Interstate 80/San Pablo Dam Road Interchange Project

CONTRA COSTA COUNTY, CALIFORNIA
DISTRICT 04 – CCC – 80, PM 3.8/5.3
EA 0A0800

Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact

Prepared for the
State of California Department of Transportation
In cooperation with
Contra Costa Transportation Authority

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 Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

February 2010
This is the Final Initial Study/Environmental Assessment (IS/EA) for the proposed Interstate 80 (I-80)/San Pablo Dam Road Interchange project, located in the City of San Pablo, Contra Costa County, bordering the City of Richmond. The project will reconstruct the I-80/San Pablo Dam Road Interchange. It will also relocate the westbound I-80/El Portal Drive on-ramp, build a new westbound auxiliary lane from the relocated westbound El Portal Drive on-ramp to the San Pablo Dam Road off-ramp, add a frontage road between the I-80/San Pablo Dam Road on-ramp and McBryde Avenue and close the McBryde Avenue off-ramp, reconstruct the pedestrian overcrossing at Riverside Avenue, and construct pedestrian and bicycle facility improvements. The Draft IS/EA was circulated for comments between August 5 and September 8, 2009, and a public hearing was held on August 19, 2009, at Maple Hall in the City of San Pablo, City Hall Complex. Following receipt and consideration of all comments, the Tight Diamond Alternative (Alternative 2) was identified as the Preferred Alternative.

This Final IS/EA is an update of the Draft IS/EA. Changes made to the Draft IS/EA in response to comments are identified in the text with a vertical line in the margin. All written comments and comments received as public testimony at the hearing are reproduced in Appendix J. Comments in Appendix J are organized by State, Regional, and Local Agencies; Organizations and Municipalities; Individuals; and Public Hearing Transcript. Responses are provided following each comment, and if text in the IS/EA was revised in response to the comment, the location of the revised text is identified in the response.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Allyn Amsk, Office of Public Information, P.O. Box 23660, Oakland, CA, 94623-0660, email: Allyn_Amsk@dot.ca.gov, or use the California Relay Service TTY number (800-735-2929).

It should be noted that at a future date, the Department acting through FHWA or another Federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that a final action has been taken on this project by the Department or another Federal agency. If such notice is published, a lawsuit or other legal claim will be barred unless it is filed within 180 days after the date of publication of the notice (or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed). If no notice is published, then the lawsuit or claim can be filed as long as the periods of time provided by other Federal laws that govern claims are met.
SCH #: 2009082009
04-CCC-80, PM 3.8/5.3
EA 0A0800

Improve the Interstate 80/San Pablo Dam Road Interchange in the City of San Pablo and
unincorporated Contra Costa County, bordering the City of Richmond, California (Post Miles 3.8 to 5.3)

INITIAL STUDY with MITIGATED NEGATIVE DECLARATION and
ENVIRONMENTAL ASSESSMENT with FINDING OF NO SIGNIFICANT
IMPACT

Submitted Pursuant to: (State) Division 13, California Public Resources Code and
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

2/25/10
Date of Approval

BJAN SARTIPI
District Director
California Department of Transportation
CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT

FOR THE

INTERSTATE 80 / SAN PABLO DAM ROAD INTERCHANGE PROJECT

The California Department of Transportation (Caltrans) has determined that Alternative 2, the Tight Diamond design, will have no significant impact on the human environment. This FONSI is based on the attached EA and other available reports, which have been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an EIS is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA.

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 Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

2/25/10
Date

BIJAN SARTIPI
District Director
California Department of Transportation
Mitigated Negative Declaration (ND)
Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Department), in cooperation with the Contra Costa Transportation Authority (CCTA), proposes to increase the traffic capacity of the Interstate 80 (I-80) interchange at San Pablo Dam Road located in the City of San Pablo and unincorporated Contra Costa County, bordering the City of Richmond, California. The purpose of the project is to improve traffic operations and bicycle/pedestrian access at the interchange.

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

The proposed project would have no effect on growth, farmlands/timberlands, paleontology, natural communities, wetlands and other waters of the United States, and plant species. In addition, the proposed project would have no significant effect on land use; community character and cohesion; utilities and emergency services; traffic and transportation/pedestrian and bicycle facilities; visual/aesthetics; cultural resources; hydrology and floodplain; water quality and stormwater runoff; geology, soils, and seismicity; hazardous waste and materials; air quality; noise; animal species; and invasive species. The proposed project would have no significantly adverse effect on community impacts (relocations) and threatened and endangered species, because the following mitigation measures would reduce potential effects to insignificance:

- Relocation assistance payments and counseling will be provided to persons and businesses in accordance with the Caltrans Relocation Assistance Program and Federal laws and regulations.
- In addition to construction best management practices to avoid impacts to California red-legged frog habitat, mitigation for impacts to upland habitat will be provided at a 1:1 ratio for temporary impacts and a 3:1 ratio for permanent impacts (0.10 acre).

[Signature]
Bijan Sartipi
District Director
California Department of Transportation

1/25/10
Date
Summary

The California Department of Transportation (Department) proposes to increase the traffic capacity of the Interstate 80 (I-80) interchange at San Pablo Dam Road located in the City of San Pablo and unincorporated Contra Costa County, bordering the City of Richmond, California.

The Department is the lead California Environmental Quality Act (CEQA) agency for the project, and effective July 1, 2007, has been assigned environmental review and consultation responsibilities under the National Environmental Policy Act (NEPA) pursuant to 23 United States Code (USC) 327. The project is proposed in cooperation with the Contra Costa Transportation Authority (CCTA), which is responsible for providing regional funding.

The purpose of the project is to improve traffic operations and bicycle/pedestrian access at the I-80/San Pablo Dam Road Interchange. Two build alternatives were evaluated that differ at the I-80/San Pablo Dam Road Interchange structure: Alternative 1, the Lanes Added Alternative, and Alternative 2, the Tight Diamond Alternative. However, existing conditions between the San Pablo Dam Road Interchange and the interchanges immediately to the east and west affect the flow of traffic and contribute to congestion on westbound I-80 in the immediate vicinity of San Pablo Dam Road. The proposed project limits therefore extend from the McBryde Avenue interchange to the El Portal Drive interchange (Post Miles 3.8 to 5.3). Proposed improvements on I-80 within the project corridor include relocating the existing westbound El Portal Drive on-ramp, building a new westbound auxiliary lane from the relocated westbound El Portal Drive on-ramp to the San Pablo Dam Road off-ramp, and adding a frontage road between the I-80/San Pablo Dam Road on-ramp and McBryde Avenue (to replace the existing I-80/McBryde Avenue off-ramp). Other elements of the project include relocation of the pedestrian overcrossing at Riverside Avenue, pedestrian and bike improvements at the I-80/San Pablo Dam Road Interchange, and restriping of the eastbound off-ramp at El Portal Drive. The total length of the project is 1.47 miles.

This Initial Study/Environmental Assessment (IS/EA) addresses the proposed project’s potential to have adverse impacts on the environment. Potential impacts and avoidance, minimization, and mitigation measures are summarized in Table S-1, at the end of this summary.
A public and agency review period for this IS/EA was held from August 5 through September 8, and a public hearing was held on August 19, 2009. Following review of all comments received, and consideration of environmental effects and project benefits, the Project Development Team identified Alternative 2, the Tight Diamond design, as the preferred alternative for this project. Detailed reasons supporting Alternative 2 are provided in Section 1.6, but are primarily the traffic benefits realized with the westbound San Pablo Dam Road to Amador Street left-turn movement and maximum avoidance of the China Slide area.¹

In addition to NEPA and CEQA compliance, the project is subject to other Federal, State, and local laws, policies, and guidelines that are addressed in this IS/EA. Applicable regulatory consultation or approvals have been completed or may be needed from the following agencies:

- U.S. Fish and Wildlife Service (USFWS) – Consultation with USFWS has been completed and a Biological Opinion was issued in September 2009.
- National Marine Fisheries Service (NOAA Fisheries) – In September 2008, the Department submitted a fisheries Biological Assessment. NOAA Fisheries had no comments on the Department’s “no effect” determination. Consultation has been completed.
- U.S. Army Corps of Engineers (USACE) – The need for a USACE permit is not anticipated because work will avoid the San Pablo Creek channel and will be restricted to top of the banks of the Wildcat Creek channel.
- State Historic Preservation Officer (SHPO) – The SHPO concurred in October 2008 that the project would not affect historic resources and that Section 106 requirements have been satisfied.
- California Department of Fish and Game (CDFG) – A Streambed Alteration Agreement permit will be required for work at the top of the banks of Wildcat Creek.
- Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) permit, and Waste Discharge Requirements – Applications/notifications for these permits will be submitted during final project design.
- City of San Pablo – Authorization/notification for temporary and/or permanent encroachment will be coordinated during final project design.

¹ The China Slide refers to the existing unstable slopes east of and above the San Pablo Dam Road interchange.
- Contra Costa County – Drainage permit for changes in drainage or water courses in unincorporated County land, and an encroachment permit for realignment of El Portal Road.

### Table S-1 Summary of Impacts and Avoidance, Minimization, and/or Mitigation Measures

<table>
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<tr>
<th>Affected Resource</th>
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<tbody>
<tr>
<td><strong>Land Use</strong></td>
<td>None.</td>
<td>Reconstruction of the pedestrian overcrossing at Riverside Avenue would require temporary closure of the existing structure, which would affect access to and from Riverside Elementary School and the neighborhood west of I-80. A permanent easement or transfer agreement for a portion of the school parking lot would be needed to extend the overcrossing across Amador Street.</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td>None.</td>
<td>The build alternatives would not induce new growth. The project would not substantially change roadway capacity or serve any new areas not already accessible by existing interchanges. The project area is already highly urbanized.</td>
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<td>No Build Alt.</td>
<td>Lanes Added (Alt. 1)</td>
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<tr>
<td>Community Impacts: Relocations</td>
<td>None.</td>
<td>The project would require acquisition of parcels or temporary construction easements adjacent to the right-of-way. Full parcel acquisitions could be needed for one commercial property, one multi-family residence, six single-family homes, and one triplex. Partial parcel acquisitions could be needed for two commercial businesses and six single-family homes. A group of parcels owned by Caltrans is leased to a recreational vehicle business. The lease has an expiration date of July 31, 2011, and can be canceled with a 90-day notice to terminate. Reconstruction of the Riverside Avenue overcrossing would require a partial parking lot acquisition and loss of nine parking spaces. The Department and CCTA will work with the school district to define the easement or agreement that allows for construction and maintenance of the overcrossing.</td>
</tr>
<tr>
<td>Community Impacts: Environmental Justice</td>
<td>None.</td>
<td>Construction of the proposed frontage road between San Pablo Dam Road and McBryde Avenue would result in acquiring four single-family homes, a triplex, and an apartment complex in a census block group (3690.01) that has approximately twice the percentage of African-American residents as the City of San Pablo overall. The necessary relocations are unavoidable and are the same for both build alternatives.</td>
</tr>
<tr>
<td>Community Impacts: Community Character and Cohesion</td>
<td>None.</td>
<td>The project would not divide or isolate residences or neighborhood. Reconstruction of the Riverside Avenue pedestrian overcrossing and addition of sidewalks and crosswalks to San Pablo Dam Road would improve pedestrian access.</td>
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<td>Lanes Added (Alt. 1)</td>
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<tr>
<td><strong>Utilities and Emergency Services</strong></td>
<td>None.</td>
<td>Both build alternatives would require relocating sewer, electrical, gas, water, petroleum, and communication lines, including a 54-inch East Bay Municipal Utility District (EBMUD) transmission main along El Portal Drive that serves water customers in Richmond, San Pablo, Albany, and Berkeley. No longitudinal encroachment exceptions are expected to be necessary because all utilities would remain outside State access control lines, and all would be accessible from local streets.</td>
</tr>
<tr>
<td><strong>Traffic and Transportation, Pedestrian and Bicycle Facilities</strong></td>
<td>By 2035, most segments of I-80 would function at capacity (LOS E or F) in the peak period commute direction. Delays at some project area intersections would exceed 50 to 80 seconds.</td>
<td>Levels of service would be the same or improve. In the AM peak, Alt. 1 would accommodate 20% more vehicles than the No Build Alt., reduce travel time by 19%, increase speed by 54%, and reduce delay by 64%. Alt. 1 would also improve speed and reduce delay in the PM peak compared to the No Build Alt. The project would improve pedestrian and bicycle facilities and upgrade existing sidewalks to ADA standards.</td>
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<tr>
<td>Visual/Aesthetics</td>
<td>None.</td>
<td>On Rollingwood Drive and El Portal Drive, residences and trees would be removed, exposing views of I-80 and the existing El Portal Drive undercrossing. The new San Pablo Dam Road Overcrossing would be wider and higher and require installation of new retaining walls. Homes on the east side of Humboldt Street would be removed. Soundwalls would be added or reconstructed along I-80 near El Portal Drive and Humboldt Street. Retaining walls would be added near the San Pablo Dam Road Interchange and Amador Street. Lighting for nighttime construction could create a temporary source of light or glare.</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>None.</td>
<td>No sensitive cultural resources were identified within the archaeological or historical areas of potential effect. The project would not affect any Section 4(f) resource.</td>
</tr>
<tr>
<td>Hydrology and Floodplains</td>
<td>None.</td>
<td>The 100-year floodplain is contained within the banks of Wildcat Creek. A bridge structure would be placed at the top of the creek bank. No other structures or construction activities would affect project area creeks or their banks. The project would avoid designated floodplains. Increases in runoff from impervious surface area added by the project would be 3.76 acres and would not change existing flood elevations.</td>
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<td>Water Quality and Stormwater Runoff</td>
<td>None. Temporary adverse impacts could result from construction-related erosion and subsequent transport of sediment to surface waters. Erosion could increase suspended solids, dissolved solids, and organic pollutants in stormwater runoff. Potential exists for spills and leaks of fluids from vehicles and equipment used during construction. The project would not increase overall traffic volumes but would increase impervious surface area.</td>
<td>Permanent erosion control best management practices (BMPs) will be included in the project to prevent an adverse change in downstream water quality. Measures will include feasible temporary (short-term) and permanent (long-term) BMPs. Development of temporary measures to prevent hydromodification will be coordinated with Contra Costa County and/or the Regional Water Quality Control Board. The required Storm Water Pollution Prevention Plan will include stormwater BMPs for temporary soil stabilization and sediment control.</td>
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<tr>
<td>Geology, Soils, and Seismicity</td>
<td>Surface fault rupture could damage roadway surfaces and require temporary road closure until repaired.</td>
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</table>
See No Build Alt. Also, project structures such as bridges and overcrossings would be exposed to strong ground shaking. One of the Alt. 1 bridge abutments is near but is not predicted to cross a potential surface fault rupture zone; surface rupture underneath a structure could cause damage or failure. The replacement Riverside Avenue pedestrian overcrossing could have some risk of damage from liquefaction. San Pablo Dam Road would be shifted slightly toward the toe of the China Slide landslide area. |  
Same as Alt. 1, except Alt. 2 would realign the San Pablo Dam Road Overcrossing away from the toe of the China Slide area, reducing the risk of future slope failure. |  
Additional geotechnical and design investigations will be performed during final design and engineering, including site-specific evaluation of subsurface conditions at the actual locations of proposed foundations. Project elements will be designed and constructed to meet seismic design requirements for ground shaking and ground motions. Measures to minimize landsliding and slope instability will be refined during final design. |
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</tr>
<tr>
<td>Hazardous Waste and Materials</td>
<td>None.</td>
<td>Tight Diamond (Alt. 2)</td>
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<td></td>
<td>Aerially deposited lead (ADL) from exhaust from leaded gasoline may occur near a highway or roadway. The project would acquire and remove some existing residential and commercial structures that may contain hazardous materials such as asbestos and lead paint in the building materials. Exposure to airborne contaminants from these materials during demolition could affect safety and health. The site investigation identified gas stations outside of the proposed right-of-way where remediation has taken place. There is a low risk that subsurface construction activities could encounter petroleum hydrocarbons in shallow groundwater.</td>
<td>Before project construction, testing for ADL will be performed and special handling measures will be implemented if necessary. All activities involving contaminated soil or groundwater, if found, will comply with the various regulatory agencies’ requirements. Material from structures that is removed or modified by the project will be handled and disposed of in accordance with all local, State, and Federal requirements.</td>
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<td><strong>Air Quality</strong></td>
<td>None.</td>
<td>The construction contractor will comply with Caltrans’ Standard Specifications Section 7-1.01F and Section 10 of Caltrans’ Standard Specifications. Structure foundation locations will be considered for investigation for naturally occurring asbestos during the final design phase. Serpentine soils in construction areas will be handled according to BAAQMD’s requirements for road construction and maintenance. These measures are similar to the dust controls previously explained in this subsection and include wetting of unpaved and storage areas, stabilizing soils in unpaved construction areas, slowing speeds to less than 15 mph, and preventing track-out of soils vehicle wheels. Structures that will be removed or modified and may present a risk of presence or release of asbestos materials will be tested. If present, these materials will be handled and disposed accordingly.</td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>Fifteen of 23 locations studied have existing noise levels that approach or exceed Federal noise abatement criteria.</td>
<td>Soundwalls have been identified as feasible in three locations. Temporary construction-related noise will be reasonably minimized by implementing provisions in Section 7-1.01I of the Caltrans Standard Specifications and abatement measures. The project would result in temporary traffic noise increases in some locations of up to 11 dBA after existing soundwalls or portions of soundwalls are removed and before the replacement soundwalls are constructed. Construction activities could at times generate noise levels higher than existing traffic noise levels.</td>
</tr>
<tr>
<td>Affected Resource</td>
<td>No Build Alt.</td>
<td>Lanes Added (Alt. 1)</td>
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<td><strong>Natural Communities</strong></td>
<td>None.</td>
<td>None.</td>
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<tr>
<td>Wetlands and Other Waters of the United States</td>
<td>None.</td>
<td>None.</td>
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<tr>
<td>Plant Species</td>
<td>None.</td>
<td>None.</td>
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<tr>
<td>Animal Species</td>
<td>None.</td>
<td>Vegetation removal on the east side of I-80 would result in minimal habitat loss. Vegetation removal that takes place during the migratory bird nesting and breeding season (generally March 1 to August 31) could affect migratory birds, if present.</td>
</tr>
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**Table S-1 Summary of Impacts and Avoidance, Minimization, and/or Mitigation Measures**

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<tr>
<td><strong>Threatened and Endangered Species</strong></td>
<td>None. There is a potential that California red-legged frog could occur at Wildcat Creek. The project would disturb approximately 0.008 acre (temporary) and 0.031 acre (permanent) of vegetation at the upper banks of Wildcat Creek.</td>
<td>Measures will be implemented during construction to avoid or minimize impacts to California red-legged frog. Mitigation for impacts to California red-legged frog habitat will be provided at a 1:1 ratio for temporary impacts and at a 3:1 ratio for permanent impacts.</td>
</tr>
<tr>
<td><strong>Invasive Species</strong></td>
<td>None. Project construction activities could have the potential to inadvertently spread invasive species if present.</td>
<td>Project landscaping and erosion control will avoid using species listed as noxious weeds. The contractor will be required to use equipment that is cleaned and inspected for plant material prior to arrival and use at the project site.</td>
</tr>
<tr>
<td><strong>Cumulative Impacts</strong></td>
<td>None. Recent and proposed development would add a total of 500 to 600 residential units and some commercial and mixed-use facilities within approximately three miles of the project limits. This development is assumed in the traffic, air quality, and noise analyses performed for the I-80/San Pablo Dam Road Interchange Project.</td>
<td>None required.</td>
</tr>
<tr>
<td><strong>Climate Change</strong></td>
<td>None. The project would increase the number of vehicles that travel through the project area by 4% to 20%, depending on direction and AM or PM peak travel period. The project would decrease total travel time by 12% to 19% and reduce delay time by 5% to 64%. Reductions in congestion and delays will reduce emissions of pollutants, including carbon dioxide.</td>
<td>None required.</td>
</tr>
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Chapter 1. Proposed Project

1.1. Introduction

The California Department of Transportation (Department) proposes to increase the traffic capacity of the Interstate 80 (I-80)/San Pablo Dam Road Interchange located in the City of San Pablo and unincorporated Contra Costa County, bordering the City of Richmond, California (Figures 1-1 and 1-2). The interchange lacks sufficient capacity to accommodate future growth, and existing conditions between the I-80/San Pablo Dam Road Interchange and the interchanges immediately to the east and west affect the flow of traffic and contribute to congestion on westbound I-80 in the immediate vicinity of San Pablo Dam Road. The project limits on I-80 extend from McBryde Avenue to El Portal Drive (Post Miles 3.8 to 5.3) (Figure 1-3) to include these adjacent interchanges. The total length of the project is 1.47 miles.

This project is included in the Metropolitan Transportation Commission’s (MTC) most recent Regional Transportation Plan (RTP), the Transportation 2035 Plan for the San Francisco Bay Area (MTC 2009; RTP ID No. 22360). The project is also included in the 2009 Transportation Improvement Program (TIP), which was adopted by MTC on May 28, 2008 (TIP ID No. CC-070035). A TIP amendment in 2009 updated the project description and funding (Revision ID No. CC-070035, TIP Amendment 09-06). The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approved the 2009 TIP on November 17, 2008, and approved TIP Amendment 09-06 on May 29, 2009.

The Department is the lead California Environmental Quality Act (CEQA) agency for the project, effective July 1, 2007. The Department has been assigned environmental review and consultation responsibilities under the National Environmental Policy Act (NEPA) pursuant to 23 United States Code (USC) 327. The project is proposed in cooperation with the Contra Costa Transportation Authority, which is responsible for providing regional funding.

1.1.1. Location and Route Description

I-80 is a major access route for interstate and intrastate traffic traveling to and from the San Francisco Bay Area, as well as a major commuter route within the East Bay and between the East Bay and San Francisco. Within the project limits, I-80 is an eight-lane
divided freeway with one eastbound and one westbound lane designated as high-occupancy vehicle (HOV) lanes during peak commute hours. Although the segment of I-80 in the project limits generally trends north-south, this report refers to I-80 by its ultimate travel directions of east and west.

The I-80/San Pablo Dam Road Interchange provides access to I-80 from San Pablo Dam Road, San Pablo Avenue, and Amador Street in the City of San Pablo. The interchange is a major commute route and transportation gateway to the City of San Pablo and unincorporated Contra Costa County. The existing tight diamond interchange (Figure 1-4) is composed of the four-lane San Pablo Dam Road Overcrossing with diagonal on-ramps and off-ramps serving eastbound and westbound I-80. The overcrossing is a concrete continuous multiple box girder bridge approximately 61 feet wide by 128 feet long. On the east side of I-80, the eastbound on-ramp and off-ramp and Amador Street, which serves as a frontage road to I-80, form a five-way intersection with San Pablo Dam Road.

1.1.2. Background

I-80 in the project area was built as a six-lane freeway in 1956 and became the first California freeway to open under the Federal Highway Act of 1956. Known originally as the Eastshore Freeway, I-80 is the primary transportation corridor along the East Bay region, connecting with the San Francisco–Oakland Bay Bridge, I-880 in Oakland/Emeryville, and the Carquinez Bridge. I-80 serves a substantial traffic volume, measured at approximately 223,000 vehicles per day within the project limits in 2007 (Caltrans 2008a).

From 1993 to 1998, an operational improvement project in Alameda and Contra Costa counties added an HOV lane on I-80 in both directions. The project initially proposed to realign San Pablo Dam Road at the I-80 interchange. However, the proposed realignment encroached into an adjacent geologically unstable hillside known as the China Slide. Due to time and funding constraints, the realignment of San Pablo Dam Road was eliminated from the project. The San Pablo Dam Road Overcrossing was seismically retrofitted, and the eastbound on-ramp was widened and realigned. The on-ramp work included the construction of two temporary modular block retaining walls.

The improvements to this interchange are identified in regional and local transportation planning. The project is listed and described in the West Contra Costa County Action Plan 2000 Update (WCCTAC 2000), the Contra Costa Transportation Authority’s 2007 Congestion Management Program for upgrades and improvements (CCTA 2007a), and
Back of Figure 1-2
Chapter 1 Proposed Project

Back of Figure 1-3
Back of Figure 1-4
CCTA’s Measure J Strategic Plan (CCTA 2007b). The City of San Pablo Public Works Division includes the project in its Capital Projects Program 2007/08 Budget plan (City of San Pablo 2008a).

The Caltrans Project Study Report/Project Development Support (PSR/PDS) document completed in May 2004 defined three potential alternatives for replacement of the I-80/San Pablo Dam Road Interchange. As part of project scoping, a community meeting was held in July 2003 to present the alternatives and allow the public to obtain information and ask questions about the project. Three build alternatives (Lanes Added, Tight Diamond, and Quad Two-Way) and the No Build Alternative were subsequently advanced for further consideration, as discussed in detail in Sections 1.3 and 1.5.

1.2. Purpose and Need

1.2.1. Project Purpose

The purpose of the proposed project is to:

- Reduce traffic congestion at the I-80/San Pablo Dam Road Interchange and on local streets in the vicinity of the interchange without increasing congestion on I-80;
- Reduce weaving conflicts between vehicles entering and exiting the freeway at the I-80/San Pablo Dam Road Interchange; and
- Provide efficient and safe bicycle and pedestrian access across I-80.

