanding of Gold River’s rejection of this connection and we agree with your arguments on trail maintenance and overflow parking in Gold River. We also take very seriously the goals, actions, and policies stated in our Bicycle and Pedestrian Master Plan and fully agree with SACOG’s strategies described in the MTP/SCS.</p> <p>The City has chosen to eliminate the trail from the project because the primary users of the trail, Gold River residents, have rejected the connection. We agree that this would be a valuable connection to the trail system and to the future Gold Line light rail station for Gold River residents, but have deferred to their preference.</p> <p>We also feel that the overall trail system is not impacted by the elimination of this trail connection. Residents south of U.S. 50 and even north of the American River will have adequate access to the trail system along the Citrus Road Class 1 trail, crossing U.S. 50 to the west of the project (1.3 miles away) and along the Folsom South Canal trail that crosses U.S. 50 east of the project (0.67 miles away). The project is still consistent with the City’s General Plan and SACOG plans due to these connections. The trail system will also be robust within Rancho Cordova, providing good access to the proposed Gold Line light rail station as the City strives to improve and expand the existing system.</p>
ZZZZ	2	<p>The comment recommends that the lead agency perform a health risk assessment for a determination of risk due to diesel particulate matter (DPM). As identified on page 291 of the Draft EIR/EA, the proposed project is not a “project of air quality concern,” as this project would not result in a substantial increase in diesel truck or bus traffic and the result of the project is an improvement in highway operations compared to the No Build alternative. The percentage of autos, medium trucks, and heavy trucks for the eastbound freeway mainline is 94%, 4%, and 2% respectively. The percentage of autos, medium trucks, and heavy trucks for the westbound freeway mainline is 97%, 2%, and 1% respectively. Therefore, diesel-fueled vehicles represent a minor portion of total traffic volumes along the portion of the U.S. 50 in the vicinity of the proposed project. Both the state of California and the USEPA requires controls that will dramatically decrease mobile source air toxics (MSATs) emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using USEPA’s MOBILE6.2 model, even if vehicle activity (vehicle-miles traveled [VMT]) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050.</p> <p>Additionally, the development of the east and westbound on- and off-ramps would not result in a substantial increase in vehicle trips such that an increased health risk would occur. The California Air Resources Board (CARB) identifies residential developments, within 500 feet of a freeway or other roadway where traffic volumes exceed 100,000 vehicles per day in urban setting, as susceptible to risk from DPM emissions from truck traffic. Implementation of the proposed project would result in a daily increase in mainline freeway traffic of approximately 27,800 vehicles compared to the No-Build alternative, while the on- and off-ramps (which would be located closer to the residential receptors) are anticipated to accommodate approximately 49,400 vehicles per day. The anticipated increase in vehicles would be far below the screening threshold of 100,000 vehicles recommended by CARB. Due to the factors listed above, the lead agency has determined that quantitative health risk assessment would not be required for the proposed project. However, in order to address the SMAQMD and citizen concerns, the City has included the planting of conifers along the northern perimeter of the interchange project. CARB has</p>