1.2.2. Project Need

The I-80/San Pablo Dam Road Interchange lacks sufficient capacity to accommodate existing and projected future traffic volumes. Inefficient traffic flows at the I-80/San Pablo Dam Road Interchange ramps result in long queues entering and exiting I-80. Projected future traffic volumes will exacerbate congestion on I-80 and the San Pablo Dam Road ramps and hinder traffic operations on local roads approaching the interchange. The four-lane San Pablo Dam Road Overcrossing lacks the capacity to accommodate projected future traffic volumes. On the east side of this overcrossing is a five-way intersection of San Pablo Dam Road, Amador Street, and the freeway ramps that does not permit left turns from westbound San Pablo Dam Road onto Amador Street. This restriction prevents westbound San Pablo Dam Road traffic from directly accessing Amador Street and Riverside Elementary School. In addition, existing
pedestrian and bicycle facilities are not adequate to provide efficient access through the interchange.

### 1.2.2.1. Capacity, Transportation Demand, and Safety

Level of service (LOS) is an indicator of operational conditions on a roadway or at an intersection and is defined in categories ranging from A to F. These categories can be viewed much like school grades, with A representing the best roadway conditions and F indicating substantial congestion with stop-and-go traffic (Figure 1-5). At intersections, LOS is evaluated in terms of delay caused by vehicles slowing or stopping due to a signal or stop sign. At signalized intersections, LOS A indicates that vehicles are delayed by ten seconds or less, and LOS F represents delays of more than 80 seconds. At unsignalized intersections, LOS A indicates that vehicles are delayed by less than ten seconds, and LOS F indicates delays of more than 50 seconds.

I-80 in the project area currently\(^2\) operates at LOS F during both the AM and PM peak hours. In the westbound direction, I-80 is four through lanes with auxiliary lanes between some ramps, and yet carries peak AM vehicle volumes that range from approximately 7,400 to 8,600 vehicles per hour. Traffic conditions on San Pablo Dam Road at the interchange are also currently congested, especially during peak commute hours (Table 1-1). The intersection of the eastbound I-80 on- and off-ramps, San Pablo Dam Road, and Amador Street operates at LOS F in the AM and PM commute peak hours (Intersection 5 in Table 1-1) and is forecasted to continue at this level through 2035.\(^3\) The intersection of the westbound I-80 off-ramp and San Pablo Dam Road (Intersection 4 in Table 1-1) operates at LOS F during the AM peak hours and LOS D during the PM peak hours. These traffic conditions create long queues on San Pablo Dam Road and Amador Street. A recent Department study on I-80 corridor traffic operations showed that traffic slows substantially at the San Pablo Dam Road Interchange—to approximately 12 miles per hour (mph) on westbound I-80 during the AM peak hours and 22 mph on eastbound I-80 during the PM peak hours (Caltrans 2004).

---

\(^2\) Traffic volumes for existing conditions are from 2005, when environmental analysis for the proposed project commenced.

\(^3\) Future conditions are normally projected for a 20-year horizon. As project construction is expected to begin in 2015, the future condition year for this study is 2035.
**Figure 1-5** Levels of Service for Freeways, Signalized Intersections, and Unsignalized Intersections
Table 1-1  Summary of Level of Service Analysis at Study Intersections: Existing Conditions

<table>
<thead>
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<th>Intersection</th>
<th>AM Peak Hour</th>
<th></th>
<th>PM Peak Hour</th>
<th></th>
</tr>
</thead>
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<tr>
<td></td>
<td>Delay*</td>
<td>LOS</td>
<td>Delay*</td>
<td>LOS</td>
</tr>
<tr>
<td>1 San Pablo Avenue/San Pablo Dam Road</td>
<td>28.5</td>
<td>C</td>
<td>&gt;80.0</td>
<td>F</td>
</tr>
<tr>
<td>2 Contra Costa Avenue/San Pablo Dam Road</td>
<td>7.8</td>
<td>A</td>
<td>13.3</td>
<td>B</td>
</tr>
<tr>
<td>3 Ventura Avenue/San Pablo Dam Road</td>
<td>16.0</td>
<td>B</td>
<td>17.8</td>
<td>B</td>
</tr>
<tr>
<td>4 I-80 WB off-ramp/San Pablo Dam Road</td>
<td>&gt;80.0</td>
<td>F</td>
<td>43.6</td>
<td>D</td>
</tr>
<tr>
<td>5 Amador Street/San Pablo Dam Road/EB ramps</td>
<td>&gt;80.0</td>
<td>F</td>
<td>&gt;80.0</td>
<td>F</td>
</tr>
<tr>
<td>6 San Pablo Dam Road/Morrow Drive</td>
<td>5.1</td>
<td>A</td>
<td>5.3</td>
<td>A</td>
</tr>
<tr>
<td>7 Amador Street/Alpine Road</td>
<td>33.2</td>
<td>D</td>
<td>17.9</td>
<td>C</td>
</tr>
<tr>
<td>8 I-80 WB off-ramp/McBryde Avenue</td>
<td>41.3</td>
<td>E</td>
<td>16.7</td>
<td>C</td>
</tr>
<tr>
<td>9 I-80 WB on-ramp/El Portal Drive</td>
<td>10-1</td>
<td>B</td>
<td>9.9</td>
<td>A</td>
</tr>
<tr>
<td>10 I-80 WB off-ramp/El Portal Drive</td>
<td>12.9</td>
<td>B</td>
<td>14.4</td>
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</tr>
<tr>
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<td>C</td>
<td>59.6</td>
<td>E</td>
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<td>12 I-80 WB on-ramp/Solano Avenue</td>
<td>&gt;50.0</td>
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<td>13 I-80 EB off-ramp/Solano Avenue</td>
<td>17.8</td>
<td>C</td>
<td>15.7</td>
<td>C</td>
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</tbody>
</table>

Source: URS 2008a

Notes:
* Delay represented is average delay at signalized intersections and average delay on controlled approaches at unsignalized intersections. Delay is shown in seconds per vehicle.
EB = Eastbound
WB = Westbound

Traffic Accident Surveillance and Analysis System (TASAS) data are summarized in Table 1-2 for the freeway system in the project area for the period of November 1, 2004, through October 31, 2007 (Caltrans 2008a). The data are expressed as accidents per million vehicle miles (MVM) traveled and accidents per million vehicles for ramps. The data show that 44 percent of accidents in the project area occur on westbound I-80 and 56 percent occur on eastbound I-80. The total accident rate on this segment of I-80 is slightly less (1.03 accidents/MVM) than the Statewide average for similar freeways (1.23 accidents/MVM).
Table 1-2  Traffic Accident Data

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<th>Actual Rates</th>
<th>Average Rates</th>
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<tr>
<td></td>
<td>Total</td>
<td>Fatal</td>
<td>Injury</td>
</tr>
<tr>
<td>I-80 (Mainline) only, not including ramps (Post Miles 3.8--5.301):</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11/01/04-10/31/07</td>
<td>331</td>
<td>4</td>
<td>84</td>
</tr>
<tr>
<td>Westbound off-ramp to McBryde Avenue (Post Mile 3.928):</td>
<td></td>
<td></td>
<td></td>
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<td>11/01/04-10/31/07</td>
<td>5</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Eastbound off-ramp to San Pablo Dam Road (Post Mile 4.182):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/01/04-10/31/07</td>
<td>22</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Westbound on-ramp from San Pablo Dam Road (Post Mile 4.224):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/01/04-10/31/07</td>
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<td>0</td>
<td>3</td>
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<td>Westbound off-ramp to San Pablo Dam Road (Post Mile 4.477):</td>
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<td></td>
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<td>5</td>
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<td>1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>11/01/04-10/31/07</td>
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<td>0</td>
<td>2</td>
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<td>Eastbound off-ramp to El Portal Drive (Post Mile 5.148):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11/01/04-10/31/07</td>
<td>11</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Eastbound on-ramp from El Portal Drive (Post Mile 5.442):</td>
<td></td>
<td></td>
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<td>11/01/04-10/31/07</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Westbound off-ramp to El Portal Drive (Post Mile 5.449):</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11/01/04-10/31/07</td>
<td>15</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Caltrans 2008a

* F+I = Fatal plus injury accident rate

The accident rates listed in Table 1-2 are below the statewide average, with the exception of the eastbound and westbound off-ramps to San Pablo Dam Road and the westbound off-ramp to El Portal Drive. The rates on these ramps are slightly above the State average. According to the TASAS data, rear-end collisions generally account for the majority of accidents.

Within the project limits, the San Pablo Dam Road Overcrossing provides pedestrian access across I-80, but the surrounding area lacks connecting pedestrian facilities. For example, residents of neighborhoods in the area west of I-80 often walk to the Princeton Plaza shopping center on San Pablo Dam Road east of the overcrossing. While the San Pablo Dam Road Overcrossing has sidewalks on both sides of the structure, there is no sidewalk on the north side of San Pablo Dam Road east of the
structure and no marked pedestrian crossing on the north side of the intersection of the eastbound I-80 on- and off-ramps and San Pablo Dam Road. In public meetings, residents have expressed concern over the confusion and delay caused by this lack of complete pedestrian access through the project area, as well as concern for the safety of pedestrians crossing the interchange. Finally, the sidewalks in the project area are narrower than the City of San Pablo standard of seven feet, and sidewalks on the San Pablo Dam Road Overcrossing do not meet American Disabilities Act (ADA) requirements.

Bicycle access in the interchange area is also inadequate. San Pablo Dam Road from San Pablo Avenue to El Portal Drive, including the overpass of I-80, is a designated bicycle route in the MTC’s Proposed Regional Bikeway System, which has been adopted by the City of San Pablo. This route is classified as a Class III bikeway, where cyclists share the road with vehicles. However, the traffic volume at the interchange presents safety concerns for bicyclists sharing lanes with vehicles. In addition, the five-way intersection at San Pablo Dam Road, the eastbound I-80 on- and off-ramps, and Amador Street constrains bicycle traffic because of high vehicle traffic volumes and roadway geometrics. The San Pablo Dam Road westbound left-turn movement to southbound Amador Street is not allowed. However, bicyclists have a tendency to cut through the opposing traffic to make this movement.

1.2.2.2. Roadway Deficiencies

The San Pablo Dam Road Overcrossing is skewed to the north to avoid further penetration of the China Slide on the east side of the road and I-80 (Figure 1-4). As a result, the angle of the intersection of San Pablo Dam Road and the terminus of the I-80 eastbound off-ramp is less-than-standard.

The existing San Pablo Dam Road Overcrossing has a clearance of 14 feet and eight inches, which does not meet the minimum vertical clearance requirement of 16 feet and nine inches (Highway Design Manual, Section 309.2, Caltrans 2008b). Additional space for shoulders is available on I-80 under the existing overcrossing.

The San Pablo Dam Road Overcrossing is two lanes in each direction. Both the westbound and eastbound lane configurations consist of a through lane and a through left-turn option lane that allows access to eastbound and westbound I-80. The left-turn pockets are not long enough to contain the volume of traffic accessing I-80 during peak traffic hours, resulting in traffic backups in both directions. During peak commute hours, westbound traffic on San Pablo Dam Road often backs up for 0.25 mile to
Morrow Drive. Eastbound traffic on San Pablo Dam Road can back up, blocking the intersections at Contra Costa and Ventura Avenues.

Amador Street intersects San Pablo Dam Road immediately adjacent to the eastbound I-80 off-ramp, forming a five-way intersection that can confuse motorists on westbound San Pablo Dam Road trying to locate the westbound I-80 on-ramp. The San Pablo Dam Road eastbound off-ramp terminus and Amador Street at San Pablo Dam Road do not have sufficient space between them. Therefore, left-turn movements from westbound San Pablo Dam Road to southbound Amador Street are not permitted at this intersection. This interferes with the ability of residents along Amador Street to access commercial areas along San Pablo Dam Road east of I-80 such as the Princeton Plaza Shopping Center, and often forces local traffic to use the freeway for local trips.

The I-80/El Portal Drive Interchange east of San Pablo Dam Road is a partial interchange with an isolated westbound I-80 on-ramp located only about 715 feet from the westbound I-80 off-ramp at San Pablo Dam Road. Based on design standards set forth in the *Highway Design Manual* (Caltrans 2008b), traffic volumes on the I-80 westbound off-ramp to San Pablo Dam Road are high enough to require a two-lane exit with a 1,300-foot auxiliary lane.

The westbound I-80 off-ramp at McBryde Avenue to the west of San Pablo Dam Road is also isolated. The weaving distance between this off-ramp and the westbound I-80 on-ramp at San Pablo Dam Road is only about 970 feet, which is less than the 1,600-foot-long standard weaving length recommended between interchanges. A longer weaving length allows more time and distance for drivers to safely and efficiently change lanes or merge as they exit or enter the freeway.

### 1.2.2.3. **Independent Utility and Logical Termini**

As originally proposed and funded, the I-80/San Pablo Dam Road Interchange Project focused on improving the capacity of the interchange structure and ramps to accommodate existing and future traffic demand and growth. The initial limits for alternative improvements considered in the PSR/PDS were immediately east and west of the interchange on- and off-ramps (Post Miles 4.0 to 4.8).

Expanding the project limits to the adjacent McBryde Avenue and El Portal Drive interchanges on I-80 allowed evaluation of a greater range of options and identification of the proposed improvements that meet the requirements of independent utility and logical termini. Expanding the project limits also reduces the potential that future changes might still be necessary to achieve the purpose and need. The eastern project...
limit at El Portal Drive, where the isolated westbound on-ramp would be relocated and consolidated with the existing interchange, allows inclusion of the proposed westbound auxiliary lane that improves (lengthens) the available weaving distance. Extending the western project limit to McBryde Avenue accommodates the proposed closure of the westbound freeway off-ramp and provides a frontage road for freeway drivers to connect to McBryde Avenue. (The McBryde Avenue off-ramp would be eliminated to increase the distance between interchanges, but drivers would be able to access McBryde Avenue by exiting at westbound San Pablo Dam Road and continuing on the frontage road.) In summary, the proposed expanded limits avoid restricting consideration of the more effective improvements that were included in the project, allows evaluation of environmental conditions on a broad scope, and are usable or effective if no other improvements are made to these segments of I-80 or San Pablo Dam Road.

**1.3. Project Description**

This section describes the proposed project and the design alternatives that were developed by a multidisciplinary team to achieve the project’s purpose and need while avoiding or minimizing environmental impacts. The alternatives are the Lanes Added Alternative (Alternative 1), the Tight Diamond Alternative (Alternative 2), and the No Build Alternative.

The project limits are a 1.47-mile segment of I-80 between McBryde Avenue and El Portal Drive (Post Miles 3.8 to 5.3) in the City of San Pablo and unincorporated Contra Costa County. Within the project limits, the I-80/San Pablo Dam Road Interchange consists of a four-lane overcrossing with diagonal on-ramps and off-ramps serving eastbound and westbound I-80. The McBryde Avenue and El Portal Drive interchanges lie to the west and east, respectively, of San Pablo Dam Road. As noted in Section 1.2, the purpose of the project is to improve traffic operations and bicycle/pedestrian access at the I-80/San Pablo Dam Road Interchange. The project is needed to address traffic congestion at the I-80/San Pablo Dam Road Interchange, the lack of a left-turn movement from westbound San Pablo Dam Road onto Amador Street, insufficient spacing between interchange ramps, and lack of efficient pedestrian and bicycle access within the limits of construction.
1.3.1. Project Alternatives

Both build alternatives include modifications to the McBryde Avenue, San Pablo Dam Road, and El Portal Drive interchanges. The project elements are the same for both alternatives except at the San Pablo Dam Road Interchange. In the Lanes Added Alternative, the existing four-lane overcrossing at San Pablo Dam Road would be replaced with a new seven-lane bridge on the existing alignment (Figure 1-6). In the Tight Diamond Alternative, the existing San Pablo Dam Road Overcrossing would also be replaced with a six-lane bridge. However, in this alternative, the new overcrossing would be further skewed to the north to separate the Amador Street and eastbound I-80 on-ramp intersections with San Pablo Dam Road in accordance with minimum design standards and to avoid encroaching into the geologically unstable hillside (China Slide) to the east (Figure 1-7). The bridge replacement design would also meet the current Caltrans vertical clearance standards. In the No Build Alternative, no modifications would be made to I-80 or the interchanges at El Portal Drive, San Pablo Dam Road, and McBryde Avenue. The preliminary project plans for the build alternatives are provided in Appendix A.

1.3.1.1. Common Design Features of the Build Alternatives

Freeway On-Ramp and Off-Ramp Changes

The existing El Portal Drive on-ramp to westbound I-80, which is isolated from the rest of the El Portal Drive interchange, would be closed and the pavement removed. A barrier along El Portal Drive would be installed across the on-ramp, which could involve extending the existing El Portal Drive soundwall. A new westbound I-80 on-ramp would be constructed approximately 2,000 feet north of the existing on-ramp, creating a full diamond interchange at El Portal Drive. The on-ramp would connect to a new westbound auxiliary lane from El Portal Drive to the San Pablo Dam Road Interchange, roughly doubling the weaving distance for motorists entering and exiting westbound I-80 between El Portal Drive and San Pablo Dam Road (Figure 1-3).

The existing McBryde Avenue off-ramp from westbound I-80 would also be closed. Motorists wishing to reach McBryde Avenue from westbound I-80 would exit at San Pablo Dam Road and continue through the interchange on a new one-way frontage road connecting to McBryde Avenue (Figure 1-3). The frontage road would diverge from the westbound I-80 on-ramp at San Pablo Dam Road.

Pedestrian and Bicycle Facilities

The project includes pedestrian sidewalks and crosswalks on both sides of San Pablo Dam Road across I-80 and the on- and off-ramps. Sidewalks and crosswalks would be
installed on the north side of San Pablo Dam Road east of eastbound I-80, which currently lacks pedestrian facilities across the eastbound on-ramp. With the project, pedestrians would be able to walk on either side of San Pablo Dam Road between the commercial area on the west side of I-80 to east of Amador Street.

There is a pedestrian overcrossing of I-80 between San Pablo Dam Road and McBryde Avenue (Figure 1-3). This overcrossing connects the Riverside Elementary School (located at 1300 Amador Street, at Riverside Avenue), adjacent residential neighborhoods, and Wildcat Canyon Regional Park on the east side of the freeway to Riverside Avenue on the west side of the freeway. The overcrossing is located east of the terminus of Riverside Avenue and is connected to the road by a paved pedestrian walkway. Riverside Elementary School students cross Amador Street to reach the overcrossing. This overcrossing would be rebuilt north of its current location as a longer structure to cross the new frontage road and the I-80 on-ramp proposed on the west side of I-80. The proposed design option would extend this pedestrian structure to cross Amador Street on the east side of I-80, allowing students to avoid Amador Street traffic. This design option would require an easement or transfer agreement for a portion of the school parking lot at Riverside Avenue and Amador Street to construct a switchback pedestrian ramp.

Class II bicycle lanes would be accommodated in the shoulders of the San Pablo Dam Road Overcrossing of I-80 (both sides of the overcrossing). Safety needs will be considered in the striping plans where vehicle turn lanes have the potential to conflict with bikes. For example, the proposed bike lane at the eastbound I-80 on-ramp from San Pablo Dam Road should be striped on the inside of the right-turn lane to allow riders to merge left and out of the way of right-turning cars headed toward the eastbound ramp.

**Ramp Metering Systems**

Meter signals and equipment would be installed at both the westbound and eastbound I-80/San Pablo Dam Road on-ramps and the El Portal Drive on-ramp to westbound I-80.

**Right-of-Way Requirements**

Some full and partial property acquisitions would be necessary, as well as temporary easements for construction access and staging.

Two residential properties on Rollingwood Drive and parts of two adjacent residential properties would be acquired to accommodate the new westbound I-80 on-ramp at El Portal Drive. Partial property acquisitions could also be necessary at the backyards of
Back of Figure 1-6
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four properties on Avon Lane, but the large size of the backyard lots and minimal property requirements at this location may avoid full acquisition of the properties. The frontage road to McBryde Avenue and associated retaining walls could require acquisition of three residential properties (five units total) on Humboldt Avenue east of Riverside Avenue. The project could require acquisition of two single-family homes, an apartment building, and a rental self-storage facility on Riverside Avenue.

Temporary construction easements could be needed along El Portal Drive and at properties along San Pablo Dam Road west of I-80. The increased elevation of the San Pablo Dam Road Overcrossing over I-80 would require reconstruction of the road approaching the overcrossing. Consequently, the elevations of side streets (Ventura Avenue) and adjacent parking lot driveways would be increased slightly to match the profile height of the new overcrossing approach. Retaining walls would also be constructed or rebuilt along the parcels adjacent to the west side of the San Pablo Dam Road Overcrossing. The existing recreational vehicle storage business along San Pablo Dam Road just east of I-80 is on land leased from the Department. The lease would be terminated, and the storage business operators would have to remove or relocate their operations.

At Riverside Elementary School, on Amador Street at Riverside Avenue, a permanent easement or transfer agreement for a portion of the parking lot would be necessary for reconstruction of the pedestrian overcrossing. This would result in a loss of some of the school’s parking lot.

**Drainage/Utilities**

Drainage from project facilities would be conveyed to the existing drainage system on I-80. To meet freeway standards, some existing gas, sanitary sewer, electrical, cable, telephone, and recycled water utilities within the proposed right-of-way for the project may need to be relocated, including a 12-inch water main and 36-inch water line near the intersection of Riverside Avenue and Amador Street, a 54-inch transmission main along El Portal Drive, and a 15-inch sewer line.

**Creek/Stream Crossings**

The project crosses Wildcat Creek between San Pablo Dam Road and McBryde Avenue and San Pablo Creek at the existing El Portal Drive on-ramp to westbound I-80 (Figure 1-3). Both creeks are in culverts where they cross existing freeway facilities. No structures would be placed within the creeks. At San Pablo Creek, the pavement for the existing El Portal Drive on-ramp would be removed. No construction would take
place in the creek or on its banks. The creek would be designated and flagged as an environmentally sensitive area (ESA) to exclude construction workers and equipment.

The one-way frontage road to McBryde Avenue and the auxiliary lane to the westbound I-80 on-ramp from San Pablo Dam Road would cross Wildcat Creek adjacent to the existing I-80 culvert. Wildcat Creek is in a relatively deep, vegetated channel at this location, with steep banks rising from the creek to the top of the banks. The proposed frontage road crossing would be placed on a bridge structure at the top of the creek bank. No bridge construction would take place within the creek waters, and existing wingwalls would remain unaffected. The bridge structure is anticipated to clear-span the creek (meaning that no piers or footings would be placed within the creek) but would require installation of abutments at the top or outside of the creek banks.

**Retaining Walls and Soundwalls**

Several retaining walls would be constructed for the new I-80 westbound on-ramp at El Portal Drive, the westbound auxiliary lane, and the one-way frontage road to McBryde Avenue. A retaining wall would be built along the shoulder of westbound I-80 at the new El Portal Drive on-ramp because of the steep grade between the freeway and the proposed new ramp. To minimize encroachment onto existing properties, a retaining wall would be constructed on the west side of the new I-80 westbound off-ramp at San Pablo Dam Road and the McBryde Avenue frontage road.

The Lanes Added Alternative would partially reconstruct a retaining wall along the shoulder of the new eastbound I-80 on-ramp. The Tight Diamond Alternative would construct retaining walls (1) between Amador Street and the new eastbound I-80 off-ramp from approximately Alpine Road to the location of the existing Amador Street/San Pablo Dam Road intersection, and (2) along the south side of the proposed extension of Amador Street to its intersection with San Pablo Dam Road.

Soundwalls already exist along the majority of both sides of the freeway and ramps within the project limits. Portions of these walls would require relocation to accommodate the project, and the noise evaluation for this project has preliminarily identified areas where additional soundwalls may also be appropriate. Noise impacts and the evaluation of noise abatement measures within the project limits are discussed in Section 2.13. Replacement soundwalls and soundwalls that meet noise abatement criteria have been preliminarily identified at the following locations:

- A segment of westbound I-80 where it parallels El Portal Drive. Three segments of the existing 16-foot-high wall would be reconstructed to accommodate widening of
I-80 for the proposed auxiliary lane. Approximately 300 feet of the easternmost portion of this wall would be removed to allow for the merge of the proposed westbound El Portal Drive on-ramp. An 8-foot-high masonry wall planned for 2009 along the western side of El Portal Drive will be constructed independent of the proposed I-80/San Pablo Dam Road Interchange improvements. The wall would be extended as part of the I-80/San Pablo Dam Road Interchange Project.

- Along westbound I-80 from the westbound San Pablo Dam Road on-ramp to west of Wildcat Creek, where it would connect with an existing soundwall that extends to McBryde Avenue. This wall would accommodate construction of the proposed frontage road and bridge over San Pablo Creek. The portion of this soundwall fronting the existing self-storage business would not be constructed if acquisition of the self-storage business property can be mostly avoided during right-of-way.

**Construction Staging**

During project construction, temporary traffic disruptions may be required to conduct the planned construction activities. During nonpeak periods (mid-day and evening through early morning), temporary lane closures, detours, and lane shifts on I-80 and San Pablo Dam Road may be required to replace the San Pablo Dam Road Overcrossing and the Riverside Avenue pedestrian overcrossing. Temporary closures of existing interchange ramps may also be necessary during construction. Lane closures would be primarily at night but could also occur during daytime nonpeak hours for specific construction activities. Impacts to pedestrians and bicyclists, as well as access to local developments, would be carefully considered in the traffic handling and stage construction plans during the final design phase. During peak commute periods, all through traffic lanes on I-80 would remain open, and at least four lanes would remain open on San Pablo Dam Road. Construction strategies would be employed in the construction zone to ensure safe, efficient operations for construction workers and motorists.

The proposed replacement Riverside Avenue pedestrian overcrossing will be located north of the existing structure. It is anticipated that the new overcrossing can be built and opened for use before demolition of the existing structure, thereby providing uninterrupted access across the freeway for pedestrians and bicyclists.

**1.3.1.2. Unique Features of the Build Alternatives**

**Lanes Added Alternative**

As stated in Section 1.2.2.2, the vertical clearance of the existing San Pablo Dam Road Overcrossing does not meet the minimum State design requirement for freeway
bridges, and no space is available beneath the overcrossing for shoulders on I-80. Therefore, the Lanes Added Alternative replaces the existing overcrossing with a new structure on the same alignment that would accommodate seven lanes of traffic, meet the minimum vertical clearance requirement, and allow for construction of 10-foot shoulders on I-80. The two added lanes would enable left-turn movements from the overcrossing to both the eastbound and westbound I-80 on-ramps. This alternative would also provide three through lanes approaching the San Pablo Dam Road Overcrossing of I-80 in both the northbound and southbound directions (Figure 1-6).

**Tight Diamond Alternative**

The Tight Diamond Alternative would also replace the existing San Pablo Dam Road Overcrossing with a six-lane bridge that includes a left-turn lane for both the eastbound and westbound I-80 ramps, minimum vertical clearance, and shoulders for I-80. However, in this alternative, the new overcrossing would be curved to allow relocation of the Amador Street/San Pablo Dam Road intersection without encroaching into the geologically unstable hillside to the east. Amador Street would be relocated by 410 feet to the north and San Pablo Dam Road on the east side of I-80 would be realigned to the west to avoid intrusion into the geologically unstable hillside (Figure 1-7).

Under this alternative, a left-turn lane would be added from westbound San Pablo Dam Road to Amador Street. The eastbound I-80 off-ramp would be lined up with the eastbound I-80 on-ramp to create a typical tight diamond interchange.

**1.3.2. Traffic Systems Management (TSM) and Traffic Demand Management (TDM) Alternatives**

TSM strategies consist of actions that increase the efficiency of existing facilities; they increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Although TSM measures alone could not satisfy the purpose and need of the project, the following TSM measures have been incorporated into both of the build alternatives: bike lanes and pedestrian facilities, an auxiliary lane, and a frontage road.

TDM measures focus on regional strategies for reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. The project includes High Occupancy Vehicle (HOV) bypass lanes and ramp metering on the eastbound and westbound on-ramps at the I-80/San Pablo Dam Road Interchange to help encourage carpooling.
1.3.3. Project Funding, Estimated Cost, and Schedule

This project is included in the Metropolitan Transportation Commission’s (MTC) most recent RTP, the Transportation 2035 Plan for the San Francisco Bay Area (MTC 2009; RTP ID No. 22360). It is also included in the 2009 Transportation Improvement Program (TIP) adopted by MTC on May 28, 2008 (TIP ID No. CC-070035) and in TIP Amendment 09-06, approved on May 29, 2009. Project approval is anticipated in 2010. Design plans, specifications, and right-of-way acquisitions are expected to be completed in 2012. Project construction is anticipated to begin in 2015.

The project is also included in the West Contra Costa County Action Plan 2000 Update (WCCTAC 2000), Countywide Comprehensive Transportation Plan Update (CCTA 2004), and Contra Costa Congestion Management Program 2007 (CCTA 2007a). Improvement of the I-80/San Pablo Dam Road Interchange was identified as an important project for funding in the Measure C Renewal public workshops conducted by the Contra Costa Transportation Authority (CCTA) during April and May 2003. Measure C, passed in 1998, authorized a one-half cent sales tax to fund transportation improvements in Contra Costa County. Partial project funding was subsequently added in Measure J, which extended the one-half cent sales tax for 25 years starting in July 2009, and in the West County Subregional Traffic Mitigation Fee Program.

The following lists the preliminary estimated costs for the project, defined by alternative:

### Alternative 1 – Lanes Added:

- **Roadway:** $47,019,000
- **Structure:** $13,175,000
- **Escalation to year 2013 @ 2%/yr:** $9,587,000
- **Right-of-Way:** $20,768,000
- **Construction Total:** $90,549,000

#### Support Total:

- Project & Env. Approval: $2,500,000
- Final Design (PS&E) @ 12%: $8,374,000
- Right-of-way: $1,000,000
- Construction Admin @ 12%: $8,374,000
- **Support Total:** $20,248,000

**ALTERNATIVE 1 TOTAL:** $110,797,000

### Alternative 2 – Tight Diamond:

- **Roadway:** $47,682,000
- **Structure:** $14,730,000
- **Escalation to 2013 @ 2%/yr:** $9,941,000
- **Right-of-Way:** $20,672,000
- **Construction Total:** $93,025,000
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<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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<td>Project &amp; Env. Approval</td>
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<td>Final Design (PS&amp;E) @ 12%</td>
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<tr>
<td>Right-of-way</td>
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<tr>
<td><strong>ALTERNATIVE 2 TOTAL:</strong></td>
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#### 1.3.4. No Build Alternative

The No Build Alternative would make no improvements to the I-80/San Pablo Dam Road Interchange or the adjacent interchanges. The existing constraints at this interchange and along the segment of I-80 between El Portal Drive and McBryde Avenue would remain. Traffic demand along this corridor and at these interchanges will continue to increase, as described in Section 1.2.2.1, and the existing deficiencies described in Section 1.2.2.2 will continue to constrain traffic and increase congestion. The No Build Alternative does not meet the purpose and need of the project because it would not reduce traffic congestion or eliminate existing traffic weaving conditions that contribute to congestion. The No Build Alternative would not improve pedestrian or bicycle access through the I-80/San Pablo Dam Road Interchange.

#### 1.4. Comparison of Alternatives

The two build alternatives are identical except for the angle of the San Pablo Dam Road bridge over I-80 and the configuration of the Amador Street intersection and connecting eastbound on- and off-ramps (on the east side of I-80, at San Pablo Dam Road). In the remainder of the project limits, the proposed changes are the same for both alternatives, including at El Portal Drive, from El Portal Drive to the San Pablo Dam Road Interchange on- and off-ramps, the Riverside Avenue and school pedestrian overcrossing, proposed frontage road, McBryde Avenue off-ramp, Wildcat Creek bridge, soundwalls, and retaining walls. The primary differences in the two alternative designs are summarized in Table 1-3.

After the public circulation period, all comments were considered, and the Project Development Team identified Alternative 2 as the preferred alternative (see Section 1.7).
Table 1-3  Comparison of the Differences Between the Build Alternatives

<table>
<thead>
<tr>
<th>Design Component</th>
<th>Lanes Added (Alternative 1)</th>
<th>Tight Diamond (Alternative 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-80/San Pablo Dam Road Bridge</td>
<td>• Proposed Alternative 1 bridge alignment would approximately follow the existing San Pablo Dam Road (and existing bridge) alignment. San Pablo Dam Road would remain adjacent to existing China Slide. Maintaining a similar alignment to the existing bridge may also simplify construction.</td>
<td>• Bridge design “skews” at an angle to maximize distance between San Pablo Dam Road and the China Slide area in the slope to the east. This reduces potential for increased slope failure.</td>
</tr>
<tr>
<td>Amador Street/San Pablo Dam Road Intersection and I-80/San Pablo Dam Road Eastbound Off-ramp</td>
<td>• The Amador Street/San Pablo Dam Road intersection would remain adjacent to the I-80 eastbound off-ramp. There would continue to be five “legs” or connections at this intersection, requiring signal timing to separate the off-ramp traffic from adjacent Amador Street traffic. • There would be no westbound San Pablo Dam Road left-turn movement at Amador Street, because of the close proximity of Amador Street to the eastbound off-ramp. As a result, westbound San Pablo Dam Road drivers cannot directly access Amador Street.</td>
<td>• Realignment of the bridge structure (see above) allows relocation of the Amador Street/San Pablo Dam Road intersection away from the I-80 eastbound off-ramp. Separation of these two intersections would improve traffic operations and safety at these intersections. • Extending Amador Street to the east and separating its intersection on San Pablo Dam Road away from the eastbound off-ramp would allow left-turn movements onto Amador Street from westbound San Pablo Dam Road. This traffic movement is infeasible with the current intersection design and Alternative 1.</td>
</tr>
<tr>
<td>I-80 Eastbound On-ramp</td>
<td>• The eastbound on-ramp would not “line up” across from the off-ramp. Intersection turning movements would not be aligned in comparison with most four-way intersections.</td>
<td>• The on- and off-ramps would line up. The intersection design would be relatively more familiar to drivers. • The eastbound San Pablo Dam Road to I-80 on-ramp movement would have a separate short connector ramp, with a yield where it merges with the on-ramp.</td>
</tr>
</tbody>
</table>

1.5. Alternatives Considered But Eliminated From Further Discussion

Development of the proposed project included consideration of alternative interchange designs as well as options to address specific elements of the project design. The alternatives and options were developed and evaluated with respect to the project’s purpose and need, potential environmental and community impacts, and cost. The
following summarizes alternatives and design options that were not advanced for further evaluation.

### 1.6. Alternatives Considered But Eliminated From Further Discussion

Development of the proposed project included consideration of alternative interchange designs as well as options to address specific elements of the project design. The alternatives and options were developed and evaluated with respect to the project’s purpose and need, potential environmental and community impacts, and cost. The following summarizes alternatives and design options that were not advanced for further evaluation.

The May 2004 PSR/PDS for the I-80/San Pablo Dam Road Interchange Project presented three build alternatives: Alternative 1—Lanes Added, Alternative 2—Tight Diamond, and Alternative 3—Quad Two-Way. Alternative 1 would replace the four-lane I-80 overcrossing at San Pablo Dam Road with a new six-lane overcrossing. Alternative 2 would also replace the four-lane overcrossing with a six-lane structure, as well as realign San Pablo Dam Road at the interchange and relocate the Amador Street/San Pablo Dam Road intersection. Alternative 3 would change the existing five-way interchange on the east side of I-80 with two four-way intersections and add another overcrossing north of the existing structure. Additional traffic modeling and analysis was performed following completion of the PSR/PDS. As a result, Alternative 3 was eliminated because signal timing at the San Pablo Dam Road westbound off-ramp would function at an unacceptable level of service. This alternative would not meet the purpose and need of reducing traffic congestion at the interchange.

Alternative 1 was refined to eliminate three of the design exceptions by realigning San Pablo Dam Road. Alternative 2 was refined to realign San Pablo Dam Road further north to avoid the China Slide area, an active slide on the east side of I-80 that is considered a design constraint because excavation may cause further slope failure.

Although Alternatives 1 and 2 had been refined, two design constraints remained that would result in unacceptable future traffic operations on I-80 and nearby ramps. Westbound I-80 has insufficient distance between the El Portal Drive on-ramp and the San Pablo Dam Road off-ramp to allow for the weaving of vehicles entering and exiting the freeway. The same constraint exists on westbound I-80 between the San Pablo Dam Road on-ramp and the McBryde Avenue off-ramp. These interchange ramps are too close
to accommodate the predicted future traffic growth. The limits of the project were therefore extended east to the El Portal Drive interchange and west to the McBryde Avenue interchange. In addition, a range of design options were considered that could accompany the reconstruction of the I-80/San Pablo Dam Road Interchange to improve future traffic conditions on this freeway segment. Table 1-4 lists the ten design concepts evaluated to address weaving length and other issues within this freeway segment.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>Hook ramp at San Pablo Dam Road eastbound off-ramp</td>
</tr>
<tr>
<td>2</td>
<td>Collector-distributor (CD) road</td>
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<tr>
<td>3</td>
<td>Braided ramp at El Portal Drive</td>
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<tr>
<td>4</td>
<td>Closure of the El Portal Drive westbound on-ramp</td>
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<tr>
<td>5</td>
<td>Relocation of isolated El Portal Drive westbound on-ramp</td>
</tr>
<tr>
<td>6</td>
<td>Relocation of El Portal Drive</td>
</tr>
<tr>
<td>7</td>
<td>Relocation of McBryde Avenue off-ramp to Solano Avenue</td>
</tr>
<tr>
<td>8</td>
<td>Addition of an auxiliary lane on westbound I-80</td>
</tr>
<tr>
<td>9</td>
<td>Frontage road</td>
</tr>
<tr>
<td>10</td>
<td>Braided ramp at McBryde Avenue</td>
</tr>
</tbody>
</table>

The concepts listed in Table 1-4 include ramp approach and configuration changes at the I-80/El Portal Drive and I-80/McBryde Avenue interchanges. Each of the ten concepts was evaluated for ability to meet acceptable traffic operating conditions and feasibility. Concepts 5 and 9 were identified as the most feasible and beneficial options that, combined with the refined Alternatives 1 and 2, would best meet the purpose and need of the project. Alternatives 1 and 2 combined with design concepts 5 and 9 are therefore evaluated in this IS/EA.

A value analysis (VA) study was performed for the project in September 2007 (Advantage Management Solutions 2007). The VA study analyzed conceptual plans to determine whether phased short-term solutions could reduce project costs without compromising the purpose and need or encroaching on design constraints such as the China Slide area. The study resulted in the development of three VA Alternatives: a separate frontage road from San Pablo Dam Road (VA Alternative 1.0), a flyover tie-in ramp from westbound San Pablo Dam Road to westbound I-80 (VA Alternative 2.0), and modification of the I-80 ramps at El Portal Drive (VA Alternative 3.0). The VA team determined that VA Alternative 1.0 would require a significant amount of additional right-of-way and related costs, VA Alternative 2.0 would cross the Hayward Fault, and VA Alternative 3.0 would increase traffic at the San Pablo Dam Road on- and off-ramps and create possible vertical
clearance problems at the I-80 westbound intersection. All of the VA alternatives were considered unacceptable and were rejected.

### 1.7. Identification of a Preferred Alternative

Alternative 2, the Tight Diamond Alternative, was identified as the preferred alternative by the Project Development Team on October 22, 2009, after considering comments received from State, regional, and local agencies and the public. The following summarizes the reasons for identifying Alternative 2 over Alternative 1:

- Improvements to traffic conditions are greater. The preferred alternative design will skew the alignment of the San Pablo Dam Road overcrossing with respect to the freeway (see Figure 1-7). This allows for relocation of the Amador Street/San Pablo Dam Road intersection 410 feet to the north, separating this intersection well away from the intersection of the eastbound I-80 on- and off-ramps with San Pablo Dam Road. With this change, the existing five-legged intersection at the San Pablo Dam Road/eastbound I-80 on- and off-ramps/Amador Street becomes a standard four-leg intersection, and improves signal timing (less delay). The LOS at the Amador Street/San Pablo Dam Road intersection is F in the AM and PM peak period for the No Build, and LOS D in the AM and PM peak period for Alternative 1. With the preferred alternative, it will improve to a better operating LOS of C for the AM and PM peak periods. This improvement is consistent with the project’s purpose and need of reducing traffic congestion at the interchange;

- A left turn from westbound San Pablo Dam Road to Amador Street will be allowed. This movement is not permitted with the No Build Alternative and cannot be achieved with Alternative 1 without increased delay at the signal; and

- Encroachment into the China Slide area east of the I-80/San Pablo Dam Road Interchange is minimized. The China Slide refers to the unstable slope directly east of and above I-80/San Pablo Dam Road. Grading into the China Slide in the past has resulted in movement of the slope. The No Build Alternative and Alternative 1 would leave San Pablo Dam Road in its same location with respect to the toe of the China Slide, while the preferred alternative allows portions of Amador Street to be realigned further away from the China Slide area.
1.8. Context Sensitive Solutions

The Department’s planning, design, operation, and maintenance of transportation systems include consideration of “context sensitive solutions” (CSS). The CSS process is intended to integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. During public review of the proposed project (see Section 3.2), several comments included the request to improve landscaping in the area, provide trees, and use native plant species. These will be considered during development of the project’s landscape design.

One modification was made to the project design as a direct result of community input: the design of the pedestrian overcrossing at Riverside Elementary School. The existing structure crosses the freeway but ends on the west side of Amador Street, requiring students and other pedestrians to cross Amador Street. The school administration requested that the pedestrian overcrossing extend past Amador Street into the Riverside Elementary School grounds to improve safety. The overcrossing design was modified accordingly.

1.9. Permits and Approvals Needed

Table 1-5 summarizes the regulatory permits and approvals needed for the project.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit or Approval</th>
<th>Status or Planned Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Fish and Wildlife Service (USFWS)</td>
<td>Consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act.</td>
<td>● California red-legged frog assessment submitted to USFWS in November 2007. Per USFWS, species presence or absence in project area cannot be determined without protocol-level surveys. Department determined that surveys, if completed, might still prove inconclusive with respect to determination of species presence. ● Biological Assessment prepared for USFWS and submitted to USFWS 9-10-08. ● Consultation with USFWS has been completed and a Biological Opinion was issued in September 2009.</td>
</tr>
<tr>
<td>National Marine Fisheries Service (NOAA Fisheries)</td>
<td>Consultation for threatened and endangered species under Section 7 of the Federal Endangered Species Act.</td>
<td>● Consultation initiated in July 2007 with submittal of a Biological Assessment to NOAA Fisheries on 9-9-08. No comments received, and consultation is concluded.</td>
</tr>
</tbody>
</table>
Table 1-5  Regulatory Permits and Approvals

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit or Approval</th>
<th>Status or Planned Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Army Corps of Engineers (USACE), San Francisco District</td>
<td>None.</td>
<td>● Section 404 waters of the United States at San Pablo and Wildcat creeks are avoided by the project design. The project will include fencing and Environmentally Sensitive Area designation to prevent any construction or indirect effects within the lower portions of creek channels that might be jurisdictional waters.</td>
</tr>
<tr>
<td>State Historic Preservation Officer (SHPO)</td>
<td>Concurrence on finding that the project does not affect historic resources and Section 106 requirements are satisfied.</td>
<td>● SHPO concurred with the findings of the cultural resources studies on 10-2-08.</td>
</tr>
<tr>
<td>California Department of Fish and Game (CDFG)</td>
<td>1602 Agreement for Lake and Streambed Alteration Permit.</td>
<td>● Permit application will be submitted during final design phase.</td>
</tr>
<tr>
<td>San Francisco Bay Regional Water Quality Control Board (RWQCB)</td>
<td>Section 402 Water Quality Certification and National Pollutant Discharge Elimination System (NPDES) approval for work greater than one acre. Waste Discharge Requirements (WDRs) may be required.</td>
<td>● Permit application will be submitted during final design phase.</td>
</tr>
<tr>
<td>City of San Pablo</td>
<td>Coordination with the City</td>
<td>● Various phases of project development during final design phase.</td>
</tr>
<tr>
<td>Contra Costa County</td>
<td>Drainage Permit required for drainage facilities and water course changes in unincorporated County land, and encroachment permit required for realignment of El Portal Road.</td>
<td>● Permit requirement and application will be determined and submitted during final design phase.</td>
</tr>
</tbody>
</table>
Chapter 2. Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter addresses the environmental impacts of the proposed project alternatives as well as identified avoidance and mitigation measures that will be carried out as part of the project.

The environmental resource discussions presented in this chapter are based on the technical studies cited at the beginning of each discussion and listed in Chapter 7. An evaluation of the proposed project consistent with CEQA checklist criteria is provided in Appendix B. Avoidance, minimization, and/or mitigation measures for each of the environmental resource areas are discussed in the following sections and summarized in Appendix F.

As part of the scoping and environmental analysis for the project, the following environmental issues were considered but no adverse impacts were identified. Consequently, these issues will not be discussed further.

- Farmlands and Timberlands – No farmlands or timberlands exist in or near the project limits.
- Paleontology – A document review conducted for the area of the proposed project found no indication that paleontological resources are present. No evidence of paleontological resources was observed during field studies along the project alignment.
Human Environment

2.1. Land Use

The following discussion is based on the Community Impact Assessment completed for the proposed project (URS 2008b).

2.1.1. Existing and Future Land Use

Contra Costa County’s land uses range from urban to rural. In the West and Central County areas, including the study area, primary uses in suburban cities and towns are residential, commercial, and industrial (Figure 2.1-1). The I-80 right-of-way and St. Joseph Cemetery to the west of I-80 near the San Pablo Dam Road Interchange are designated for public/quasi-public (County) and institutional (San Pablo) uses. Single-family and multi-family residential uses are present in unincorporated Contra Costa County at the north end of the study area, in San Pablo in the vicinity of the I-80/San Pablo Dam Road Interchange and McBryde Avenue, and in Richmond around McBryde Avenue. Commercial land uses are concentrated around the I-80/San Pablo Dam Road Interchange and San Pablo Avenue in the study area, although commercial uses are also present along El Portal Drive west of the I-80 westbound on-ramp. Institutional uses include Riverside Elementary School on Amador Street.

2.1.1.1. Commute/Travel Patterns and Land Use Planning

I-80 is a major access route for interstate and intrastate traffic traveling to and from the Bay Area, as well as a major commuter route within the East Bay and between the East Bay and San Francisco. The I-80/San Pablo Dam Road Interchange provides regional and local access to I-80 from San Pablo Dam Road, San Pablo Avenue, and Amador Street in the City of San Pablo, serving as a gateway to the City of San Pablo from other communities in the East Bay.

Land use patterns greatly influence the movement of people. The distance people must travel to work and shop, and the type of transport they use, affects the transportation networks of cities and larger metropolitan areas, including within the study area. Lengthening commute time and increasing congestion throughout much of California has brought about the concept of a “jobs/housing balance” (Caltrans 1997a). The essence of this concept is to encourage people to live as close to where they work as possible.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

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

Contra Costa County has adopted regional measures to help address the Bay Area’s traffic congestion through land use planning, the intra-regional Bay Area Smart Growth Strategy, and the Regional Livability Footprint Project. Planning measures have included adoption of an urban limit line and voter passage of Measure C. The measure, known as Contra Costa County’s “65/35 Land Preservation Standard,” requires not less than 65 percent of land be preserved for parks, open space, agriculture, wetlands, and other nonurban uses (Contra Costa County 1990). The Smart Growth strategy addresses some land use and transportation policy solutions such as infill and higher-density, mixed-use development in urban core and older suburban neighborhoods that are near or adjacent to public transit. Pedestrian and bicycle-friendly neighborhoods are encouraged, as is development that addresses the need for a balanced mix of employment centers and appropriately priced housing. In 2004, county voters adopted Measure J, extending an existing half-cent sales tax for transportation project funding, but tied the funding to provisions that local agencies also adopt urban growth boundaries.

According to Association of Bay Area Government (ABAG) data on housing and jobs, the City of San Pablo has a job/housing ratio of 0.60 in 2007. This indicates that a number of residents must commute outside of the City to jobs. ABAG (2007) projects that this job/housing ratio will remain relatively constant into the future, reaching 0.64 by 2014.

2.1.1.2. Housing

The study area has a total of 3,690 housing units. Of these, 3,550 units were occupied in 2000, representing an average vacancy rate of 3.7 percent. According to the City of San Pablo, housing is split nearly 50/50 between owner occupied and rental units (CityData.com n.d.).

The median home age in San Pablo is 38 years. The median home value was $488,200 in spring 2008. At this same time, 353 residential units were for sale in the City, of which about 70 percent (267) were single-family homes. Other residential units for sale included condominiums (49), multi-family residential units (25), and mobile homes (12) (Yahoo Real Estate 2008).

Because the City of San Pablo is an older developed city, most of the new housing stock in the future will come from redevelopment of land currently in use.
2.1.1.3. Development Trends

One of the community themes in the 1996 City of San Pablo General Plan (City of San Pablo 1996) is to: “Consolidate commercial uses into more competitive, better designed locations with integrated parking systems and a variety of high-quality social and gathering places at commercial centers to mature beyond the strip commercial development where the community can celebrate their community life.” This led to the creation of special districts in the City, with one of the goals being to make more use of sites with immediate freeway access.

The area to the west of I-80 is considered the Gateway District. This area is the focus of San Pablo’s efforts to attract more regional commercial opportunities. The San Pablo Towne Center at 2499 San Pablo Dam Road is one of the focal points of the Gateway District. Another recent development in the district is the Casino San Pablo (13255 San Pablo Avenue), which is a regional draw for entertainment dollars. Recently completed and planned projects within about three miles of the project show a mix of multi-family and single-family homes, and infrastructure and park projects (Table 2.1-1). An example is the Abella Paseo project, completed in 2006 on a 36-acre site that had previously been a shopping center. The site now contains 292 market-value units on 21 acres that include single-family homes, townhomes, and condominiums. No major projects were identified in the study area within unincorporated Contra Costa County.

2.1.2. Consistency with State, Regional, and Local Plans and Programs

2.1.2.1. Transportation Plans/Programs

The project’s status with respect to programming in the most recent Regional Transportation Plan and Transportation Improvement Program is described at the beginning of Chapter 1. Other local funding is described in Section 1.1.2.