Comment Letter	Comment Number	Response
		<p>identified that needles have surface area that can allow for removal (deposition) of ozone, nitrogen dioxide, and particulate matter. The planting of these trees, as well as the anticipated emission reductions due to USEPA and California regulations, would ensure that implementation of the proposed project would not result in an increase health risk.</p> <p>Please also see Master Response 6.</p>
	3	<p>The proposed project utilized the Road Construction Emissions Model (RCEM) v6.3.2 to remain consistent with the baseline established with the remainder of the document. The RCEM v.6.3.2 was the model available at the time of the preparation of the Draft EIR/EA and the publication of the Notice of Preparation. CEQA does not require that a lead agency modify analysis due to updated models or methodology so long as the analysis is consistent with existing regulations and established thresholds.</p>
	4	<p>The City will supply the SMAQMD all relevant modeling files prior to certification of the Final EIR/EA. The air quality technical analysis and modeling information is available on the project website at:  <a href="http://ranchocordovainterchange.net/">http://ranchocordovainterchange.net/</a></p>
	5	<p>Refer to mitigation measure MM 3.2.11-1 for additional details regarding how the City would reduce NOx emissions. In response to the comment, mitigation measure MM 3.2.11-2 has been revised. The revised measure would require the construction contractor to utilize construction equipment that meets Tier 3 emission standards or greater which will greatly reduce the emissions of TACs from construction equipment.</p>
	6	<p>The City has consulted with the SMAQMD and has agreed that payment of the NOx mitigation fees are feasible mitigation for the proposed project impact of exceeding the 85 pounds/per day NOx threshold. As such, the City will recalculate the NOx mitigation fee prior to the start of construction activities in consultation with the SMAQMD. In response to this comment, the text of mitigation measure MM 3.2.11.4 and the paragraph immediately after have been revised to state that the City will pay the mitigation fees.</p>
	7	<p>The City has consulted with the SMAQMD and has agreed that payment of the NOx mitigation fees are feasible mitigation for the proposed project impact of exceeding the 85 pounds/per day NOx threshold. As such, if the proposed project is approved, the City will recalculate the NOx mitigation fee prior to the start of construction activities in consultation with the SMAQMD. In response to this comment, the text of mitigation measure MM 3.2.11.4 and the paragraph immediately after have been revised.</p>
	8	<p>The Draft EIR/EA has identified several mitigation practices to reduce dust and exhaust emissions from construction activities. These are included in mitigation measure MM 3.2.11-1a, which include compliance with SMAQMD Rule 403, watering of the construction site, and limiting of vehicle speeds on unpaved roads to 15 miles per hour. Measures to reduce exhaust emissions are identified in mitigation measure MM 3.2.11-1b. Additionally, in order to ensure that diesel emissions are reduced to the maximum extent possible, mitigation measure MM 3.2.11-1b has been revised as well. Enhanced Fugitive Dust Control Practices are incorporated within other mitigation measures throughout the Draft EIR/EA. Site watering and erosion control measures are presented in Section 2.2.2, vegetative planting measures are presented in Section 2.1.9.</p>
AAAAA	1	Comment noted.
	2	Please see Master Responses 10 and 13.
	3	Please see Master Response 5.
	4	Please see Master Response 5.

Comment Letter	Comment Number	Response
	5	In urbanized areas, improvements to the transportation network in one location will affect adjacent locations. The effects on the neighboring Sunrise Boulevard and Hazel Avenue interchanges are captured in the transportation analysis for the U.S. 50/Rancho Cordova Parkway interchange. These effects are both positive and negative as described in the Draft EIR/EA. When looking at individual locations, the level of service analysis will show improvements in some locations and will worsen in others. Project performance, in terms of vehicle mobility, is best represented in system-wide measures. The average speed of traffic system-wide will increase by a couple of miles per hour with the project, and the travel speeds on eastbound U.S. 50 will increase between 2 and 5 mph. The project will also allow the transportation system to serve about 6 to 7 thousand additional vehicles per day.
	6	Please see response to AAAAA5.
	7	Please see response to AAAAA5.
	8	Please see response to AAAAA5.
	9	Please see response to AAAAA5.
	10	Please see response to AAAAA5.
	11	Please see response to AAAAA5.
	12	Please see response to AAAAA5.
	13	Please see response to AAAAA5.
	14	Please see response to AAAAA5.
BBBBB	1	Please see Common Letter Response 1.
	2	Please see Common Letter Response 2.
	3	Please see Common Letter Response 5.
	4	Please see Common Letter Response 6.
	5	Please see Common Letter Response 7.
CCCCC	1-7	Please see Common Letter Responses 1 through 7.
DDDDD	1	Please see Master Responses 6, 8, 9 and 12.
	2	Please see Master Response 1 and Common Letter Response 4.
	3	Please see Common Letter Response 5.
	4	Please see Common Letter Response 6.
	5	Please see Common Letter Response 7.
EEEEEE	1	Please see Master Response 6.
	2	Please see Master Responses 6, 8, and 9.
FFFFF	1-7	Please see Common Letter Responses 1 through 7.
GGGGG	1-7	Please see Common Letter Responses 1 through 7.
HHHHH	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 6.
	3	Please see Master Response 12.
	4	Please see Master Response 9.