2.1.2.2. Contra Costa County 2005–2020 General Plan

The Contra Costa County 2005–2020 General Plan establishes growth management policies that are intended to optimize land use and control urban sprawl (Contra Costa County 2005). The Plan includes urban and nonurban land uses within cities as well as unincorporated areas. The project falls entirely within developed areas of Contra Costa County. The project limits and surrounding community areas are well within the County’s urban limit line.
### Table 2.1-1 Planned or Recently Completed Projects in the Study Area

<table>
<thead>
<tr>
<th>Name</th>
<th>Distance from Project (miles)</th>
<th>Jurisdiction</th>
<th>Status</th>
<th>Proposed Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abella Paseo</td>
<td>0.75</td>
<td>City of San Pablo</td>
<td>Completed 2006</td>
<td>Master Planned Community</td>
</tr>
<tr>
<td>Amador to San Pablo Dam Road Sidewalk Gap Closure</td>
<td>Overlaps</td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Pedestrian use</td>
</tr>
<tr>
<td>College Center Shops</td>
<td>0.80</td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Mixed commercial, service</td>
</tr>
<tr>
<td>Caprigo Construction</td>
<td>1.47</td>
<td>City of San Pablo</td>
<td>Completed</td>
<td>Mixed use</td>
</tr>
<tr>
<td>Contra Costa College Improvements Implementation Project</td>
<td>0.7</td>
<td>Contra Costa County</td>
<td>Planned/proposed; date not known</td>
<td>Campus plan improvements</td>
</tr>
<tr>
<td>Davis Park Master Plan</td>
<td>1.2</td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Adopt and implement park master plan improvements</td>
</tr>
<tr>
<td>El Paseo Family Apartments (Brookside Drive Family Housing)</td>
<td>1.30</td>
<td>City of San Pablo</td>
<td>Expected completion mid-2008</td>
<td>Affordable housing</td>
</tr>
<tr>
<td>El Portal Drive Gateway Streetscape</td>
<td>Overlaps</td>
<td>City of San Pablo</td>
<td>Expected completion in 2009</td>
<td>Pedestrian, landscaping, utility, and lighting improvements to El Portal Drive from Church Lane to I-80</td>
</tr>
<tr>
<td>El Portal School Site</td>
<td></td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Institutional, recreational park</td>
</tr>
<tr>
<td>Forest Green Estates</td>
<td>2.67</td>
<td>City of El Sobrante</td>
<td>Planned/proposed; date not known</td>
<td>Housing</td>
</tr>
<tr>
<td>Road 20/El Portal Drive Intersection Reconfiguration</td>
<td>0.5</td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Road 20 and El Portal Drive intersection will be reconfigured to eliminate the single lane from Road 20 to Church Lane</td>
</tr>
<tr>
<td>Rumrill Boulevard Bridge Replacement Project (PW-442)</td>
<td>1.3</td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Replace existing bridge over San Pablo Creek (1.3 miles downstream of I-80)</td>
</tr>
<tr>
<td>San Pablo Dam Seismic Upgrade</td>
<td>3.5</td>
<td>East Bay Municipal Utility District, in Contra Costa County</td>
<td>Construction began late 2008</td>
<td>Seismic upgrade of existing dam</td>
</tr>
<tr>
<td>Wanlass Park Improvements Project</td>
<td>1.1</td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Construction of park and educational center</td>
</tr>
</tbody>
</table>
Table 2.1-1 Planned or Recently Completed Projects in the Study Area

<table>
<thead>
<tr>
<th>Name</th>
<th>Distance from Project (miles)</th>
<th>Jurisdiction</th>
<th>Status</th>
<th>Proposed Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildcat Creek Trail / Davis Park to 23rd Street</td>
<td>0.9</td>
<td>City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Construction of bike/pedestrian trail on north bank of Wildcat Creek</td>
</tr>
<tr>
<td>Wildcat / San Pablo Creeks Flood Control</td>
<td>Not defined</td>
<td>Mostly within City of San Pablo</td>
<td>Planned/proposed; date not known</td>
<td>Army Corps of Engineers completed flood improvements downstream of San Pablo. Second phase for channel improvements within San Pablo planned but not scheduled.</td>
</tr>
</tbody>
</table>

Source: City of San Pablo 2008b and Governor’s Office of Planning and Research, CEQAnet, accessed January 2009

2.1.2.3. San Pablo General Plan

As the City of San Pablo is an established community, much of the planning focus set forth in the General Plan is not on new growth but on maintaining and improving existing development. This translates into improving the physical environment with overarching community themes including improving neighborhood livability; consolidating commercial uses; establishing better pedestrian, transit, and traffic circulation; and replacing blighted development (City of San Pablo 1996).

The land use designations within the study area are consistent with local and regional long-term plans and goals. The San Pablo General Plan promotes the creation of districts within the city. Two of these districts abut San Pablo Dam Road on either side of I-80: the San Pablo Dam Road District to the east, and the Gateway District to the west. Land use policies in these districts encourage optimizing the use of freeway frontage sites, recognizing the contiguous relationship of the Gateway District to the regional transportation route (I-80), improving freeway accessibility to and from the San Pablo Dam Road District, and improving pedestrian access to San Pablo Dam Road.

2.1.2.4. Parks and Recreational Facilities

There are two large parks in the project region: Alvarado Park and Wildcat Canyon Regional Park. Alvarado Park is in the hills east of I-80 and Riverside Elementary School, and lies in the northern end of Wildcat Canyon Regional Park. The East Bay Regional Park District took over Alvarado Park from the City of Richmond in 1985. Most of the structures that once existed in this park area are gone, but extensive
stonework (walls, light stands, and an arch bridge across Wildcat Creek) still exists. Most of the stonework was installed as part of a Works Progress Administration project during the Great Depression. As a result, Alvarado Park is included in the National Register of Historic Places. The park contains picnic and barbecue facilities and a playground.

Wildcat Canyon Regional Park comprises 2,430 acres along the Wildcat Creek watershed. The park contains an extensive trail system connecting to Tilden Regional Park. The East Bay Regional Park District plans to extend a trail along Wildcat Creek to the San Francisco Bay but has not yet set a date for construction. This park is not in the project area but is included due to its proximity to Alvarado Park and its potential to be connected by a new trail through the project area.

2.1.2.5. Schools and Public Services

The study area is in the West Contra Costa Unified School District, which serves more than 31,000 students. Riverside Elementary School (preschool through 6th grade) is located at 1300 Amador Street in San Pablo, directly east of I-80 within the project limits. Amador Street is the primary access to and from Riverside Elementary School. Children accessing the school from west of I-80 use an existing pedestrian crossing over I-80, which connects the end of Riverside Avenue on the west side of I-80 to Amador Street (across from the school). Vista High School is northwest of Rollingwood Drive and El Portal Drive, about 0.25 mile outside of the project limits.

2.1.3. Environmental Consequences

2.1.3.1. Land Use and Planning

The project is consistent with local and regional plans. It would serve an existing developed urban area, and would not involve unused rural land or expand growth through changes in new transportation capacity or access (see Section 2.2.2). The project design has been developed in coordination with the cities of San Pablo and Richmond and with Contra Costa County. The project area is not within the jurisdiction of a regional conservation plan.

2.1.3.2. Parks and Recreational Facilities

The project would not affect Alvarado Park or Wildcat Canyon Regional Park. No formal trails or recreational facilities are within or near the proposed project. There are no formal trails along Wildcat Creek in the vicinity of the west side of I-80, and therefore construction of the frontage road structure over the creek would not interfere directly or indirectly with park use.
2.1.3.3. Schools

The project would reconstruct the existing pedestrian overcrossing of I-80 between San Pablo Dam Road and McBryde Avenue. This overcrossing connects Riverside Elementary School (located on Amador Street, at Riverside Avenue), adjacent residential neighborhoods, and Wildcat Canyon Regional Park on the east side of I-80 to Riverside Avenue on the west side of I-80. The overcrossing does not provide access across Amador Street, a busy street that students have to cross to reach Riverside Elementary School. The project would reconstruct the overcrossing in approximately its current location as a longer structure to cross the new frontage road and Amador Street on the east side of I-80. On the east side of I-80 and Amador Street, a permanent easement or transfer agreement of a portion of the school parking lot at Riverside Avenue and Amador Street would be required for a spiral or switchbacked pedestrian ramp for the new overcrossing. Informal consultation between CCTA and the West Contra Costa Unified School District indicates this option would be a favorable safety improvement (see correspondence in Appendix I from West Contra Costa Unified School District, October 1, 2008). The Department and CCTA will work with the West Contra Costa Unified School District to obtain the easement or agreement.

Reconstruction of the pedestrian overcrossing would require temporary closure of the existing structure, which would affect access to and from the school and the neighborhood to the west of I-80.

2.1.4. Avoidance, Minimization, and/or Mitigation Measures

Reconstruction of the proposed pedestrian overcrossing will be timed in consultation with the school district to avoid school sessions to the extent possible, although the school is in session throughout most of the year. Notice well in advance of construction will be necessary to adequately inform school staff and parents of the construction plans and timing. The design of the overcrossing will require that the school can lock a gate preventing entrance to school property while still allowing continued public access between the overcrossing landing and Amador Street. Reconstruction of the overcrossing prior to reconstruction of the I-80/San Pablo Dam Road Interchange will be investigated and considered during final design and planning for construction staging.
2.2. Growth

This section is based on the Community Impact Assessment (URS 2008b) prepared for the proposed project.

2.2.1. Regulatory Setting

The Council on Environmental Quality regulations, which implement 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 Council on Environmental Quality regulations (40 Code of Federal Regulations [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.

CEQA also requires the analysis of a project’s potential to induce growth. Section 15126.2(d) of the CEQA guidelines 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.”

2.2.2. Growth Inducement Assessment

Growth, as used in this report, refers to the development of the built environment as communities respond to the demands of an increasing population and/or business environment. Growth trends fluctuate over periods of low and high activity depending on factors such as policy, zoning, economy, and infrastructure that either encourage or discourage it. The nature of a development project can be described in terms of whether it might influence growth, and if so, in what way or magnitude. Growth inducement may also be discussed in the context of whether a project would tend to create potential for further development beyond the project itself, or is a project that is planned as a response to existing or foreseeable demands of the community served. This distinction generally explains the intent and purpose of a proposed project. This discussion of growth addresses the compatibility of the proposed project with the planning documents that direct development activities (in this case, the Contra Costa County General Plan and the City of San Pablo General Plan) and the potential for the project to contribute to growth.
I-80 and the San Pablo Dam Road Interchange no longer provide the capacity for the volume of traffic using these facilities. The existing level of service (LOS) at the intersection of the eastbound I-80 on- and off-ramps, San Pablo Dam Road, and Amador Street is F in the morning and afternoon/evening peak commute hours. It is forecasted to continue at this operating condition through 2035. At the intersection of the westbound I-80 off-ramp and San Pablo Dam Road, the existing LOS is F during the morning peak hours and D during the afternoon/evening peak hours. These traffic volumes create long queues on San Pablo Dam Road and Amador Street. A recent Caltrans study on I-80 corridor traffic operations showed that on the I-80 mainline traffic substantially slows down at the San Pablo Dam Road Interchange. On westbound I-80, traffic slowed to 12 mph during the morning peak hours. In the eastbound direction, traffic slowed to 22 mph during the afternoon/evening peak hours.

The proposed project is designed to improve traffic operations at the San Pablo Dam Road Interchange to relieve congestion that backs up onto local streets and to improve traffic operations on the I-80 mainline in the project area. This would help serve the growth in traffic that has taken place in the region over the past four decades since I-80 was originally built as well as planned growth in the region.

The City of San Pablo’s land use policies are the primary land use controls that determine growth in the project area. The proposed project is consistent with the City’s General Plan. That plan considers effective and efficient roadways an important goal for the City and specifically targets the area serviced by the I-80/San Pablo Dam Road Interchange (District 1: the Gateway District) as an Entertainment/Regional Serving District requiring an adequate roadway network to carry large volumes of traffic (City of San Pablo 1996). Additionally, General Plan Policy LU 8.4 calls for prioritized redevelopment and consolidation of District parcels fronting I-80 to create an attractive and enticing freeway frontage.

The following factors are also considered in the determination of whether this project would induce growth:
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

- The project would not substantially change accessibility between the existing freeway and the local communities. The El Portal Drive, San Pablo Dam Road, and McBryde Avenue interchanges on I-80 already exist and are heavily used by traffic. The project improvements would not create any new access to communities or lands that are not already served by the freeway and local roads.
- The project is designed to improve the operations of the existing interchanges within the project limits and reduce delays, by specifically addressing operational constraints inherent within the current facility.
- Lands served by the freeway and interchanges within the project limits are already highly urbanized or unsuitable for development, and no reasonably foreseeable growth is anticipated with the exception of the planned or already completed developments discussed in Section 2.1.1.3. The west side of I-80 in the study area is largely built-out with housing, commercial uses, and Saint Joseph Cemetery. The east side is also developed with housing, Riverside Elementary School, recreational vehicle storage areas (on land already owned by the Department), and commercial uses. Undeveloped land east of the I-80/San Pablo Dam Road Interchange is on steep, slide-prone parcels that were acquired by the Department as a result of previous landslide activity and are not planned for development.

Therefore, the proposed project would accommodate existing and planned growth but would not induce growth.

2.3. Community Impacts

This section is based on the Community Impact Assessment (URS 2008b) prepared for the proposed project.

2.3.1. Community Character and Cohesion

2.3.1.1. Regulatory Setting

NEPA established that the Federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 USC 4331[b][2]). 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.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

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.

2.3.1.2. Affected Environment

Population and Community Characteristics

The project is primarily within the City of San Pablo and includes an area of unincorporated Contra Costa County. El Portal Drive generally marks the boundary between San Pablo and unincorporated Contra Costa County. At the western limit of the project, McBryde Avenue is the border between the cities of San Pablo and Richmond.

Neighborhoods in or near the project include the Rollingwood residential area along and to the west of El Portal Drive, and the East Richmond Heights residential neighborhood in the hills east of and above McBryde Avenue. San Pablo Avenue and San Pablo Dam Road support commercial retail and business districts.

Census Block Groups that most closely correspond to the project area were examined, and population and community characteristics of the groups were compared with the totals for the City of San Pablo. The community impacts study area and the Block Groups evaluated are shown in Figure 2.3-1. The total city population in 2007 was estimated to be 30,965 with the study area representing about 10,300, or 31 percent of the total. The largest age group in the city is 35–64 years (31 percent). In general, the age of the study area population reflects the composition of San Pablo. However, Census Tract 3690.01 Block Group 2, which is west of I-80 extending south from El Portal Drive to Evans Avenue, has about three times the amount of senior citizens than the San Pablo average. The ethnic composition of the city in 2000 was predominantly Hispanic or Latino (44 percent), followed by people who identified themselves as white (32 percent), and African Americans (18 percent). The study area overall has a greater percentage of whites and African Americans than the population of San Pablo, and roughly half the percentage of Hispanic or Latino population of the city as a whole.
BACK OF FIGURE 2.3-1
The 2000 median household income for the City of San Pablo was $37,184, with 18 percent living below the poverty level. In the study area, slightly over ten percent of residents were below the poverty level. The census block in the center of the study area, nearest the I-80/San Pablo Dam Road Interchange, represents the highest overall population, highest elder population, and lowest median household income.

**Employment and Economics**

On the west side of the I-80/San Pablo Dam Road Interchange is the Gateway District, which is the city’s commercial center and includes Casino San Pablo on San Pablo Avenue. Commercial uses include dine-in and drive-through restaurants, highway retail, and lodging. Residential uses extend northward from the Gateway District to the north end of the study area. The area south of the Gateway District is residential. On the east side of the interchange, the southern portion of the study area is mixed residential and institutional (Riverside Elementary School) with some open space. The area north of the interchange is includes a commercial mobile home storage and sales business located on Department right-of-way.

**Community Services and Facilities**

Community services including parks and schools are described in Section 2.1.2. Hospitals and emergency services are described in Section 2.4.1.

2.3.1.3. **Environmental Consequences**

The project has the potential to affect community character and cohesiveness in the study area. In general, direct impacts to the community would result from removal of homes and businesses and from changes in access between I-80 and the community. The following summarizes these changes by location.

**El Portal Drive**

The project would modify existing access to and from I-80 by relocating the existing El Portal Drive on-ramp by approximately 2,000 feet to east. The Rollingwood neighborhood is generally west of El Portal Drive. Two residences on Rollingwood Drive, east of Judith Court, would be acquired to allow for realignment of El Portal Drive for the proposed relocated westbound on-ramp. The realignment of the road and acquisition of these two residences would not divide or isolate this community, as the affected parcels are on the eastern edge of the neighborhood at El Portal Drive and I-80. Remaining right-of-way impacts in this neighborhood would consist of partial acquisition of parcels to accommodate realignment of the El Portal Drive, but the existing residential use of each property would remain unchanged.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Humboldt Avenue and Riverside Avenue
The project would require acquisition of three residences located between Humboldt Avenue and I-80 as well as an apartment building and a self-storage business that front I-80 at the terminus of Riverside Avenue. These acquisitions would take place along the edge of this mixed residential and commercial area where it borders the west side of I-80. The existing soundwall on the freeway on-ramps and off-ramps in this area would be reconstructed to the west to the new edge of pavement. Local traffic circulation in this neighborhood would be otherwise unchanged; Humboldt Avenue and Riverside Avenue would remain in their existing locations and provide the same access to Contra Costa Avenue. The changes would not divide or isolate the remaining residences or neighborhood. Changes to the pedestrian overcrossing at Riverside Avenue are discussed separately below.

Proposed Frontage Road and McBryde Avenue
The project would modify access between I-80 and local roads with the addition of a westbound frontage road between San Pablo Dam Road and McBryde Avenue. The frontage road would replace the existing freeway off-ramp connection to McBryde Avenue. Westbound I-80 traffic that currently exits the freeway at McBryde Avenue would exit at a new auxiliary lane and off-ramp east of San Pablo Dam Road, travel through a signalized intersection at San Pablo Dam Road, and then continue to McBryde Avenue. Signage on the freeway would direct westbound drivers headed toward McBryde Avenue to exit at San Pablo Dam Road. Exiting I-80 at the longer freeway auxiliary lane would allow drivers heading to San Pablo Dam Road or McBryde Avenue more time to change lanes. Access between the freeway and McBryde Avenue would therefore remain available, and this change in circulation would not affect the neighborhoods that rely on the existing McBryde Avenue off-ramp.

Pedestrian Access
An existing pedestrian overcrossing connects the two sides of Riverside Avenue, providing access between Riverside Elementary School and the nearby residential area off Amador Street east of I-80 to neighborhoods west of I-80. The overcrossing also provides access across I-80 to the undeveloped open space area that borders Wildcat Creek. The new pedestrian overcrossing would provide the same access to these neighborhoods and land uses, but also extend across Amador Street on the east side of I-80, allowing students and other pedestrians to avoid Amador Street traffic and providing a safer and more convenient crossing of this busy local road. This would improve public access between the school and the neighborhood on the west side of I-80. The existing overcrossing would have to be temporarily closed during construction.
Pedestrian access would also be improved by completing sidewalks and crosswalks on both sides of San Pablo Dam Road, as described in Section 1.3.1.1 (Pedestrian and Bicycle Facilities).

### 2.3.1.4. Avoidance, Minimization, or Mitigation Measures

Potential impacts to community access and circulation are avoided by including replacement of the pedestrian overcrossing in the project, and inclusion of sidewalks across the I-80/San Pablo Dam Road Interchange structure. Temporary pedestrian access impacts during construction will be minimized by the measures outlined in Section 2.1.4.

### 2.3.2. Relocations

#### 2.3.2.1. Regulatory Setting

The Department’s 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 will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Appendix D provides 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.). The Department’s Title VI Policy Statement is included in Appendix C.

#### 2.3.2.2. Affected Environment

The project would require acquisition of or temporary construction easements at some parcels adjacent to the project. Both build alternatives would have the same right-of-way impacts. The affected properties are located on or adjacent to:

- El Portal Drive (the rear yards face El Portal Drive, but the street addresses are on Rollingwood Drive, Judith Court, and Avon Lane). The affected neighborhood consists of single-family homes.
- San Pablo Dam Road, west of I-80. The affected parcels are private commercial and retail businesses with parking lots and entrances fronting San Pablo Dam Road.
- San Pablo Dam Road, east of I-80. The affected parcels are leased from the Department by a private business that stores and rents recreational vehicles.
- Humboldt Avenue, Riverside Avenue, and Joel Court. These are single-family and multifamily homes, and a private commercial self-storage business.
Amador Street. The affected property is part of a parking lot at Riverside Elementary School.

### 2.3.2.3. Environmental Consequences

The potentially affected parcels, based on the preliminary design, are shown in Figure 2.3-2 and listed in Table 2.3-1. The following summarizes the potential property effects of the proposed project.

**Impacts to Households**

In the El Portal Drive area of the Rollingwood neighborhood, two single-family homes would be acquired, and portions of parcels would be acquired from six other single-family homes.

On Humboldt Drive and Riverside Avenue, four single-family, one triplex, and one multifamily residential structure would be fully acquired. A temporary construction easement would be necessary at Joel Court, but no homes or relocations are required at that location.

Specific characteristics of the proposed displaced families with respect to special relocation needs are not known at this stage of project development. Census information at the Block Group level (the most specific available from the U.S. Census) indicates that the neighborhoods in the vicinity of El Portal Drive have a lower percent of minority residents than the City of San Pablo average, and an average family size of about 3.9 persons per household. The Block Group that contains Humboldt Drive and Riverside Avenue (and extends out to San Pablo Dam Road) has a higher-than-average proportion of minority residents than San Pablo and an average family household size of 4.6 persons. While income is generally slightly higher and poverty levels slightly lower in the study area than in the City of San Pablo, the average poverty level for the study area population is about 14 percent, and therefore some of the displaced residents can be expected to be low income.4

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4 The poverty threshold for a family of four determined by the U.S. Department of Health and Human Services was $17,603 in 2000, corresponding to the year 2000 Census Data for income statistics used in this report, and $21,203 in 2007, the latest year available (http://www.census.gov/Press-Release/www/releases/archives/income_wealth/012528.html).
Potentially Affected Parcels

I-80 / San Pablo Dam Road Interchange Improvement

Figure 2.3-2

26815671 April 2008

URS Corp., Oakland, J. Owen

Full or partial property acquisition
Temporary construction easement
Lease of Caltrans property to private business to be terminated
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Back of figure
## Table 2.3-1 Properties Potentially Affected by the Project

<table>
<thead>
<tr>
<th>Parcel ID</th>
<th>APN#</th>
<th>Street Address</th>
<th>Type of Property</th>
<th>Potential Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>416013024</td>
<td>3168 Rollingwood, San Pablo</td>
<td>Single Family</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>B</td>
<td>416013020</td>
<td>3160 Rollingwood, San Pablo</td>
<td>Single Family</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>C</td>
<td>416013023</td>
<td>3152 Rollingwood, San Pablo</td>
<td>Single Family</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>D</td>
<td>416013021</td>
<td>3058 Judith Court, San Pablo</td>
<td>Single Family</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>D2</td>
<td>416013007</td>
<td>El Portal Drive</td>
<td>Unoccupied</td>
<td>Temporary Construction Easement</td>
</tr>
<tr>
<td>E</td>
<td>416022008</td>
<td>3040 Avon Lane, San Pablo</td>
<td>Single Family</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>F</td>
<td>416022007</td>
<td>3036 Avon Lane, San Pablo</td>
<td>Single Family</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>G</td>
<td>416022006</td>
<td>3030 Avon Lane, San Pablo</td>
<td>Single Family</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>H</td>
<td>416022005</td>
<td>3024 Avon Lane, San Pablo</td>
<td>Single Family</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>H2</td>
<td>416022004</td>
<td>3018 Avon Lane, San Pablo</td>
<td>Single Family</td>
<td>Temporary Construction Easement</td>
</tr>
<tr>
<td>I</td>
<td>417290002</td>
<td>40 San Pablo Town Center, San Pablo</td>
<td>Commercial</td>
<td>Temporary Construction Easement</td>
</tr>
<tr>
<td>J</td>
<td>417290003</td>
<td>50 San Pablo Town Center, San Pablo</td>
<td>Commercial / Retail Center</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>K</td>
<td>41729004</td>
<td>Driveway to shopping center</td>
<td>Commercial / Retail</td>
<td>Temporary Construction Easement</td>
</tr>
<tr>
<td>L</td>
<td>417042034</td>
<td>2500 San Pablo Dam Road, San Pablo</td>
<td>Gas Station/Carwash</td>
<td>Temporary Construction Easement</td>
</tr>
<tr>
<td>M</td>
<td>417042033</td>
<td>2526 San Pablo Dam Road, San Pablo</td>
<td>Commercial / Restaurant</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>N</td>
<td>417041008</td>
<td>Humboldt Avenue, San Pablo</td>
<td>Single Family</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>O</td>
<td>417041002</td>
<td>1424 Humboldt Avenue, San Pablo</td>
<td>Single Family</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>P</td>
<td>417041005</td>
<td>1422 Humboldt Avenue, San Pablo</td>
<td>Triplex</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>Q</td>
<td>417041006</td>
<td>5303 Riverside Avenue, San Pablo</td>
<td>Single Family</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>R</td>
<td>417043008</td>
<td>5296 Riverside Avenue, San Pablo</td>
<td>Multi-Family</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>S</td>
<td>417043009</td>
<td>5310 Riverside Avenue, San Pablo</td>
<td>Single Family</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>T</td>
<td>418030014</td>
<td>1300 Amador Street, San Pablo</td>
<td>School Parking Lot</td>
<td>Partial Acquisition</td>
</tr>
<tr>
<td>U</td>
<td>417030014</td>
<td>5310 Riverside Avenue, San Pablo</td>
<td>Commercial/ Self-Storage</td>
<td>Full Acquisition</td>
</tr>
<tr>
<td>Owned by Caltrans</td>
<td>419032006, 419032009, 419031002, 419032005, 419032008, 419032007, 420055001</td>
<td>San Pablo Dam Road, San Pablo</td>
<td>Government Owned/Institutional</td>
<td>Caltrans right-of-way. Existing business has lease that will not be renewed.</td>
</tr>
</tbody>
</table>

**Source:** Contra Costa County Assessor’s Office and field visits

**Note:** This is only a preliminary assessment. Some partial acquisitions could become full acquisitions, or no acquisition at all. The final construction alternative selection and final construction details will determine the final acquisitions.
The affected residences that may be displaced represent 0.2 percent of the total housing units available in San Pablo as of 2008. In 2008, approximately 353 residences were for sale or rent in the city ranging from single-family homes to mobile homes (see Section 2.1.1.2). Adequate housing for sale or rent appears to exist for residents displaced by the proposed project, if they choose to remain in the same area. Appendix D describes relocation assistance resources available to the affected residents and businesses.

**Impacts to Businesses and Institutions**

The project will require a partial to full right-of-way take at the self-storage business on Riverside Avenue to widen the existing right-of-way for the proposed westbound frontage road. Relocation of this business would cause loss of clientele from the disruption of moving. The private owner of the business would be compensated for the necessary right-of-way acquisition, and the owner can choose to relocate.

The recreation vehicle storage and sales business on San Pablo Dam Road is located on land owned by the Department. The lease has an expiration date of July 31, 2011, and can be canceled with a 90-day notice to terminate. The owner is aware of the need to relocate when the property became needed for transportation facilities.

Partial acquisitions of other parcels for reconstruction of the San Pablo Dam Road Overcrossing would affect driveway access into parking lots that serve businesses along this road. This may temporarily inconvenience the customers of these businesses during construction. At the Jack in the Box restaurant on the west side of the interchange, a retaining wall may encroach on some existing parking spaces.

The school district supports the proposed relocation of the pedestrian overcrossing because it would improve safety and access for students walking to and from school (see correspondence in Appendix I). However, the overcrossing would require a permanent easement or transfer agreement of a portion of the Riverside Elementary School parking lot at the corner of Amador Street and Riverside Avenue. A preliminary estimate of nine parking spaces for individuals who work, volunteer, or visit at the school would be removed within the 25-space lot bordering Riverside Avenue. The school has a second parking lot off Amador Street that would remain unaffected; that lot has approximately 37 spaces. The Department and CCTA will work with the school district to define the easement or transfer of property that allows for construction and maintenance of the proposed pedestrian overcrossing and changes in parking.
2.3.2.4. Avoidance, Minimization, or Mitigation Measures

Relocation assistance payments and counseling will be provided to persons and businesses in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All benefits and services would be provided equitably without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S. Code 2000d, et seq.). The Relocation Assistance Program was developed to help displaced individuals move with as little inconvenience as possible. All rights and services provided under Public Law 91-646, Uniform Relocation Assistance and Real Property Acquisition Act of 1970 would be strictly followed to meet the need of the handicapped, elderly, and other special groups (e.g., non-English speaking people) to ensure that their relocation needs are met. Programs implemented to meet these needs include bilingual brochures on relocation services, interpreters, determination of people’s needs and preferences through individual interviews, transportation services for those who do not own personal transportation or who cannot drive, information on other State and Federal assistance programs, and counseling to minimize hardships.

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) set forth the policy of the United States to provide, within constitutional limitations, for fair housing throughout the United States. The Act 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, national origin, or handicap.

Caltrans Relocation Assistance Program information is included in Appendix D.

The Department and CCTA will also consider final impacts to any parking areas at the businesses bordering San Pablo Dam Road on the west side of the freeway, and will either reconfigure the striping/layout of the existing parking lot or provide compensation for loss of parking. These steps will take place during the right-of-way and final design stages of project development.

2.3.3. Environmental Justice

2.3.3.1. Regulatory Setting

All projects involving a Federal action (funding, permit, or land) must comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994. This Executive Order directs Federal agencies to take the
appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2007, this was $21,203 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. The Department’s commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which is included in Appendix C.

### 2.3.3.2. Affected Environment

A comparison of household incomes based on Census “block-level” data\(^5\) for the study area shows that no low-income communities would be affected disproportionately by the project. FHWA and the Department of Transportation (DOT) use the Federal Department of Health and Human Services (HHS) poverty guidelines to determine low-income ($21,203 for a family of four in 2007). As indicated in Table 2.3-2, the average household income in San Pablo is $37,184. All of the Census Block Groups in the study area have average household incomes equal to or greater than the citywide average except for Block Group 3690.01 (west of I-80, between approximately San Pablo Dam Road and McBryde Avenue), which has an average household income of $25,125. The average household income for that Block Group is still above the HHS low-income guideline of $21,203.

A minority community is defined as a distinct population composed of predominantly one or more racial or ethnic groups that is nonwhite. The ethnic composition of San Pablo in 2000 was predominantly Hispanic or Latino, followed by white, then African-American. The study area, however, is predominantly white and African-American (together comprising 60 percent of the study area, 36.1 percent of which was white) (Table 2.3-3). While the racial makeup of the study area is somewhat similar to that of the City of San Pablo as a whole, one Census Block Group (3690.01) has almost twice the percentage of African-Americans as the City of San Pablo as a whole. The overall population of this Census Block Group was 1,459 individuals in 2000 (the latest data available), of which African Americans comprised

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\(^5\) Census data have been collected and reported by the U.S. Census at different levels of detail and geographic area: by counties, tracts, block groups, and blocks. Blocks are the smallest Census geography, but only general population characteristics are reported by the Census at the block level. Figure 2.3-1 shows the boundaries of the Census Tracts and Block Groups.
# Table 2.3-2 Income Statistics for the City of San Pablo and Study Area in 2000

<table>
<thead>
<tr>
<th>Attribute</th>
<th>City of San Pablo</th>
<th>CT 3672 Block Group 3</th>
<th>CT 3690.01 Block Group 1</th>
<th>CT 3690.01 Block Group 2</th>
<th>Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median household income</td>
<td>$37,184</td>
<td>$42,083</td>
<td>$37,159</td>
<td>$25,125</td>
<td>$35,592</td>
</tr>
<tr>
<td>Per capita income</td>
<td>$14,303</td>
<td>$12,573</td>
<td>$16,144</td>
<td>$15,557</td>
<td>$19,302</td>
</tr>
<tr>
<td>Total Area Population</td>
<td>30,215</td>
<td>938</td>
<td>1,459</td>
<td>4,048</td>
<td>1,048</td>
</tr>
<tr>
<td>Number of persons below the poverty level in 1999</td>
<td>5,331</td>
<td>47</td>
<td>209</td>
<td>461</td>
<td>147</td>
</tr>
<tr>
<td>% Below poverty level in 1999</td>
<td>17.6%</td>
<td>5.0%</td>
<td>14.3%</td>
<td>11.4%</td>
<td>14.0%</td>
</tr>
</tbody>
</table>

Source: 2000 U.S. Census Table P12.
Table 2.3-3  Racial/Ethnic Composition of the City of San Pablo and the Study Area in 2000

<table>
<thead>
<tr>
<th>Racial/Ethnic Group</th>
<th>City of San Pablo</th>
<th>CT 3672 Block Group 3</th>
<th>CT 3690.01 Block Group 1</th>
<th>CT 3690.01 Block Group 2</th>
<th>CT 3690.02 Block Group 1</th>
<th>CT 3690.02 Block Group 3</th>
<th>CT3710 Block Group 1</th>
<th>Total In Study Area Block Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>White alone</td>
<td>9555</td>
<td>341</td>
<td>295</td>
<td>1,455</td>
<td>441</td>
<td>450</td>
<td>410</td>
<td>3,392</td>
</tr>
<tr>
<td>%</td>
<td>31.6%</td>
<td>36.4%</td>
<td>20.2%</td>
<td>35.9%</td>
<td>42.1%</td>
<td>44.4%</td>
<td>45.4%</td>
<td>36.1%</td>
</tr>
<tr>
<td>African American</td>
<td>5539</td>
<td>82</td>
<td>496</td>
<td>1,056</td>
<td>197</td>
<td>253</td>
<td>163</td>
<td>2,247</td>
</tr>
<tr>
<td>%</td>
<td>18.3%</td>
<td>8.7%</td>
<td>34.0%</td>
<td>26.1%</td>
<td>18.8%</td>
<td>25.0%</td>
<td>18.1%</td>
<td>23.9%</td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>271</td>
<td>4</td>
<td>11</td>
<td>29</td>
<td>17</td>
<td>19</td>
<td>8</td>
<td>88</td>
</tr>
<tr>
<td>%</td>
<td>0.9%</td>
<td>0.4%</td>
<td>0.8%</td>
<td>0.7%</td>
<td>1.6%</td>
<td>1.9%</td>
<td>0.9%</td>
<td>0.9%</td>
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<tr>
<td>Asian</td>
<td>4945</td>
<td>225</td>
<td>275</td>
<td>741</td>
<td>210</td>
<td>67</td>
<td>144</td>
<td>1662</td>
</tr>
<tr>
<td>%</td>
<td>16.4%</td>
<td>24.0%</td>
<td>18.8%</td>
<td>18.3%</td>
<td>20.0%</td>
<td>6.6%</td>
<td>15.9%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander</td>
<td>154</td>
<td>1</td>
<td>28</td>
<td>27</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>68</td>
</tr>
<tr>
<td>%</td>
<td>0.5%</td>
<td>0.1%</td>
<td>1.9%</td>
<td>0.7%</td>
<td>0.2%</td>
<td>0.8%</td>
<td>0.2%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other race</td>
<td>7688</td>
<td>220</td>
<td>237</td>
<td>498</td>
<td>93</td>
<td>131</td>
<td>111</td>
<td>1290</td>
</tr>
<tr>
<td>%</td>
<td>25.4%</td>
<td>23.5%</td>
<td>16.2%</td>
<td>12.3%</td>
<td>8.9%</td>
<td>12.9%</td>
<td>12.3%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>2063</td>
<td>65</td>
<td>117</td>
<td>242</td>
<td>88</td>
<td>85</td>
<td>65</td>
<td>662</td>
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<tr>
<td>%</td>
<td>6.8%</td>
<td>6.9%</td>
<td>8.0%</td>
<td>6.0%</td>
<td>8.4%</td>
<td>8.4%</td>
<td>7.2%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Hispanic or Latino (of any race)</td>
<td>13490</td>
<td>350</td>
<td>357</td>
<td>850</td>
<td>214</td>
<td>236</td>
<td>229</td>
<td>2236</td>
</tr>
<tr>
<td>%</td>
<td>44.6%</td>
<td>37.3%</td>
<td>24.5%</td>
<td>21.0%</td>
<td>20.4%</td>
<td>23.3%</td>
<td>25.4%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Total</td>
<td>30215</td>
<td>938</td>
<td>1,459</td>
<td>4,048</td>
<td>1,048</td>
<td>1,013</td>
<td>903</td>
<td>9,409</td>
</tr>
</tbody>
</table>

496 individuals or 34 percent of the study area population, compared to 18 percent for the City of San Pablo.

### 2.3.3.3. Environmental Consequences

No low-income communities would be affected disproportionately by the project. The average household incomes for all of the census block groups affected by the project are above the Federal low-income threshold.

Construction of the proposed frontage road between San Pablo Dam Road and McBryde Avenue would result in acquiring four single-family homes, a triplex, and an apartment complex in a census block (3690.01) that has approximately twice the percentage of African-American residents as the City of San Pablo overall. The project would also require acquisition and relocation of two homes/families in Census Block Group 3672, due to the realignment of El Portal Drive to accommodate the proposed westbound on-ramp. The population in Block Group 3672 area is predominantly white.

The project would result in an adverse relocation impact to a minority population within Census Block Group 3690.01 due to the proposed acquisition of homes and relocation of residents. However, the impact is not disproportionately high when considered in comparison with minority populations in San Pablo as a whole. The project’s relocation requirements would also adversely affect a nonminority population, although to a lesser extent (fewer homes).

The necessary relocations would be unavoidable and would be the same for both build alternatives. Initial project designs would have involved a greater number of potential housing relocations but were reduced by using retaining walls to minimize encroachment of the project into residential parcels next to the existing freeway.

This same community (Census Block Group 3690.01) is not expected to be affected by other aspects of the project. Local street circulation in this community would be the same, as existing streets would still have the same access and traffic conditions. A replacement soundwall would be constructed along westbound I-80 at the edge of the proposed frontage road and would continue to attenuate traffic noise from the freeway corridor, similar to the existing situation. Neither the project nor the frontage road would increase traffic volumes on the I-80 corridor or McBryde Avenue; therefore, the project would not adversely affect air quality. Moreover, vehicle emissions are projected to decrease over time due to continued improvements in emission reductions.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

The public involvement for this project included an informational meeting specifically targeted at the individuals affected by relocation. Chapter 3 provides a description of the public involvement process and the concerns raised and addressed.

2.3.3.4. Avoidance, Minimization, or Mitigation Measures

In 1997, the U.S. Department of Transportation (USDOT) issued the Order to Address Environmental Justice in Minority Populations and Low-Income Populations (Federal Register, Vol. 62, No. 72: 18377–18381, April 15, 1997). As the USDOT’s response to Executive Order 12898, it generally describes the process for incorporating environmental justice principles into USDOT programs, policies, and activities. The objective of the order is to ensure that the interests and well-being of minority and low-income populations are considered and addressed during transportation decision making by working within the existing statutory and regulatory requirements. The order states that USDOT will not carry out any programs, policies, or activities that will have a disproportionately high and adverse effect on minority populations or low-income populations unless “further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable.”

The principal purpose of the proposed project is to improve traffic operations at the I-80/San Pablo Dam Road Interchange. Because of the short distances between the interchange and interchanges at El Portal Drive and McBryde Avenue to the east and west, respectively, limiting modifications to the San Pablo Dam Road Interchange would not substantially improve traffic operations. The only practicable alternative to improving traffic operations between the I-80/San Pablo Dam Road Interchange and the McBryde Avenue off-ramp is to close that off-ramp and connect McBryde Avenue to the San Pablo Dam Road Interchange with a frontage road, which is included in the proposed project.

Families or individuals affected by relocation will be eligible for relocation assistance. This includes assistance in finding, obtaining, and moving into replacement housing of their choice, within the benefits eligible to each family that are determined based on their individual circumstances. Relocation benefits and assistance will offset the adverse impacts associated with the necessary acquisition of homes and displacement of families.
Based on the above discussion and analysis, neither of the proposed build alternatives would cause disproportionately high and adverse effects on any minority or low-income population as per E.O. 12898 regarding Environmental Justice.

### 2.4. Utilities and Emergency Services

#### 2.4.1. Affected Environment

Both build alternatives would require relocating sewer, electrical, gas, water, petroleum, and communication lines. Utilities in the project area were identified through site visits and reviews of utility plans obtained from the Department, CCTA, Contra Costa County, City of San Pablo, City of Richmond, Comcast, Conoco Phillips, East Bay Municipal Utility District (EBMUD), CPN Pipeline Company, Sprint, Verizon, AT&T, Kinder Morgan Company, Chevron Pipe Line Company, West County Wastewater District, and Pacific Gas and Electric (PG&E).

The Contra Costa County Fire Protection District, which has a San Pablo branch at 13928 San Pablo Avenue, provides fire and emergency services in the project area. The San Pablo Police Department, located at 13880 San Pablo Avenue, and the Richmond Police Department, 1701 Regatta Boulevard, provide law enforcement services in the project area. The Contra Costa County Sheriff’s Department also provides law enforcement coverage in unincorporated areas of the county.

The nearest hospital is Doctors Medical Center in San Pablo, at 2000 Vale Road about 0.4 mile from the I-80/San Pablo Dam Road Interchange. Doctors Medical Center provides San Pablo with 24-hour emergency services, a burn center, a regional cancer center, a women’s center, and the only full-service, open-heart surgery program in West Contra Costa County. Additional services include home health and long-term care, obstetrics, inpatient and same-day surgery, rehabilitation services, orthopedic surgery, and alcohol and drug rehabilitation (City of San Pablo 2008c).

Kaiser Permanente Medical Center is about 2.1 miles west-southwest of the I-80/San Pablo Dam Road Interchange at 901 Nevin Avenue in Richmond.

#### 2.4.2. Environmental Consequences

The China Slide is next to the existing State right-of-way on the east side of the I-80/San Pablo Dam Road Interchange. Utilities that currently exist under San Pablo Dam Road are within Caltrans right-of-way but outside the State’s “access control
and some of these utilities will be relocated as part of this project. Approval of longitudinal encroachment exceptions will be required for these utilities, and those exceptions will be processed during final project design. EBMUD’s 54-inch transmission main in El Portal Drive is the primary connection between the Sobrante Water Treatment Plant and customers in the Central Pressure Zone; the utility has noted that any removal of service of this water line will affect customers in Richmond, San Pablo, Albany, and Berkeley. The project may require relocation of this line along El Portal Drive. Any relocation of this large-diameter pipeline will require close coordination with the project’s overall construction staging, detour, and traffic control plan. Further utility investigation would be performed to verify all utility relocation requirements and data during the final project design phase.

As stated in Section 1.3.1.1, project construction would be staged to maintain through traffic on I-80 and San Pablo Dam Road, although detours and limited short-term, temporary closures could be necessary on freeway ramps and other roadways in the project limits. A Transportation Management Plan will be developed as part of the project to address traffic impacts from staged construction, detours, and specific traffic handling concerns such as emergency access during project construction (see Section 2.5.3.5). Access will be maintained for emergency response vehicles, and no disruption to existing emergency service access is expected.

2.4.3. Avoidance, Minimization, or Mitigation Measures

EBMUD has requested that the schedule for the I-80/San Pablo Dam Road Interchange improvements allow sufficient time for the relocation of all utilities. EBMUD estimates that the relocation of their 54-inch transmission main would take approximately 18 months or longer to complete (exact schedule to be determined) after final improvement plans for the project are completed. EBMUD requires this period of time to prepare an outage plan, detailed design drawings, and specifications, as well as to complete the actual relocation work prior to start of the project. Due to outage restrictions, the relocated pipeline must be in-service prior to taking the existing 54-inch transmission line out of service. The crossover from the existing 54-inch transmission main to the relocated pipeline may only take place during the winter months. EBMUD has specifically requested that Caltrans’ overall project schedule accommodate the requested outage restrictions.

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6 The access control limit restricts installation of utilities within that portion of the State’s right-of-way,
2.5. Traffic and Transportation/Pedestrian and Bicycle Facilities

The information for this section is summarized from the Final Traffic Operations Report prepared for this project (URS 2008a).

2.5.1. Regulatory Setting

The Department, 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.

The Department is committed to carrying out the 1990 Americans with Disabilities Act (ADA) 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.

2.5.2. Affected Environment

I-80, a primary interregional commute corridor in and through western Contra Costa County, has major regional significance in the East Bay and the greater San Francisco Bay Area. In the project area, I-80 is a truck route and provides direct connections to San Pablo, Richmond, and unincorporated areas of Contra Costa County (El Sobrante) through the San Pablo Dam Road, El Portal Drive, McBryde Avenue, and Solano Avenue interchanges. Within the project limits, westbound I-80 (heading toward San Francisco) has one High Occupancy Vehicle (HOV) lane and three mixed-flow (unrestricted vehicle type) lanes. In addition, westbound auxiliary lanes extend between the El Portal Drive on-ramp and San Pablo Dam Road off-ramp, and between the San Pablo Dam Road on-ramp and McBryde Avenue off-ramp. In the eastbound direction (heading toward Sacramento), I-80 has one HOV lane and three mixed-flow lanes. There are no auxiliary lanes between interchanges in the eastbound direction. All of the I-80 on-ramps and off-ramps within the project limits have a single lane.
The following are the primary regional and local roadways in the project vicinity (shown in Figure 1-2):

- El Portal Drive is a two-lane roadway (one lane in each direction) that extends from San Pablo Dam Road to San Pablo Avenue, crossing beneath I-80 at the eastern extent of the project limits. At peak hour conditions, traffic may divert off of San Pablo Dam Road onto El Portal Drive.
- San Pablo Dam Road is an east-west, four-lane roadway (two lanes in each direction). Under existing conditions, it carries approximately 30,000 vehicles per day (vpd).
- San Pablo Avenue is a north-south, four-lane roadway (two lanes in each direction). Under existing conditions, it carries approximately 24,000 vpd in the project vicinity.
- Amador Street is a north-south, two-lane roadway (one lane in each direction) between Solano Avenue and San Pablo Dam Road. Amador Street experiences traffic from vehicles that divert off of I-80 during very congested freeway conditions and from vehicles accessing Riverside Elementary School.
- McBryde Avenue is an east-west, four-lane roadway (two lanes in each direction) that serves the project area and the residential area in the hills above I-80. McBryde Avenue provides access between Amador Street and San Pablo Avenue.

San Pablo Dam Road, San Pablo Avenue, and El Portal Drive are main arterials that are designated as “Routes of Regional Significance” by the Contra Costa Measure C program.\(^7\)

Existing pedestrian and bicycle facilities in the study area are described in Section 1.2.2.1.

### 2.5.2.1. Traffic Operations Analysis Study Area and Years

A traffic operations analysis was conducted along eastbound and westbound I-80 between the El Portal Drive off-ramp and the Solano Avenue on-ramp. The analysis evaluated the Solano Avenue interchange (west of the McBryde Avenue interchange) to determine the western limits of the project based on traffic operations.

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\(^7\) Routes of Regional Significance are roads that serve regional mobility or act as reliever routes for the regional system, serving more than one jurisdiction within the county. These routes are adopted by each jurisdiction and the county as part of the Contra Costa County Measure C Growth Management Plan.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Improvements to the McBryde Avenue interchange were determined to benefit traffic conditions on westbound I-80 independent of any future projects in the corridor and to meet the criteria for establishing the logical termini for the project alternatives.

The analysis evaluated the mainline of I-80, the freeway off-ramps and on-ramps, and the local street intersections that had the greatest potential to be affected by the project. The following freeway ramp and roadway intersections were studied:

- San Pablo Avenue/San Pablo Dam Road;
- Contra Costa Avenue/San Pablo Dam Road;
- Ventura Avenue/San Pablo Dam Road;
- I-80 westbound ramps/San Pablo Dam Road;
- Amador Street/San Pablo Dam Road/I-80 eastbound ramps;
- San Pablo Dam Road/Morrow Drive;
- Amador Street/Alpine Road;
- I-80 westbound off-ramp/McBryde Avenue/Humboldt Street;
- I-80 westbound on-ramp/El Portal Drive;
- I-80 westbound off-ramp/El Portal Drive;
- I-80 eastbound ramps/El Portal Drive;
- I-80 westbound on-ramp/Solano Avenue/Humboldt Street; and
- I-80 eastbound off-ramp/Amador Street.

The traffic forecasts for the study area were developed using the CCTA travel demand model implemented in TransCAD. Freeway operations along I-80 in the eastbound and westbound directions between the El Portal Drive off-ramp and Solano Avenue on-ramp were analyzed using the VISSIM computer transportation planning/traffic engineering simulation model. An analysis of intersection operations at 13 study intersections used another traffic simulation model called SYNCHRO. The operational analysis evaluated existing and future conditions. Existing conditions represent the year 2005, based on the availability of data when the traffic study was conducted. Future conditions were projected for the year 2035. The AM and PM peak hour operational models were calibrated and validated to established criteria for freeway, ramp, and intersection volumes, travel times, and observed queues.
2.5.2.2. Existing and Future Year Traffic Conditions (No Build Alternative)

Existing and Future No Build Traffic Volumes

I-80 carries a substantial volume of traffic. The annual average daily traffic (AADT) reported for 2005 was 184,000 east of McBryde Avenue (both directions, 24-hour period), and 181,000 AADT west of El Portal Drive (Caltrans 2007). Traffic is carried on four through-traffic lanes in each direction: three general purpose/mixed-flow lanes and one HOV lane. Two segments of I-80 in the project limits have auxiliary lanes: westbound I-80 between El Portal Drive on-ramp and the San Pablo Dam Road off-ramp, and westbound I-80 between the San Pablo Dam Road on-ramp and the McBryde Avenue off-ramp. All existing on-ramps and off-ramps have single lanes.

Trucks on I-80 represent five percent of the total vehicle volume at the San Pablo Dam Road Interchange (Caltrans 2006a). The average use of the HOV lanes on I-80 in Contra Costa County is relatively high, estimated at approximately 23 percent of the total vehicle volume during the morning (AM) peak period and 15 percent in the afternoon/evening (PM) peak period (Caltrans 2007).

Traffic growth in recent years has heavily affected the I-80 corridor. The AADT on I-80 has increased by up to 29 percent between 1997 and 2007. Existing and future peak period traffic volumes for the freeway and on-ramps and off-ramps in the study area are listed in Tables 2.5-1 and 2.5-2 for the AM and PM peak periods, respectively. These tables show the predicted (modeled) peak period traffic volumes along the I-80 corridor in the project area based on regional projections of land use growth and future travel demand, without the proposed project.

Existing and Future No Build Travel Time and Vehicle Speeds

Travel time, which represents the driving time within a defined roadway segment in the study area, provides a way to compare how a roadway segment performs in different study years and with each alternative. A slower travel time for an alternative or study year (when comparing the same roadway segment) indicates greater congestion.