Comment Letter	Comment Number	Response
	5	Please see Master Responses 3 and 4.
IIIII	1	Please see Master Responses 8 and 9.
	2	Please see Master Response 13.
	3	Please see Master Responses 4 and 13.
	4	Please see Master Response 4.
	5	Please see Master Response 13.
	6	Please see Master Response 1.
	7	Please see Master Response 8.
	8	Please see Master Response 3.
JJJJJ	1-7	Please see Common Letter Responses 1 through 7.
KKKKK	1	A reverification letter was submitted to USACE on June 19, 2014.
	2	Mitigation measure MM 3.2.14-4c has been revised to require compensatory mitigation prior to the start of construction activities.
LLLLL	1	Please see Master Response 11.
MMMMM	1	Please see Master Response 6.
NNNNN	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 10.
	3	Comment noted.
	4	Please see Master Response 4.
OOOOO	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 6.
	3	Please see Master Response 6.
	4	Please see Master Response 6.
	5	Please see Master Responses 6 and 8.
	6	Please see Master Responses 1 and 11.
	7	As stated on page 313 of the Draft EIR/EA: "It should be noted that, due to the heavy traffic on U.S. 50 during daytime hours, detouring traffic on U.S. 50 to accommodate construction activities may not be feasible in all instances, and construction work outside of the recommended daytime hours may be necessary to construct the project." Mitigation measures are provided on page 317 to reduce this impact. Despite mitigation, impacts associated with noise levels during project construction were found to be significant and unavoidable for purposes of CEQA.
	8	Please see Master Responses 5 and 7.
	9	Please see Master Response 8.
	10	Please see Master Responses 8 and 9.
	11	Please see Master Responses 3 and 4.
PPPPP	1	Comment noted.
	2	Comment noted.

Comment Letter	Comment Number	Response
	3	Please see Master Response 1.
	4	Please see Master Response 12.
	5	Please see Master Responses 1, 11 and 12.
	6	Please see Master Response 13.
	7	Please see Master Response 4.
	8	Please see Master Responses 3 and 4.
QQQQQ	1	Please see Master Responses 6 and 8.
	2	The westbound on-ramp and off-ramp geometry (approximately 90 degrees to the connecting roadway) at Rancho Cordova Parkway are consistent with the typical design of an interchange. While other configurations were considered, Caltrans requested that we provide a design that provides a well-defined transition between the parkway and the freeway ramps. The rationale for this is for drivers to realize that they are no longer on a high-speed parkway. While there would certainly be some vehicles which would come to a stop, this would be a signalized intersection and some vehicles would be approaching a green signal and be able to continue (albeit more slowly) without stopping. Vehicles using the westbound on-ramp would be stopping during peak travel periods regardless of the configuration due to the ramp metering. The stopping at this intersection has been considered in the noise and air pollution analyses conducted for the project.
	3	All impacts to special-status species would be fully mitigated for.
	4	Please see Master Response 8.
	5	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
RRRRR	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Responses 6, 8, and 12.
	3	Comment noted. Please also see Master Responses 6, 8, 9 and 12.
	4	Please see responses to letter MMM.
SSSSS	1	Please see Master Response 6.
	2	Please see Master Responses 10 and 13.
TTTTT	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Responses 6 and 8.
UUUUU	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
VVVVV	1	Your opposition to the Rancho Cordova Parkway Interchange Project is acknowledged and included in the project record.
	2	Please see Master Response 6.
	3	Please see Master Response 13.
	4	Please see Master Response 8.

[Insert Coded Comment Letters]

[Insert intersection turning movement volumes from 2004 and 2013 – F&P memo]