During the AM peak hour under existing conditions, the I-80 mainline segment between the El Portal Drive on-ramp and the McBryde Avenue off-ramp is congested in the westbound direction; queuing results from heavy on-ramp and off-ramp volumes at the interchanges. During the PM peak hour, the I-80 mainline segment between the Amador Street off-ramp and the San Pablo Dam Road off-ramp is congested in the eastbound direction. Average future No Build speeds on the freeway...
are predicted at 30 miles per hour (mph) in the AM peak period and 28 mph in the PM peak period.

### Table 2.5-1 AM Peak Period Existing Conditions (Year 2005) and Future (Year 2035) Traffic Demand (Freeway and Ramps)

<table>
<thead>
<tr>
<th>Segments</th>
<th>AM Existing (2005)</th>
<th>AM Future (2035)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>1,965</td>
<td>3,730</td>
</tr>
<tr>
<td>Amador Street off-ramp</td>
<td>26</td>
<td>54</td>
</tr>
<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>1,939</td>
<td>3,676</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>128</td>
<td>268</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>1,811</td>
<td>3,408</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>113</td>
<td>242</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>1,924</td>
<td>3,650</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>53</td>
<td>131</td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>1,871</td>
<td>3,519</td>
</tr>
<tr>
<td>Westbound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>5,391</td>
<td>7,561</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>86</td>
<td>164</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
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<td>7,397</td>
</tr>
<tr>
<td>El Portal Drive on-ramp</td>
<td>394</td>
<td>694</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>5,699</td>
<td>8,091</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>134</td>
<td>261</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>5,565</td>
<td>7,830</td>
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<td>San Pablo Dam Road on-ramp</td>
<td>455</td>
<td>756</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>6,020</td>
<td>8,586</td>
</tr>
<tr>
<td>McBryde Avenue off-ramp</td>
<td>61</td>
<td>147</td>
</tr>
<tr>
<td>Mainline between McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
<td>5,959</td>
<td>8,439</td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>205</td>
<td>380</td>
</tr>
<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>6,164</td>
<td>8,819</td>
</tr>
</tbody>
</table>

**Sources:** Caltrans 2006a (24-Hour Traffic Volumes for 2005) and URS 2008a for future conditions
### Table 2.5-2 PM Peak Period Existing Conditions (Year 2005) and Future (Year 2035) Traffic Demand (Freeway and Ramps)

<table>
<thead>
<tr>
<th>Segments</th>
<th>PM Existing (2005)</th>
<th>PM Future (2035)</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>3:00 – 4:00</td>
<td>4:00 – 5:00</td>
</tr>
<tr>
<td><strong>Eastbound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>8,352</td>
<td>8,359</td>
</tr>
<tr>
<td>Amador Street off-ramp</td>
<td>338</td>
<td>376</td>
</tr>
<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>8,014</td>
<td>7,983</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>758</td>
<td>669</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>7,256</td>
<td>7,314</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>780</td>
<td>730</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>8,036</td>
<td>8,044</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>511</td>
<td>518</td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>7,525</td>
<td>7,526</td>
</tr>
<tr>
<td><strong>Westbound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>6,364</td>
<td>6,354</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>559</td>
<td>633</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
<td>5,805</td>
<td>5,721</td>
</tr>
<tr>
<td>El Portal Drive on-ramp</td>
<td>571</td>
<td>530</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>6,376</td>
<td>6,251</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>491</td>
<td>512</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>5,885</td>
<td>5,739</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>859</td>
<td>787</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and McByrde Avenue off-ramp</td>
<td>6,744</td>
<td>6,526</td>
</tr>
<tr>
<td>McByrde Avenue off-ramp</td>
<td>492</td>
<td>495</td>
</tr>
<tr>
<td>Mainline between McByrde Avenue off-ramp and Solano Avenue on-ramp</td>
<td>6,252</td>
<td>6,031</td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>327</td>
<td>269</td>
</tr>
<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>6,579</td>
<td>6,300</td>
</tr>
</tbody>
</table>

**Sources:** Caltrans 2006a (24-Hour Traffic Volumes for 2005) and URS 2008a for future conditions
Existing and Future No Build Levels of Service

Level of Service, an indicator of the operating performance of a road or intersection, is explained in Section 1.2.2.1. In accordance with Contra Costa County planning criteria, the traffic analysis used LOS D or better (LOS A, B, C, or D) to indicate roadways and intersections that function or will function in the future at an “acceptable” level of performance, while LOS E or F indicated an “unacceptable” level of congestion. Tables 2.5-3 and 2.5-4 list the existing and future No Build LOS ratings for freeway segments, ramps, and intersections in the study area. Future increases in traffic will result in additional congestion in traffic operations on I-80 and its ramps, enough to result in a decrease in LOS ratings along some I-80 segments and ramps as well as on local roads. By 2035, many segments of the I-80 corridor will function at LOS E or F in the peak period travel direction (westbound in the AM period, and eastbound in the PM period).

2.5.3. Environmental Consequences

The three alternatives (No Build, Alternative 1 – Lanes Added, and Alternative 2 – Tight Diamond) were modeled for future traffic conditions. Volumes, speeds, and levels of service are listed and compared in Tables 2.5-5 through 2.5-13B, and a summary is provided at the end of this section.

2.5.3.1. No Build Alternative

Future conditions for the No Build Alternative would be the same as reported in Tables 2.5-3 and 2.5-4 for the year 2035. Volumes would increase due to regional traffic growth, and drivers would increasingly rely on the I-80 corridor. By 2035, most segments of I-80 would function at capacity (LOS E or F) in the peak period commute direction.
Table 2.5-3  Summary of I-80 Mainline Segment Levels of Service for Existing and Future No Build Conditions

<table>
<thead>
<tr>
<th>Segments</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
<td>2035</td>
</tr>
<tr>
<td><strong>Westbound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East of El Portal Drive off-ramp</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>El Portal Drive off-ramp and off-ramp</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp and on-ramp</td>
<td>F</td>
<td>D</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>F</td>
<td>E</td>
</tr>
<tr>
<td>McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>West of Solano Avenue on-ramp</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td><strong>Eastbound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp and on-ramp</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>East of El Portal Drive off-ramp</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

Source: URS 2008a

Table 2.5-4  Summary of Intersection Levels of Service for Existing and Future No Build Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
<td>2035</td>
</tr>
<tr>
<td>1 San Pablo Avenue/San Pablo Dam Road</td>
<td>C</td>
<td>F</td>
</tr>
<tr>
<td>2 Contra Costa Avenue/San Pablo Dam Road</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>3 Ventura Avenue/San Pablo Dam Road</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>4 I-80 WB ramps/San Pablo Dam Road</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>5 Amador Street/San Pablo Dam Road/I-80 EB ramps</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>6 San Pablo Dam Road/Morrow Drive</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>7 Amador Street/Alpine Road</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>8 I-80 WB off-ramp/McBryde Avenue/Humboldt Street</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>9 I-80 WB on-ramp/El Portal Drive</td>
<td>B</td>
<td>F</td>
</tr>
<tr>
<td>10 I-80 WB off-ramp/El Portal Drive</td>
<td>B</td>
<td>F</td>
</tr>
<tr>
<td>11 I-80 EB ramps/El Portal Drive</td>
<td>C</td>
<td>F</td>
</tr>
<tr>
<td>12 I-80 WB on-ramp/Solano Avenue/Humboldt Street</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>13 I-80 EB off-ramp/Amador Street</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

Source: URS 2008a

EB = eastbound; WB = westbound
The traffic analysis indicates that, in the AM peak period for the No Build Alternative (Table 2.5-5), five of the seven freeway mainline segments in the westbound direction would operate at an unacceptable level of service (LOS E or F). The demand projected in the analysis would exceed capacity in the mainline segment between the San Pablo Dam Road on-ramp and the McBryde Avenue off-ramp in the westbound direction during the AM peak hour, and the segment is projected to become a bottleneck. The traffic analysis projects that significant congestion and queues on westbound I-80 would develop upstream of this bottleneck, east of San Pablo Dam Road. In the PM peak hour (Table 2.5-6), all of the I-80 mainline segments are projected to operate at an unacceptable level of service.

Table 2.5-5 AM Peak Period Comparison of Traffic Conditions – No Build Alternative

<table>
<thead>
<tr>
<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td>Westbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>7,933</td>
<td>8,744</td>
<td>8,715</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>33</td>
<td>22</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>254</td>
<td>376</td>
<td>729</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
<td>7,679</td>
<td>8,368</td>
<td>7,986</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>41</td>
<td>28</td>
</tr>
<tr>
<td>El Portal Drive on-ramp</td>
<td>515</td>
<td>907</td>
<td>1,234</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>8,195</td>
<td>9,275</td>
<td>9,220</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>576</td>
<td>868</td>
<td>1,118</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>54</td>
<td>53</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>7,619</td>
<td>8,408</td>
<td>8,102</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>551</td>
<td>915</td>
<td>1,263</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>60</td>
<td>59</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>8,170</td>
<td>9,323</td>
<td>9,365</td>
</tr>
<tr>
<td></td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>McBryde Avenue off-ramp</td>
<td>204</td>
<td>383</td>
<td>908</td>
</tr>
<tr>
<td></td>
<td>59</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td>Mainline between McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
<td>7,966</td>
<td>8,940</td>
<td>8,456</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>56</td>
<td>57</td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>426</td>
<td>788</td>
<td>1,238</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>55</td>
<td>51</td>
</tr>
<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>8,392</td>
<td>9,728</td>
<td>9,694</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>56</td>
<td>55</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>2,300</td>
<td>4,366</td>
<td>7,057</td>
</tr>
<tr>
<td></td>
<td>59</td>
<td>59</td>
<td>53</td>
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</table>
Table 2.5-5  AM Peak Period Comparison of Traffic Conditions – No Build Alternative

<table>
<thead>
<tr>
<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td>Amador Street off-ramp</td>
<td>34</td>
<td>71</td>
<td>195</td>
</tr>
<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>2,266</td>
<td>4,295</td>
<td>6,862</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>105</td>
<td>219</td>
<td>391</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>2,162</td>
<td>4,076</td>
<td>6,471</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>115</td>
<td>246</td>
<td>502</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>2,276</td>
<td>4,321</td>
<td>6,973</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>98</td>
<td>244</td>
<td>686</td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>2,264</td>
<td>4,243</td>
<td>6,591</td>
</tr>
</tbody>
</table>

Source: URS 2008a
NA = Not analyzed

Figure 2.5-1 shows future No Build turning movement volumes for the study area intersections. Table 2.5-7A lists the summary (average) LOS for each study area intersection, and Table 2.5-7B lists LOS by each study intersection turning movement. Of the 13 local intersections evaluated under future No Build conditions, nine would have unacceptable levels of service during the AM peak hour, and eight would have unacceptable levels of service during the PM peak hour. Delays would exceed 50 to 80 seconds at nine (AM peak) and eight (PM peak) of the 13 intersections evaluated, indicating that drivers may queue and wait through more than one traffic signal cycle before passing through the intersection.
### Table 2.5-6  PM Peak Period Comparison of Traffic Conditions – No Build Alternative

<table>
<thead>
<tr>
<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5:00 – 6:00</td>
</tr>
<tr>
<td>Westbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>7,794</td>
<td>7,782</td>
<td>7,620</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>483</td>
<td>547</td>
<td>552</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
<td>7,311</td>
<td>7,236</td>
<td>7,068</td>
</tr>
<tr>
<td>El Portal Drive on-ramp</td>
<td>883</td>
<td>819</td>
<td>821</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>8,194</td>
<td>8,054</td>
<td>7,889</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>465</td>
<td>485</td>
<td>479</td>
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<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>7,729</td>
<td>7,569</td>
<td>7,410</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>1,118</td>
<td>1,024</td>
<td>1,089</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>8,847</td>
<td>8,593</td>
<td>8,499</td>
</tr>
<tr>
<td>McBryde Avenue off-ramp</td>
<td>769</td>
<td>772</td>
<td>862</td>
</tr>
<tr>
<td>Mainline between McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
<td>8,078</td>
<td>7,821</td>
<td>7,637</td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>441</td>
<td>363</td>
<td>372</td>
</tr>
<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>8,519</td>
<td>8,184</td>
<td>8,009</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>9,120</td>
<td>9,121</td>
<td>9,156</td>
</tr>
<tr>
<td>Amador Street off-ramp</td>
<td>155</td>
<td>172</td>
<td>153</td>
</tr>
<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>8,965</td>
<td>8,949</td>
<td>9,003</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>444</td>
<td>392</td>
<td>462</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>8,521</td>
<td>8,557</td>
<td>8,541</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>989</td>
<td>925</td>
<td>1,055</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>9,510</td>
<td>9,482</td>
<td>9,596</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>1,093</td>
<td>1,106</td>
<td>1,170</td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>9,246</td>
<td>9,185</td>
<td>9,295</td>
</tr>
</tbody>
</table>

Source: URS 2008a NA = Not analyzed
## Table 2.5-7A Summary of Level of Service Analysis at Study Intersections: Future No Build Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V/C</td>
<td>Delay*</td>
<td>LOS</td>
<td>V/C</td>
<td>Delay*</td>
<td>LOS</td>
</tr>
<tr>
<td>1 San Pablo Avenue/San Pablo Dam Road</td>
<td>1.11</td>
<td>&gt;80.0</td>
<td>F</td>
<td>1.19</td>
<td>&gt;80.0</td>
<td>F</td>
</tr>
<tr>
<td>2 Contra Costa Avenue/San Pablo Dam Road</td>
<td>0.52</td>
<td>11.5</td>
<td>B</td>
<td>0.65</td>
<td>9.9</td>
<td>A</td>
</tr>
<tr>
<td>3 Ventura Avenue/San Pablo Dam Road</td>
<td>0.45</td>
<td>6.1</td>
<td>A</td>
<td>0.77</td>
<td>10.6</td>
<td>B</td>
</tr>
<tr>
<td>4 I-80 WB ramps/San Pablo Dam Road</td>
<td>1.5</td>
<td>&gt;80.0</td>
<td>F</td>
<td>1.04</td>
<td>&gt;80.0</td>
<td>F</td>
</tr>
<tr>
<td>5 Amador Street/San Pablo Dam Road/I-80 EB ramps</td>
<td>1.53</td>
<td>&gt;80.0</td>
<td>F</td>
<td>1.6</td>
<td>&gt;80.0</td>
<td>F</td>
</tr>
<tr>
<td>6 San Pablo Dam Road/Morrow Drive</td>
<td>0.66</td>
<td>4.2</td>
<td>A</td>
<td>0.8</td>
<td>5.9</td>
<td>A</td>
</tr>
<tr>
<td>7 Amador Street/Alpine Road</td>
<td>-</td>
<td>&gt;50.0</td>
<td>F</td>
<td>-</td>
<td>27.1</td>
<td>D</td>
</tr>
<tr>
<td>8 I-80 WB off-ramp/McBryde Avenue/Humboldt Street</td>
<td>-</td>
<td>&gt;50.0</td>
<td>F</td>
<td>-</td>
<td>&gt;50.0</td>
<td>F</td>
</tr>
<tr>
<td>9 I-80 WB on-ramp/El Portal Drive</td>
<td>-</td>
<td>&gt;50.0</td>
<td>F</td>
<td>-</td>
<td>16.0</td>
<td>C</td>
</tr>
<tr>
<td>10 I-80 WB off-ramp/El Portal Drive</td>
<td>1.13</td>
<td>&gt;80.0</td>
<td>F</td>
<td>1.11</td>
<td>58.0</td>
<td>E</td>
</tr>
<tr>
<td>11 I-80 EB ramps/El Portal Drive</td>
<td>1.02</td>
<td>&gt;80.0</td>
<td>F</td>
<td>1.16</td>
<td>&gt;80.0</td>
<td>F</td>
</tr>
<tr>
<td>12 I-80 WB on-ramp/Solano Avenue/Humboldt Street</td>
<td>-</td>
<td>&gt;50.0</td>
<td>F</td>
<td>-</td>
<td>&gt;50.0</td>
<td>F</td>
</tr>
<tr>
<td>13 I-80 EB off-ramp/Amador Street</td>
<td>-</td>
<td>32.1</td>
<td>D</td>
<td>-</td>
<td>&gt;80.0</td>
<td>F</td>
</tr>
</tbody>
</table>

Source: URS 2008a

Notes: Delay represented is average delay at signalized intersections and average delay on controlled approaches at unsignalized intersections.

* Delay in seconds per vehicle

EB = Eastbound
LOS = Level of service
V/C = Maximum volume-to-capacity ratios at signalized intersections
WB = Westbound
Table 2.5-7B Level of Service Analysis by Movement at Study Intersections: Future No Build Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay(s)</td>
<td>LOS</td>
</tr>
<tr>
<td>Entrance and San Pablo Avenue (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left/Through/Right</td>
<td>71.2</td>
<td>E</td>
</tr>
<tr>
<td>WB Left</td>
<td>70.8</td>
<td>E</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>52.1</td>
<td>D</td>
</tr>
<tr>
<td>NB Left</td>
<td>72.7</td>
<td>E</td>
</tr>
<tr>
<td>NB Through</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>NB Right</td>
<td>63.9</td>
<td>E</td>
</tr>
<tr>
<td>SB Left</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>SB Through/Right</td>
<td>30.3</td>
<td>C</td>
</tr>
<tr>
<td>Contra Costa and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB Through/Left</td>
<td>46.3</td>
<td>D</td>
</tr>
<tr>
<td>NB Right</td>
<td>44.1</td>
<td>D</td>
</tr>
<tr>
<td>SB Through/Left</td>
<td>45.6</td>
<td>D</td>
</tr>
<tr>
<td>SB Right</td>
<td>44.2</td>
<td>D</td>
</tr>
<tr>
<td>EB Left</td>
<td>45.5</td>
<td>D</td>
</tr>
<tr>
<td>EB Through/Right</td>
<td>3.7</td>
<td>A</td>
</tr>
<tr>
<td>WB Left</td>
<td>49.4</td>
<td>D</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>8.9</td>
<td>A</td>
</tr>
<tr>
<td>Ventura Avenue and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB Left/Through/Right</td>
<td>33.1</td>
<td>C</td>
</tr>
<tr>
<td>SB Left/Through/Right</td>
<td>34.9</td>
<td>C</td>
</tr>
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<td>A</td>
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<tr>
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<tr>
<td>WB Through/Right</td>
<td>4.8</td>
<td>A</td>
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<tr>
<td>I-80 WB Off-Ramp and San Pablo Dam Road (Signalized)</td>
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<tr>
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<td>WB Through/Left</td>
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</tr>
<tr>
<td>I-80 EB Off-Ramp and I-80 EB On-Ramp (Signalized)</td>
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<tr>
<td>NB Left</td>
<td>71</td>
<td>E</td>
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<tr>
<td>NB Through</td>
<td>28.8</td>
<td>C</td>
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<tr>
<td>NB Right</td>
<td>&gt;80</td>
<td>F</td>
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<td>EB Left/Right</td>
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<tr>
<td>WB Right</td>
<td>24.6</td>
<td>C</td>
</tr>
<tr>
<td>NB Through</td>
<td>3.8</td>
<td>A</td>
</tr>
<tr>
<td>NB Right</td>
<td>2.7</td>
<td>A</td>
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<tr>
<td>SB Left</td>
<td>28.9</td>
<td>C</td>
</tr>
<tr>
<td>SB Through</td>
<td>3.8</td>
<td>A</td>
</tr>
<tr>
<td>Alpine Road and Amador Street (Unsignalized)</td>
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<td>WB Left/Right</td>
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<td>SB Through/Left</td>
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Table 2.5-7B Level of Service Analysis by Movement at Study Intersections: Future No Build Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay(s)</td>
<td>LOS</td>
</tr>
<tr>
<td>McBryde Avenue and WB Off-Ramp (Unsignalized)</td>
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<tr>
<td>WB Through/Left</td>
<td>10.7</td>
<td>B</td>
</tr>
<tr>
<td>NB Left/Through/Right</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>SB Left</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>SB Through/Right</td>
<td>16.5</td>
<td>C</td>
</tr>
<tr>
<td>El Portal Drive and I-80 WB On-Ramp (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>El Portal Drive and I-80 WB Off-Ramp (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>NB Right</td>
<td>11</td>
<td>B</td>
</tr>
<tr>
<td>SB Left</td>
<td>34.6</td>
<td>C</td>
</tr>
<tr>
<td>SB Through</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>El Portal Drive and I-80 EB On-Ramp (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left</td>
<td>25.4</td>
<td>C</td>
</tr>
<tr>
<td>EB Through</td>
<td>4.5</td>
<td>A</td>
</tr>
<tr>
<td>WB Through</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>WB Right</td>
<td>10.8</td>
<td>B</td>
</tr>
<tr>
<td>NB Through/Left</td>
<td>29.4</td>
<td>C</td>
</tr>
<tr>
<td>NB Right</td>
<td>22</td>
<td>C</td>
</tr>
<tr>
<td>Solano Avenue and Humboldt Street (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left/Through/Right</td>
<td>8.4</td>
<td>A</td>
</tr>
<tr>
<td>SB Left/Through/Right</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>Amador Street and I-80 EB Off-Ramps (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left</td>
<td>33.4</td>
<td>D</td>
</tr>
<tr>
<td>EB Right</td>
<td>12.8</td>
<td>B</td>
</tr>
</tbody>
</table>

Source: URS 2008a

Notes: Delay in seconds per vehicle
EB = Eastbound
LOS = Level of service
NB = Northbound
SB = Southbound
WB = Westbound

2.5.3.2. Alternative 1 – Lanes Added Alternative

With Alternative 1, the traffic analysis projects that the I-80 freeway mainline segments would operate at or near capacity, and the significant bottlenecks predicted for the No Build condition would not develop. During the PM peak hour, all of the freeway mainline segments in the eastbound and westbound directions are projected to operate at unacceptable levels of service, except for the mainline segment between the San Pablo Dam Road on-ramp and off-ramp in the westbound direction. During the AM and PM peak hours in the westbound direction, overall traffic operations along the freeway mainline segments are projected to improve with Alternative 1 compared to No Build conditions. Tables 2.5-8 and 2.5-9 list future operating conditions for the freeway mainline and ramps with Alternative 1. Figure 2.5-2 shows...
the Alternative 2 peak period turning movement volumes for the study area intersections.

Alternative 1 would improve operations at the intersections of (1) I-80 westbound ramps/San Pablo Dam Road, (2) Amador Street/San Pablo Dam Road/I-80 eastbound ramps, (3) Frontage Road (I-80 westbound off-ramp under existing conditions)/McBryde Avenue/Humboldt Street, (4) I-80 westbound ramps/El Portal Drive, and (5) I-80 eastbound ramps/El Portal Drive. Tables 2.5-10A and 2.5-10B list the operating conditions at the key intersections for future Alternative 1 conditions. Compared with the No Build Alternative (Table 2.5-7A), Alternative 1 would decrease delay time at the various intersections at the I-80/San Pablo Dam Road and I-80/El Portal Drive interchanges and improve levels of service at Intersections 4, 5, 10, and 11 in Table 2.5-10A from unacceptable (LOS E or F) to acceptable (LOS D or better).

Table 2.5-8  AM Peak Period Comparison of Traffic Conditions –Alternative 1

<table>
<thead>
<tr>
<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td>Westbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>7,888</td>
<td>8,747</td>
<td>8,718</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>248</td>
<td>362</td>
<td>703</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
<td>7,640</td>
<td>8,385</td>
<td>8,015</td>
</tr>
<tr>
<td>El Portal Drive on-ramp</td>
<td>411</td>
<td>723</td>
<td>983</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>8,051</td>
<td>9,107</td>
<td>8,998</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>975</td>
<td>1,448</td>
<td>1,865</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>7,076</td>
<td>7,660</td>
<td>7,133</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>607</td>
<td>1,008</td>
<td>1,391</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>7,683</td>
<td>8,668</td>
<td>8,524</td>
</tr>
<tr>
<td>McBryde Avenue off-ramp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline between McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>366</td>
<td>679</td>
<td>1,066</td>
</tr>
</tbody>
</table>

I-80/San Pablo Dam Road Interchange Project IS/EA 2-47
### Table 2.5-8  AM Peak Period Comparison of Traffic Conditions –Alternative 1

<table>
<thead>
<tr>
<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>8,049</td>
<td>9,346</td>
<td>9,590</td>
</tr>
<tr>
<td><strong>Eastbound</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>2,526</td>
<td>4,559</td>
<td>7,209</td>
</tr>
<tr>
<td>Amador Street off-ramp</td>
<td>37</td>
<td>77</td>
<td>211</td>
</tr>
<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>2,489</td>
<td>4,482</td>
<td>6,998</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>143</td>
<td>299</td>
<td>534</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>2,346</td>
<td>4,184</td>
<td>6,464</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>84</td>
<td>179</td>
<td>366</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>2,430</td>
<td>4,363</td>
<td>6,830</td>
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<tr>
<td>El Portal Drive off-ramp</td>
<td>91</td>
<td>226</td>
<td>637</td>
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<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>2,447</td>
<td>4,345</td>
<td>6,576</td>
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**Source:** URS 2008a

NA = Not analyzed
### Table 2.5-9 PM Peak Period Comparison of Traffic Conditions –Alternative 1

<table>
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<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
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<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td>Westbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>7,883</td>
<td>7,716</td>
<td>7,084</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>441</td>
<td>504</td>
<td>457</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
<td>7,442</td>
<td>7,212</td>
<td>6,627</td>
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<tr>
<td>El Portal Drive on-ramp</td>
<td>598</td>
<td>556</td>
<td>484</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>8,040</td>
<td>7,678</td>
<td>7,111</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>1,062</td>
<td>1,094</td>
<td>1,087</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>6,978</td>
<td>6,674</td>
<td>6,025</td>
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<td>San Pablo Dam Road on-ramp</td>
<td>1,149</td>
<td>1,120</td>
<td>1,017</td>
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<td>Mainline between San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>8,128</td>
<td>7,794</td>
<td>7,042</td>
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<tr>
<td>McBryde Avenue off-ramp</td>
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<td></td>
</tr>
<tr>
<td>Mainline between McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>459</td>
<td>387</td>
<td>401</td>
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<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>8,587</td>
<td>8,181</td>
<td>7,443</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>8,937</td>
<td>9,156</td>
<td>8,909</td>
</tr>
<tr>
<td>Amador Street off-ramp</td>
<td>104</td>
<td>102</td>
<td>122</td>
</tr>
<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>8,833</td>
<td>9,054</td>
<td>8,787</td>
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<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>796</td>
<td>829</td>
<td>835</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>8,037</td>
<td>8,224</td>
<td>7,952</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>1,295</td>
<td>1,382</td>
<td>1,199</td>
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<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>9,332</td>
<td>9,606</td>
<td>9,151</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>1,089</td>
<td>1,166</td>
<td>1,399</td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>9,119</td>
<td>9,358</td>
<td>8,633</td>
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</tbody>
</table>

Source: URS 2008a

NA = Not analyzed
Table 2.5-10A  
Summary of Level of Service Analysis at Study Intersections—Future Alternative 1 Conditions

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<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V/C</td>
<td>Delay*</td>
</tr>
<tr>
<td>1 San Pablo Avenue/San Pablo Dam Road</td>
<td>1.07</td>
<td>&gt;80.0</td>
</tr>
<tr>
<td>2 Contra Costa Avenue/San Pablo Dam Road</td>
<td>0.49</td>
<td>9.6</td>
</tr>
<tr>
<td>3 Ventura Avenue/San Pablo Dam Road</td>
<td>0.54</td>
<td>7.0</td>
</tr>
<tr>
<td>4 I-80 WB ramps/San Pablo Dam Road</td>
<td>1.02</td>
<td>50.0</td>
</tr>
<tr>
<td>5 Amador Street/San Pablo Dam Road/I-80 EB ramps</td>
<td>0.9</td>
<td>37.3</td>
</tr>
<tr>
<td>6 San Pablo Dam Road/Morrow Drive</td>
<td>0.66</td>
<td>4.2</td>
</tr>
<tr>
<td>7 Amador Street/Alpine Road</td>
<td>&gt;50.0</td>
<td>F</td>
</tr>
<tr>
<td>8 Frontage Road/McBryde Avenue/Humboldt Street</td>
<td>0.69</td>
<td>29.8</td>
</tr>
<tr>
<td>9 I-80 WB on-ramp/El Portal Drive</td>
<td>Will not exist.</td>
<td></td>
</tr>
<tr>
<td>10 I-80 WB ramps/El Portal Drive</td>
<td>0.83</td>
<td>40.3</td>
</tr>
<tr>
<td>11 I-80 EB ramps/El Portal Drive</td>
<td>0.72</td>
<td>25.2</td>
</tr>
<tr>
<td>12 I-80 WB on-ramp/Solano Avenue/Humboldt Street</td>
<td>&gt;50.0</td>
<td>F</td>
</tr>
<tr>
<td>13 I-80 EB off-ramp/Amador Street</td>
<td>36.2</td>
<td>E</td>
</tr>
</tbody>
</table>

Source: URS 2008a

Notes: Delay represented is average delay at signalized intersections and average delay on controlled approaches at unsignalized intersections.

* Delay in seconds per vehicle
EB = Eastbound
LOS = Level of service
V/C = Maximum volume-to-capacity ratios at signalized intersections
WB = Westbound
### Table 2.5-10B  Level of Service Analysis by Movement at Study Intersections: Future Alternative 1 Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay(s)</td>
<td>LOS</td>
</tr>
<tr>
<td>Entrance and San Pablo Avenue (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left/Through/Right</td>
<td>71.1</td>
<td>E</td>
</tr>
<tr>
<td>WB Left</td>
<td>63</td>
<td>E</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>46</td>
<td>D</td>
</tr>
<tr>
<td>NB Left</td>
<td>72.2</td>
<td>E</td>
</tr>
<tr>
<td>NB Through</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>NB Right</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>SB Left</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>SB Through/Right</td>
<td>33</td>
<td>C</td>
</tr>
<tr>
<td>Contra Costa and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB Through/Left</td>
<td>46.3</td>
<td>D</td>
</tr>
<tr>
<td>NB Right</td>
<td>44.2</td>
<td>D</td>
</tr>
<tr>
<td>SB Through/Left</td>
<td>45.8</td>
<td>D</td>
</tr>
<tr>
<td>SB Right</td>
<td>44.3</td>
<td>D</td>
</tr>
<tr>
<td>EB Left</td>
<td>47.8</td>
<td>D</td>
</tr>
<tr>
<td>EB Through/Right</td>
<td>4.8</td>
<td>A</td>
</tr>
<tr>
<td>WB Left</td>
<td>48</td>
<td>D</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>6.6</td>
<td>A</td>
</tr>
<tr>
<td>Ventura Avenue and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB Left/Through/Right</td>
<td>32.8</td>
<td>C</td>
</tr>
<tr>
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<td>35.3</td>
<td>D</td>
</tr>
<tr>
<td>EB Left</td>
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<td>5.9</td>
<td>A</td>
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<tr>
<td>EB Right</td>
<td>3.8</td>
<td>A</td>
</tr>
<tr>
<td>WB Left</td>
<td>35</td>
<td>D</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>5.3</td>
<td>A</td>
</tr>
<tr>
<td>I-80 WB Off-Ramp and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left</td>
<td>31.4</td>
<td>C</td>
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<tr>
<td>EB Through</td>
<td>76.2</td>
<td>E</td>
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<tr>
<td>EB Right</td>
<td>43.6</td>
<td>D</td>
</tr>
<tr>
<td>NB Through</td>
<td>59.8</td>
<td>E</td>
</tr>
<tr>
<td>NB Right</td>
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<td>D</td>
</tr>
<tr>
<td>WB Left</td>
<td>61.6</td>
<td>E</td>
</tr>
<tr>
<td>WB Through</td>
<td>9.5</td>
<td>A</td>
</tr>
<tr>
<td>I-80 EB Off-Ramp and I-80 EB On-Ramp</td>
<td></td>
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</tr>
<tr>
<td>NB Left</td>
<td>63.2</td>
<td>E</td>
</tr>
<tr>
<td>NB Right</td>
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<td>E</td>
</tr>
<tr>
<td>SB Right</td>
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<td>D</td>
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<tr>
<td>WB Left</td>
<td>80.2</td>
<td>F</td>
</tr>
<tr>
<td>WB Through</td>
<td>56.6</td>
<td>E</td>
</tr>
<tr>
<td>EB Left</td>
<td>76.1</td>
<td>E</td>
</tr>
<tr>
<td>EB Through</td>
<td>9.4</td>
<td>A</td>
</tr>
<tr>
<td>Morrow Drive and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left</td>
<td>29.5</td>
<td>C</td>
</tr>
<tr>
<td>WB Right</td>
<td>26.7</td>
<td>C</td>
</tr>
<tr>
<td>NB Through</td>
<td>3.9</td>
<td>A</td>
</tr>
<tr>
<td>NB Right</td>
<td>2.5</td>
<td>A</td>
</tr>
<tr>
<td>SB Left</td>
<td>31.3</td>
<td>C</td>
</tr>
<tr>
<td>SB Through</td>
<td>3.6</td>
<td>A</td>
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### Table 2.5-10B  Level of Service Analysis by Movement at Study Intersections: Future Alternative 1 Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay(s)</td>
<td>LOS</td>
</tr>
<tr>
<td>7. Alpine Road and Amador Street (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left/Right</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>SB Through/Left</td>
<td>2</td>
<td>A</td>
</tr>
<tr>
<td>8. McBryde Avenue and WB Off-Ramp (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Through/Right</td>
<td>27.6</td>
<td>C</td>
</tr>
<tr>
<td>WB Through/Left</td>
<td>29.5</td>
<td>C</td>
</tr>
<tr>
<td>NB Left</td>
<td>46.9</td>
<td>D</td>
</tr>
<tr>
<td>SB Left</td>
<td>27.2</td>
<td>C</td>
</tr>
<tr>
<td>SB Through</td>
<td>27.3</td>
<td>C</td>
</tr>
<tr>
<td>SB Right</td>
<td>26.9</td>
<td>C</td>
</tr>
<tr>
<td>9. El Portal Drive and I-80 WB On-Ramp (Will not exist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. El Portal Drive and I-80 WB Off-Ramp (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Through</td>
<td>29.7</td>
<td>C</td>
</tr>
<tr>
<td>EB Right</td>
<td>36.2</td>
<td>D</td>
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<tr>
<td>WB Left</td>
<td>42.1</td>
<td>D</td>
</tr>
<tr>
<td>WB Through</td>
<td>9.2</td>
<td>A</td>
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<tr>
<td>SB Left</td>
<td>33.8</td>
<td>C</td>
</tr>
<tr>
<td>SB Right</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>11. El Portal Drive and I-80 EB On-Ramp (Signalized)</td>
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<td></td>
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<tr>
<td>EB Left</td>
<td>35.7</td>
<td>D</td>
</tr>
<tr>
<td>EB Through</td>
<td>10.3</td>
<td>B</td>
</tr>
<tr>
<td>WB Through</td>
<td>19</td>
<td>B</td>
</tr>
<tr>
<td>WB Right</td>
<td>12.5</td>
<td>B</td>
</tr>
<tr>
<td>NB Left</td>
<td>67.4</td>
<td>E</td>
</tr>
<tr>
<td>NB Through</td>
<td>31.4</td>
<td>C</td>
</tr>
<tr>
<td>NB Right</td>
<td>31.5</td>
<td>C</td>
</tr>
<tr>
<td>12. Solano Avenue and Humboldt Street (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left/Through/Right</td>
<td>6.2</td>
<td>A</td>
</tr>
<tr>
<td>SB Left/Through/Right</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>13. Amador Street and I-80 EB Off-Ramps (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left</td>
<td>37.6</td>
<td>E</td>
</tr>
<tr>
<td>EB Right</td>
<td>12.5</td>
<td>B</td>
</tr>
</tbody>
</table>

Source: URS 2008a

Notes: Delay in seconds per vehicle

EB = Eastbound

LOS = Level of service

NB = Northbound

SB = Southbound

WB = Westbound

The following are changes to intersections that are predicted to continue to operate at LOS E or F under future Alternative 1 conditions:

- San Pablo Avenue/San Pablo Dam Road and the I-80 westbound ramps/Solano Avenue/Humboldt Street intersection would continue to operate at LOS F with the same delay as the No Build Alternative (no change).
The level of service at Amador Street/Alpine Drive would remain the same, but the PM delay would be slightly longer (four seconds). Amador Street/Alpine Drive is a three-leg intersection, with a stop sign on Alpine Drive and no stop signs on Amador Street. Future traffic increases under the No Build condition would result in LOS F and D in the AM and PM peak periods, respectively. Alternative 1 would slightly add to, but not substantially change, the delays that would ultimately occur at this location.

The I-80 eastbound off-ramp/Amador Street intersection would remain the same in the PM, but the delay would be longer in the AM (four seconds longer than with the No Build Alternative). The LOS would decrease from D to E. This impact results from increased traffic capacity on San Pablo Dam Road passing through the eastbound I-80 off-ramp/San Pablo Dam Road intersection and the Amador Street/San Pablo Dam Road intersection. The two intersections are close enough in proximity that the off-ramp and Amador Street traffic turning on and off of San Pablo Dam Road must be constrained through signal timing and cannot adequately handle the increased volumes.

2.5.3.3. Alternative 2 – Tight Diamond Alternative

With Alternative 2, all of the freeway mainline segments in the westbound direction are projected to operate at unacceptable levels of service in the AM peak hour, similar to the No Build Alternative and Alternative 1. The freeway mainline segments are anticipated to operate at or near capacity, and the significant bottlenecks predicted for the No Build condition would not develop. During the PM peak hour, all of the study mainline segments are projected to operate at unacceptable levels of service except the mainline segment between the San Pablo Dam Road on-ramp and off-ramp in the westbound direction. During peak periods, Alternative 2 would generally reduce delays and improve levels of service compared with the No Build Alternative. It should also be noted that, based on the projected traffic demand, Alternative 2 would result in less “cut-through traffic” using city streets to avoid congestion on I-80 compared to future No Build and Alternative 1 conditions. Tables 2.5-11 and 2.5-12 list future operating conditions for Alternative 2 for the freeway mainline and ramps. Figure 2.5-3 shows peak period turning movement volumes for the study area intersections.

With Alternative 2, the project would make improvements at the same intersections as proposed for Alternative 1. The primary difference is that Alternative 2 would realign the Amador Street/San Pablo Dam Road intersection to the east, away from the I-80 eastbound off-ramp, allowing for improved signal timing. The San Pablo Dam Road Overcrossing would have six lanes, compared with seven lanes under Alternative 1.
### Table 2.5-11 AM Peak Period Comparison of Traffic Conditions – Alternative 2

<table>
<thead>
<tr>
<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td>Westbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>7,938</td>
<td>8,813</td>
<td>8,782</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>269</td>
<td>393</td>
<td>761</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
<td>7,669</td>
<td>8,420</td>
<td>8,021</td>
</tr>
<tr>
<td>El Portal Drive on-ramp</td>
<td>435</td>
<td>765</td>
<td>1,041</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>8,104</td>
<td>9,185</td>
<td>9,062</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>903</td>
<td>1,340</td>
<td>1,726</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>7,201</td>
<td>7,845</td>
<td>7,335</td>
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<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>528</td>
<td>878</td>
<td>1,211</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>7,730</td>
<td>8,723</td>
<td>8,546</td>
</tr>
<tr>
<td>McBryde Avenue off-ramp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline between McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>374</td>
<td>693</td>
<td>1,089</td>
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<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>8,104</td>
<td>9,416</td>
<td>9,635</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>2,325</td>
<td>4,413</td>
<td>7,133</td>
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<tr>
<td>Amador Street off-ramp</td>
<td>35</td>
<td>73</td>
<td>200</td>
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<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>2,290</td>
<td>4,340</td>
<td>6,933</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
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<td>530</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>2,148</td>
<td>4,043</td>
<td>6,402</td>
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<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>116</td>
<td>247</td>
<td>505</td>
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<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>2,264</td>
<td>4,290</td>
<td>6,908</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>91</td>
<td>225</td>
<td>634</td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>2,258</td>
<td>4,229</td>
<td>6,575</td>
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</tbody>
</table>

**Source:** URS 2008a  
NA = Not analyzed
Table 2.5-12 PM Peak Period Comparison of Traffic Conditions – Alternative 2

<table>
<thead>
<tr>
<th>Segments</th>
<th>Traffic Volumes</th>
<th>Average (Mean) Speeds (MPH)</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5:00 – 6:00</td>
<td>6:00 – 7:00</td>
<td>7:00 – 8:00</td>
</tr>
<tr>
<td>Westbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>7,897</td>
<td>7,885</td>
<td>7,721</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>442</td>
<td>500</td>
<td>505</td>
</tr>
<tr>
<td>Mainline between El Portal Drive off-ramp and on-ramp</td>
<td>7,456</td>
<td>7,385</td>
<td>7,216</td>
</tr>
<tr>
<td>El Portal Drive on-ramp</td>
<td>596</td>
<td>553</td>
<td>554</td>
</tr>
<tr>
<td>Mainline between El Portal Drive on-ramp and San Pablo Dam Road off-ramp</td>
<td>8,051</td>
<td>7,938</td>
<td>7,770</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>1,061</td>
<td>1,107</td>
<td>1,093</td>
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<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>6,990</td>
<td>6,831</td>
<td>6,677</td>
</tr>
<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>1,129</td>
<td>1,034</td>
<td>1,100</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road on-ramp and McBryde Avenue off-ramp</td>
<td>8,119</td>
<td>7,865</td>
<td>7,777</td>
</tr>
<tr>
<td>McBryde Avenue off-ramp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline between McBryde Avenue off-ramp and Solano Avenue on-ramp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solano Avenue on-ramp</td>
<td>465</td>
<td>383</td>
<td>392</td>
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<tr>
<td>Mainline west of Solano Avenue on-ramp</td>
<td>8,584</td>
<td>8,248</td>
<td>8,169</td>
</tr>
<tr>
<td>Eastbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mainline west of Amador Street off-ramp</td>
<td>9,120</td>
<td>9,121</td>
<td>9,156</td>
</tr>
<tr>
<td>Amador Street off-ramp</td>
<td>97</td>
<td>108</td>
<td>96</td>
</tr>
<tr>
<td>Mainline between Amador Street off-ramp and San Pablo Dam Road off-ramp</td>
<td>9,023</td>
<td>9,013</td>
<td>9,060</td>
</tr>
<tr>
<td>San Pablo Dam Road off-ramp</td>
<td>786</td>
<td>694</td>
<td>819</td>
</tr>
<tr>
<td>Mainline between San Pablo Dam Road off-ramp and on-ramp</td>
<td>8,236</td>
<td>8,319</td>
<td>8,241</td>
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<tr>
<td>San Pablo Dam Road on-ramp</td>
<td>1,319</td>
<td>1,234</td>
<td>1,407</td>
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<tr>
<td>Mainline between San Pablo Dam Road on-ramp and El Portal Drive off-ramp</td>
<td>9,555</td>
<td>9,553</td>
<td>9,648</td>
</tr>
<tr>
<td>El Portal Drive off-ramp</td>
<td>1,107</td>
<td>1,120</td>
<td>1,185</td>
</tr>
<tr>
<td>Mainline east of El Portal Drive off-ramp</td>
<td>9,318</td>
<td>9,281</td>
<td>9,375</td>
</tr>
</tbody>
</table>

Source: URS 2008a

NA = Not analyzed
With the proposed improvements, four of the study intersections—San Pablo Avenue/San Pablo Dam Road, Amador Street/Alpine Road, the I-80 westbound on-ramp/Solano Avenue/Humboldt Street, and the I-80 eastbound off-ramp/Amador Street—are projected to operate at unacceptable levels of service under future Alternative 2 conditions (Tables 2.5-13A and 2.5-13B). The same would be true for the No Build and Alternative 1 conditions. All five intersections proposed for improvement with this alternative (I-80 westbound ramps/San Pablo Dam Road, Amador Street/San Pablo Dam Road/I-80 eastbound ramps, Frontage Road [I-80 westbound off-ramp under existing conditions]/McBryde Avenue/Humboldt Street, I-80 westbound ramps/El Portal Drive, and I-80 eastbound ramps/El Portal Drive) are projected to operate at acceptable levels of service during both AM and PM peak hours.

The average delays at the intersections of the San Pablo Dam Road/I-80 westbound and eastbound off-ramps are projected to be shorter than those under Alternative 1 (Intersections 4 and 5). The realignment of Amador Street under Alternative 2 would reduce congestion and conflicting turning movements at the intersection of the I-80 eastbound ramps and San Pablo Dam Road.

Intersections 4, 5, 10, and 11 in Table 2.5-13A would improve from unacceptable (LOS E or F) to acceptable (D or better) compared with future No Build conditions. The following are changes to intersections that are predicted to continue to operate at LOS E or F under future Alternative 2 conditions:

- San Pablo Avenue/San Pablo Dam Road and the I-80 westbound on-ramp/Solano Avenue/Humboldt Street intersection would continue to operate at LOS F with the same delay as the No Build Alternative (no change).
- Level of service at Amador Street/Alpine Road would remain the same, but the PM delay would increase by more than ten seconds (an impact with this alternative). This change is associated with increased traffic on Amador Street as discussed for Alternative 1.
- Delays at the I-80 eastbound off-ramp/Amador Street and Amador Street/San Pablo Dam Road intersections would decrease with Alternative 2 because of the realignment/separation of the intersections.
Table 2.5-13A  Summary of Level of Service Analysis at Study Intersections—Future Alternative 2 Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th></th>
<th>PM Peak Hour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>V/C</td>
<td>Delay*</td>
<td>LOS</td>
</tr>
<tr>
<td>1 San Pablo Avenue/San Pablo Dam Road</td>
<td>1.04</td>
<td>&gt;80.0</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>2 Contra Costa Avenue/San Pablo Dam Road</td>
<td>0.43</td>
<td>10.3</td>
<td>B</td>
<td>0.66</td>
</tr>
<tr>
<td>3 Ventura Avenue/San Pablo Dam Road</td>
<td>0.49</td>
<td>7.1</td>
<td>A</td>
<td>0.8</td>
</tr>
<tr>
<td>4 I-80 WB ramps/San Pablo Dam Road</td>
<td>0.95</td>
<td>37.3</td>
<td>D</td>
<td>0.99</td>
</tr>
<tr>
<td>5 I-80 EB ramps/San Pablo Dam Road</td>
<td>0.77</td>
<td>44.2</td>
<td>D</td>
<td>0.93</td>
</tr>
<tr>
<td>6 San Pablo Dam Road/Morrow Drive</td>
<td>0.66</td>
<td>5.0</td>
<td>A</td>
<td>0.68</td>
</tr>
<tr>
<td>7 Amador Street/Alpine Road</td>
<td>&gt;50.0</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Frontage Road/McBryde Avenue/Humboldt Street</td>
<td>0.82</td>
<td>46.9</td>
<td>D</td>
<td>0.78</td>
</tr>
<tr>
<td>9 I-80 WB on-ramp/El Portal Drive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 I-80 WB ramps/El Portal Drive</td>
<td>0.85</td>
<td>35.0</td>
<td>D</td>
<td>0.77</td>
</tr>
<tr>
<td>11 I-80 EB ramps/El Portal Drive</td>
<td>0.74</td>
<td>27.9</td>
<td>C</td>
<td>0.98</td>
</tr>
<tr>
<td>12 I-80 WB on-ramp/Solano Avenue/Humboldt Street</td>
<td>&gt;50.0</td>
<td>F</td>
<td></td>
<td>&gt;50.0</td>
</tr>
<tr>
<td>13 I-80 eastbound off-ramp/Amador Street</td>
<td>37.5</td>
<td>E</td>
<td></td>
<td>&gt;50.0</td>
</tr>
<tr>
<td>14 Amador Street/San Pablo Dam Road</td>
<td>29.4</td>
<td>C</td>
<td></td>
<td>33.9</td>
</tr>
</tbody>
</table>

Source: URS 2008a

Notes: Delay represented is average delay at signalized intersections and average delay on controlled approaches at unsignalized intersections.
* Delay in seconds per vehicle
EB = Eastbound
LOS = Level of service
V/C = Maximum volume-to-capacity ratios at signalized intersections
WB = Westbound
### Table 2.5-13B  Level of Service Analysis by Movement at Study Intersections: Future Alternative 2 Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Delay(s)</strong></td>
<td><strong>LOS</strong></td>
<td><strong>Delay(s)</strong></td>
</tr>
<tr>
<td>Entrance and San Pablo Avenue (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left/Through/Right</td>
<td>71.2</td>
<td>E</td>
</tr>
<tr>
<td>WB Left</td>
<td>61.8</td>
<td>E</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>46.3</td>
<td>D</td>
</tr>
<tr>
<td>NB Left</td>
<td>72.2</td>
<td>E</td>
</tr>
<tr>
<td>NB Through</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>NB Right</td>
<td>73.7</td>
<td>E</td>
</tr>
<tr>
<td>SB Left</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>SB Through/Right</td>
<td>30.6</td>
<td>C</td>
</tr>
<tr>
<td>Contra Costa and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB Through/Left</td>
<td>46.3</td>
<td>D</td>
</tr>
<tr>
<td>NB Right</td>
<td>44.2</td>
<td>D</td>
</tr>
<tr>
<td>SB Through/Left</td>
<td>45.8</td>
<td>D</td>
</tr>
<tr>
<td>NB Right</td>
<td>44.3</td>
<td>D</td>
</tr>
<tr>
<td>EB Left</td>
<td>48.7</td>
<td>D</td>
</tr>
<tr>
<td>EB Through/Right</td>
<td>5.5</td>
<td>A</td>
</tr>
<tr>
<td>WB Left</td>
<td>44.8</td>
<td>D</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>6.1</td>
<td>A</td>
</tr>
<tr>
<td>Ventura Avenue and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB Left/Through/Right</td>
<td>32.7</td>
<td>C</td>
</tr>
<tr>
<td>SB Left/Through/Right</td>
<td>35.7</td>
<td>D</td>
</tr>
<tr>
<td>EB Left</td>
<td>37.5</td>
<td>D</td>
</tr>
<tr>
<td>EB Through</td>
<td>6.4</td>
<td>A</td>
</tr>
<tr>
<td>EB Right</td>
<td>4.3</td>
<td>A</td>
</tr>
<tr>
<td>WB Left</td>
<td>32.8</td>
<td>C</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>4.7</td>
<td>A</td>
</tr>
<tr>
<td>I-80 WB Off-Ramp and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SB Through/Left</td>
<td>38.2</td>
<td>D</td>
</tr>
<tr>
<td>SB Right</td>
<td>30.5</td>
<td>C</td>
</tr>
<tr>
<td>EB Through/Left</td>
<td>45.2</td>
<td>D</td>
</tr>
<tr>
<td>EB Right</td>
<td>15.9</td>
<td>B</td>
</tr>
<tr>
<td>NB Through/Left</td>
<td>35.7</td>
<td>D</td>
</tr>
<tr>
<td>I-80 EB Off-Ramp and I-80 EB On-Ramp (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB Through/Left</td>
<td>20.7</td>
<td>C</td>
</tr>
<tr>
<td>NB Right</td>
<td>19.7</td>
<td>B</td>
</tr>
<tr>
<td>EB Left</td>
<td>27.9</td>
<td>C</td>
</tr>
<tr>
<td>EB Through</td>
<td>33.2</td>
<td>C</td>
</tr>
<tr>
<td>WB Through/Right</td>
<td>59.3</td>
<td>E</td>
</tr>
<tr>
<td>Morrow Drive and San Pablo Dam Road (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left</td>
<td>30.2</td>
<td>C</td>
</tr>
<tr>
<td>WB Right</td>
<td>27.8</td>
<td>C</td>
</tr>
<tr>
<td>NB Through</td>
<td>5.1</td>
<td>A</td>
</tr>
<tr>
<td>NB Right</td>
<td>3.2</td>
<td>A</td>
</tr>
<tr>
<td>SB Left</td>
<td>29.7</td>
<td>C</td>
</tr>
<tr>
<td>SB Through</td>
<td>4.2</td>
<td>A</td>
</tr>
<tr>
<td>Alpine Road and Amador Street (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left/Right</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>SB Through/Left</td>
<td>2.2</td>
<td>A</td>
</tr>
</tbody>
</table>
### Table 2.5-13B  Level of Service Analysis by Movement at Study Intersections: Future Alternative 2 Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay(s)</td>
<td>LOS</td>
</tr>
<tr>
<td>McBryde Avenue and WB Off Ramp (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Through/Right</td>
<td>36.7</td>
<td>D</td>
</tr>
<tr>
<td>WB Left</td>
<td>&gt;80</td>
<td>F</td>
</tr>
<tr>
<td>WB Through</td>
<td>26.7</td>
<td>C</td>
</tr>
<tr>
<td>NB Left</td>
<td>37.8</td>
<td>D</td>
</tr>
<tr>
<td>SB Left</td>
<td>34.1</td>
<td>C</td>
</tr>
<tr>
<td>SB Through</td>
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<td>C</td>
</tr>
<tr>
<td>SB Right</td>
<td>31</td>
<td>C</td>
</tr>
<tr>
<td>EI Portal Drive and I-80 WB Off-Ramp (Signalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Through</td>
<td>31.8</td>
<td>C</td>
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<td>EB Right</td>
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<td>D</td>
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<td>C</td>
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<td>WB Through</td>
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<td>A</td>
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<tr>
<td>SB Left</td>
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<td>D</td>
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<tr>
<td>SB Right</td>
<td>&gt;80</td>
<td>F</td>
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<tr>
<td>EI Portal Drive and I 80 EB On-Ramp (Signalized)</td>
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<tr>
<td>EB Left</td>
<td>13.6</td>
<td>B</td>
</tr>
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<td>EB Through</td>
<td>9.8</td>
<td>A</td>
</tr>
<tr>
<td>WB Through</td>
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<td>C</td>
</tr>
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</tr>
<tr>
<td>NB Left</td>
<td>57.1</td>
<td>E</td>
</tr>
<tr>
<td>NB Through</td>
<td>30.7</td>
<td>C</td>
</tr>
<tr>
<td>NB Right</td>
<td>30.7</td>
<td>C</td>
</tr>
<tr>
<td>Solano Avenue and Humboldt Street (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WB Left/Through/Right</td>
<td>6.8</td>
<td>A</td>
</tr>
<tr>
<td>SB Left/Through/Right</td>
<td>&gt;50</td>
<td>F</td>
</tr>
<tr>
<td>Amador Street and I-80 EB Off-Ramps (Unsignalized)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB Left</td>
<td>39.1</td>
<td>E</td>
</tr>
<tr>
<td>EB Right</td>
<td>12.5</td>
<td>B</td>
</tr>
</tbody>
</table>

Source: URS 2008a

Notes: Delay in seconds per vehicle

EB = Eastbound
LOD = Level of service
NB = Northbound
SB = Southbound
WB = Westbound

### 2.5.3.4. Comparison of Traffic Operating Conditions Among Alternatives

This section summarizes the operational analysis for future conditions along the freeway mainline with respect to the following performance measures: number of vehicles, total distance traveled, total travel time, average network speed, and total network delay.

Table 2.5-14 and the following summarize the measures of effectiveness for future No Build and Alternatives 1 and 2 conditions:
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

- The total number of vehicles in the AM peak period is projected to increase by approximately 20 percent with Alternative 1 and 17 percent with Alternative 2, and in the PM increase by approximately four percent with both build alternatives.
- The total travel time in the AM peak period is projected to decrease by approximately 19 percent with Alternative 1 and 12 percent with Alternative 2.
- The total distance traveled in the AM peak period is projected to increase by approximately 28 percent with Alternative 1 and 24 percent with Alternative 2, and in the PM increase by approximately nine percent with both build alternatives.
- The average speed in the AM peak period is projected to increase by approximately 54 percent with Alternative 1 and 38 percent with Alternative 2, and in the PM increase by approximately eight percent with Alternative 1 and seven percent with Alternative 2.
- The total network delay is projected to decrease in the AM peak period by approximately 64 percent with Alternative 1 and 47 percent with Alternative 2, and in the PM decrease by approximately six percent with Alternative 1 and 5 percent with Alternative 2.

2.5.3.5. Construction Impacts

As stated in Section 1.3.1.1, project construction would be staged to maintain through traffic on I-80 and San Pablo Dam Road, although detours and limited short-term, temporary closures could be necessary on freeway ramps and other roadways in the project limits. During the final design phase, a Transportation Management Plan (TMP) will be prepared as part of the project to minimize delay and inconvenience to the traveling public, in accordance with Department requirements and guidelines. The TMP will address traffic impacts from staged construction, detours, and specific traffic handling concerns such as emergency access during project construction. The TMP would include briefing local public officials and developing a public information program to notify the public of project progress and upcoming closures and detours. The public information program would include outreach to ride sharing agencies, transit operators, and neighborhood and special interest groups. Impacts to pedestrians and bicyclists, as well as access to local developments, would all be carefully considered in the staging plans.

There is a potential for heavy trucks serving the construction site to increase the degradation of pavement on the delivery and haul routes used by the construction contractors. Contractor haul routes have not been identified at this preliminary stage.
of project development. It is anticipated that I-80 will be one of the primary haul routes. Maintenance of the freeway and ramps is the Department’s responsibility. For local roads, there will be a construction contractor requirement, or specification, for pre- and post-construction evaluations of the haul routes. The contractor will be required to identify planned haul routes and estimated truck traffic on the routes. Pavement damage or degradation identified through the pre- and post-surveys that can be associated with the project’s truck trips will be a repair requirement of the contractors.

2.5.3.6. Pedestrian and Bicycle Facilities
Access to and from the project’s transportation facilities including San Pablo Dam Road, McBryde Avenue, El Portal Drive, and other local streets in the project limits would be designed with consideration of low-mobility groups and in conformance with ADA. Design features would include ramped curbs at intersections and accessible locations for public transit stops.

The project would upgrade existing sidewalks on and around San Pablo Dam Road at the interchange area to meet ADA standards and California Code of Regulations Title 24 requirements. Both alternatives will include ADA-accessible sidewalks and crosswalks on each side of San Pablo Dam Road.

The project also proposes to construct bicycle lanes on the rebuilt San Pablo Dam Road Overcrossing under either build alternative. If applicable, additional nonmotorized and pedestrian features may be considered during the final design phase.

2.5.4. Avoidance, Minimization, and/or Mitigation Measures
Both of the build alternatives improve traffic operations within the project limits. In general, levels of service would be the same or improve, and delays would decrease within the project limits. The slight increase in delays at the Amador Street/Alpine Road intersection with both build alternatives is not considered a substantial impact from the project, and may warrant consideration in the future for additional traffic controls regardless of whether the proposed I-80/San Pablo Dam Road Interchange improvements are made. At the I-80 eastbound off-ramp/Amador Street intersection, Alternative 2 would improve the existing LOS from D (AM) and F (PM) to LOS C in the AM and PM.
Table 2.5-14 Comparison of Traffic Measures of Effectiveness

<table>
<thead>
<tr>
<th>Measure of Effectiveness</th>
<th>Units</th>
<th>Year 2035 Conditions</th>
<th>Difference in Measure of Effectiveness</th>
<th>Difference in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No Build</td>
<td>Alternative 1</td>
<td>Alternative 2</td>
</tr>
<tr>
<td>Total Number of Vehicles</td>
<td>Vehicles</td>
<td>AM</td>
<td>55,019</td>
<td>65,838</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>70,004</td>
<td>73,044</td>
</tr>
<tr>
<td>Total Travel Time</td>
<td>Vehicle Hours</td>
<td>AM</td>
<td>4,260</td>
<td>3,465</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>6,084</td>
<td>6,144</td>
</tr>
<tr>
<td>Total Path Distance</td>
<td>Vehicle Miles</td>
<td>AM</td>
<td>124,870</td>
<td>159,663</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>167,732</td>
<td>182,478</td>
</tr>
<tr>
<td>Average Speed</td>
<td>Miles per hour</td>
<td>AM</td>
<td>30</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Total Delay Time</td>
<td>Vehicle Hours</td>
<td>AM</td>
<td>2,165</td>
<td>784</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>3,272</td>
<td>3,081</td>
</tr>
</tbody>
</table>

Source: URS 2008a
Note: The Difference in Measure of Effectiveness is calculated with respect to future No Build conditions.
2.6. Visual/Aesthetics

This section describes the visual setting of the project study area presented in the *Visual Resources Impact Report* (Haygood and Associates 2009).

2.6.1. Regulatory Setting

NEPA establishes that the Federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 USC 4331[b][2]). To further emphasize this point, 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” (California Public Resources Code [PRC] Section 21001[b]).

2.6.2. Affected Environment

The project limits on I-80 are located in foothill terrain at the base of the East Bay hills between El Portal Drive and McBryde Avenue in the cities of San Pablo and Richmond and unincorporated Contra Costa County. The natural gradient of the freeway slopes downward from the east to the west toward San Francisco Bay. The terrain adjacent to the freeway varies but generally rises steeply to the east of I-80 and is flat to moderately sloping downgradient toward San Pablo Bay to the west.

The visual setting of the project area is dominated by urban features. Views along the freeway corridor are generally of overcrossings (located at San Pablo Dam Road, McBryde Avenue, and Riverside Avenue) and soundwalls, retaining walls, landscaping, signs, and housing and commercial land uses. Non-urban features are limited to cut slopes and vegetated areas between I-80 and San Pablo Dam Road at the eastern extent of the project limits. Views of the East Bay hills to the north and east include some remnants of natural topographical features and grasslands. Vegetation in and adjacent to the project limits is mature and consists of introduced species of trees, shrubs, and groundcovers. I-80 is not a designated California scenic highway within the project limits.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

The visual resources evaluation used criteria and methods provided in the guidance from *Visual Impact Assessment for Highway Projects* (FHWA 1981). Eighteen locations were identified, described, and photographed to represent the wide range of existing visual conditions within the project limits. The visual character and quality of the existing landscape was evaluated from the representative vantage points based on urban and natural characteristics, and quality (defined in terms of vividness, intactness, and unity).

Figures 2.6-1 through 2.6-5 include photographs of the existing setting from various vantage points in the project area. The photographs represent the range of visible features that exist in the project limits. Figure 2.6-1 shows the photo locations and view directions.

### 2.6.3. Environmental Consequences

#### 2.6.3.1. Changes to the Visual Setting in the Study Area

Descriptions of each view perspective (Views A through R) and the changes to the visual setting that would result from the project are provided in Table 2.6-1. Figures 2.6-6 through 2.6-11 present before-and-after visual simulations for five locations where the project has the greatest potential to affect views.

**Table 2.6-1 Summary of Visual Changes at Representative View Locations**

<table>
<thead>
<tr>
<th>View ID (Figure #)</th>
<th>Description of Existing View</th>
<th>Changes with the Project (With Both Build Alternatives Unless Noted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (2.6-2)</td>
<td>Regional view from Hillcrest Road looking toward I-80 and the El Portal Drive interchange ramps. This photo illustrates a distant view of the eight-lane freeway from the hills to the east of the project.</td>
<td>The project would close the existing and build a new westbound on-ramp at the El Portal Drive overpass. Some trees near the freeway would be removed to accommodate the new on-ramp. Overall, the existing urban and intermixed vegetated areas and street landscaping would remain the same.</td>
</tr>
<tr>
<td>B (2.6-2)</td>
<td>East from I-80, at the exit for the eastbound El Portal Drive off-ramp. The eucalyptus trees to the left on this photo are adjacent to I-80 at El Portal Drive.</td>
<td>The eucalyptus trees to the left of I-80 in this view would be removed to accommodate the new westbound on-ramp. New trees will be planted.</td>
</tr>
<tr>
<td>C (2.6-2)</td>
<td>East from the San Pablo Dam Road westbound off-ramp. Mature trees, shrubs, and grasses are visible on each side of the freeway and ramps.</td>
<td>A retaining wall would be built on the freeway side of the ramp varying in height from four to 12 feet and approximately 550 feet long. Some trees visible to the left in this photo would be removed to accommodate a widened westbound off-ramp. Changes to the ramp are limited to minor shoulder widening and restriping.</td>
</tr>
</tbody>
</table>
Table 2.6-1 Summary of Visual Changes at Representative View Locations

<table>
<thead>
<tr>
<th>View ID</th>
<th>Description of Existing View</th>
<th>Changes with the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>D (2.6-2)</td>
<td>West from the same vantage point as View C, toward the San Pablo Dam Road westbound off-ramp and existing San Pablo Dam Road Overcrossing.</td>
<td>The build alternatives will replace the San Pablo Dam Road Overcrossing with a wider structure, about two feet higher than the existing bridge. Alternative 1 would maintain the bridge in approximately the same location. Alternative 2 would shift and realign the east side of the overcrossing (left side of the photo) toward the viewer.</td>
</tr>
<tr>
<td>E (2.6-3)</td>
<td>Westbound on I-80 at the existing pedestrian overcrossing near Riverside Elementary School.</td>
<td>The project would relocate this pedestrian overcrossing approximately 300 feet to the east at Riverside Avenue. The overcrossing would be longer to span the proposed frontage road and Amador Street. The vegetation visible on the right side of this photo would be removed. An existing soundwall would be reconstructed and extended on the right (west) side of I-80.</td>
</tr>
<tr>
<td>F (2.6-3)</td>
<td>Westbound on I-80 showing the McBryde Avenue off-ramp. Retaining walls and soundwalls are adjacent to the freeway and ramps.</td>
<td>The project would close the ramp and provide a frontage road on the south side of I-80 connecting San Pablo Dam Road with McBryde Avenue. The frontage road would be at a higher elevation than I-80 at this location. Existing soundwalls would be relocated/reconstructed to accommodate the frontage road. With the project, the soundwalls would be at the new edge of the road and ramps, and the overall visual impression of experience of the soundwalls and retaining walls would be similar to the existing setting.</td>
</tr>
<tr>
<td>G (2.6-3)</td>
<td>View along Amador Street near its intersection with San Pablo Dam Road, showing portion of residential neighborhood that lines east side of the street.</td>
<td>With Alternative 1, the eastbound I-80 off-ramp would remain in its existing location, and minor realignment of Amador Street would take place. The existing vegetation will mostly remain. The profile (grade) of Amador Street would be increased by approximately 2.5 feet in this location to match the elevation of the reconstructed San Pablo Dam Road Overcrossing. Alternative 2 would relocate and curve San Pablo Dam Road to the north, and this portion of Amador Street would be shifted to the east. The project would add an aesthetically treated retaining wall approximately four to eight feet high. Most existing vegetation near the interchange would be removed.</td>
</tr>
</tbody>
</table>
### Table 2.6-1 Summary of Visual Changes at Representative View Locations

<table>
<thead>
<tr>
<th>View ID (Figure #)</th>
<th>Description of Existing View</th>
<th>Changes with the Project (With Both Build Alternatives Unless Noted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H (2.6-3)</td>
<td>View across San Pablo Dam Road looking northeast toward a mobile home community above the interchange, near the China Slide area. Residents in the community have views of San Pablo Dam Road and the interchange.</td>
<td>With Alternative 1, San Pablo Dam Road would be widened at this location but retain approximately the same alignment. Because of the presence of the China Slide on the slope adjacent to this location (to the right, or south, in this photo), further encroachment of the road into the hillside would be minimized or avoided. With Alternative 2, views from this location would be of a realigned San Pablo Dam Road and overcrossing, slightly west of the existing slope and roadway alignment.</td>
</tr>
<tr>
<td>I (2.6-4)</td>
<td>Northeast along the commercial area adjacent to San Pablo Dam Road where it crosses over I-80.</td>
<td>Both alternatives would widen the San Pablo Dam Road Overcrossing. The widening would be to the north or left side of the road section in this view, and some of the existing trees and shrubs would have to be removed and replaced.</td>
</tr>
<tr>
<td>J (2.6-4)</td>
<td>Southwest along Rollingwood Drive toward residential homes that border El Portal Drive and the existing undercrossing at I-80. The eucalyptus trees in the background of the photo are adjacent to westbound I-80.</td>
<td>The construction of the relocated westbound El Portal on-ramp would require acquisition and removal of two homes on Rollingwood Drive (far left side of photo). The eucalyptus trees visible in the background of this photo are adjacent to westbound I-80 and would be removed to accommodate the new westbound on-ramp.</td>
</tr>
<tr>
<td>K (2.6-4)</td>
<td>Southwest along El Portal Drive and the existing soundwall between westbound I-80 and El Portal Drive.</td>
<td>Portions of this soundwall would be relocated to accommodate the proposed westbound I-80 auxiliary lane. Following completion, the relocated wall would appear similar to the existing setting shown in the photo. Independent of this project, the City of San Pablo is constructing an 8-foot masonry wall along the edge of El Portal Road, on the right side of this photo.</td>
</tr>
<tr>
<td>L (2.6-4)</td>
<td>From Church Lane looking north across St. Joseph Cemetery in the direction of I-80. The freeway is mostly screened within the distant hillside.</td>
<td>The proposed project would generally not affect views from this perspective (described in View J). Most of the distant vegetation shown in this view will remain.</td>
</tr>
<tr>
<td>M (2.6-5)</td>
<td>North along Joel Court. The homes on the right side of this photo have rear yards that border a soundwall along the I-80/McBryde Avenue westbound off-ramp.</td>
<td>This view would not change except for the relocation of the pedestrian overcrossing by approximately 300 feet to the east. The residences would remain, and a portion of the existing soundwall in the rear yards of these homes will be reconstructed and raised two to four feet in its current location.</td>
</tr>
</tbody>
</table>
Table 2.6-1 Summary of Visual Changes at Representative View Locations

<table>
<thead>
<tr>
<th>View ID (Figure #)</th>
<th>Description of Existing View</th>
<th>Changes with the Project (With Both Build Alternatives Unless Noted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (2.6-6)</td>
<td>View from Rollingwood Drive toward I-80 and El Portal Drive.</td>
<td>The project would remove two residences have addresses on Rollingwood Drive with rear yards that border El Portal Drive: this home and the home adjacent to it to the right (southwest). I-80 crosses over El Portal Drive at this location, which is visible from homes on Rollingwood Drive. In the perspective of this view, the project would remove the two homes, eucalyptus trees in the background, and the soundwall on westbound I-80. The westbound on-ramp would have a retaining wall, as shown in the visual simulation in Figure 2.6-6. The retaining wall would vary from two to 15 feet high near the El Portal Drive intersection to its merge with westbound I-80.</td>
</tr>
<tr>
<td>O (2.6-7)</td>
<td>View west from the westbound I-80/San Pablo Dam Road off-ramp near the existing I-80/San Pablo Dam Road Interchange.</td>
<td>Motorists exiting on the westbound off-ramp to San Pablo Dam Road will view a widened ramp and a reconstructed I-80 overcrossing. This perspective and view would otherwise remain generally the same, as shown in the visual simulation in Figure 2.6-7.</td>
</tr>
<tr>
<td>P (2.6-8)</td>
<td>North from San Pablo Dam Road toward the overcrossing of I-80.</td>
<td>The changes at this location are generally the same as described for View 1, as shown in the visual simulation in Figure 2.6-8.</td>
</tr>
<tr>
<td>Q (2.6-9)</td>
<td>West toward the homes along Humboldt Street and the existing soundwall bordering westbound I-80.</td>
<td>The homes along the east side of Humboldt Street (along the existing soundwall on westbound I-80) and at the eastern end of Riverside Avenue would be acquired and the structures removed. The existing soundwall would be removed, and a new soundwall would be constructed on the east side of Humboldt Street. Views from homes on the west side of Humboldt Street would be of the soundwall instead of residential structures, as shown in the visual simulation in Figure 2.6-9.</td>
</tr>
<tr>
<td>R (2.6-10, 2.6-11)</td>
<td>East from Amador Street toward San Pablo Dam Road and the I-80 eastbound on-ramp.</td>
<td>With Alternative 1, the view looking north at the intersection of San Pablo Dam Road and Amador Street would be generally the same, except that trees and shrubs along I-80 would be removed. The intersection would be raised slightly due to the higher profile of the San Pablo Dam Road Overcrossing but would not substantially change the view at this location, as shown in the visual simulation in Figure 2.6-10. With Alternative 2, the San Pablo Dam Road Overcrossing would shift to the north and Amador Street would be realigned. The overcrossing would be higher than the existing structure. Most trees and vegetation in the vicinity of the San Pablo Dam Road/Amador Street intersection would be removed, as shown in the visual simulation in Figure 2.6-11.</td>
</tr>
</tbody>
</table>
Overall, the proposed project would not result in substantial adverse visual impacts. Views in the project area already include major visual elements of I-80, the interchanges, the pedestrian overcrossing, soundwalls, freeway landscaping, and freeway signs and lighting. The project would modify this corridor by adding an auxiliary lane, relocating and modifying interchange ramps, reconstructing the San Pablo Dam Road Overcrossing, and relocating and extending existing soundwalls. These changes would not introduce new structures or features in the project limits that are not already part of the existing landscape. The project would require the acquisition of homes and commercial properties and the removal of existing vegetation including mature trees in specific areas, which would change the local visual setting.

2.6.3.2. Areas That Would Experience Greatest Visual Change

The major areas of change to the visual setting are described below.

East End of El Portal Drive / Rollingwood Neighborhood

Along westbound I-80, the addition of the auxiliary lane would require removal and replacement of three sections of an existing 16-foot-high soundwall to accommodate the additional freeway pavement area. The replaced sections would appear similar to the existing soundwall. The easternmost 300 feet of the existing soundwall, near the El Portal Drive underpass of I-80, would be removed and not replaced to accommodate the relocation of the westbound on-ramp at this location.

The easternmost portion of El Portal Drive in the project limits must be realigned to accommodate the proposed westbound on-ramp. This realignment requires acquisition and removal of two homes on Rollingwood Drive and removal of mature eucalyptus trees next to I-80. Near I-80 on Rollingwood Drive and El Portal Drive, residences and trees would be removed, exposing additional views of the freeway and the existing El Portal Drive undercrossing at I-80. This change is simulated in View N (Figure 2.6-6).

Independent of the proposed project, the City of San Pablo would construct a previously planned 8-foot-high masonry wall along El Portal Drive, to just east of Glenlock Street (see layout sheet L-5 in Appendix A). The proposed I-80/San Pablo Dam Road Interchange Project IS/EA...
Existing view perspectives A through F (shown in Figures 2.6-2 and 2.6-3)

Existing view perspectives G through M (shown in Figures 2.6-3 through 2.6-4)

Before-and-after view simulation perspectives N through R (shown in Figures 2.6-5 through 2.6-11)
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Back of figure
Figure 2.6-2 Existing Views in the Project Area (A–D)

A. From Hillcrest Road toward I-80 and El Portal Drive interchange ramps

B. East from I-80 at the eastbound El Portal Drive off-ramp

C. East from the San Pablo Dam Road westbound off-ramp

D. San Pablo Dam Road westbound off-ramp and existing overcrossing
Figure 2.6-3 Existing Views in the Project Area (E–H)

E. Westbound I-80 at the existing pedestrian overcrossing

F. Westbound I-80 at the McBryde Avenue off-ramp

G. Amador Street near its intersection with San Pablo Dam Road

H. Across San Pablo Dam Road looking northeast toward a mobile home community above the interchange, near the China Slide area

I-80/San Pablo Dam Road Interchange Project IS/EA
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I. Northeast along San Pablo Dam Road where it crosses I-80

J. Southwest along Rollingwood Drive toward homes that border El Portal Drive and the existing undercrossing at I-80

K. Southwest along El Portal Drive and the soundwall along westbound I-80

L. From Church Lane looking north across St. Joseph Cemetery toward I-80

**Figure 2.6-4 Existing Views in the Project Area (I–L)**

*I-80/San Pablo Dam Road Interchange Project IS/EA*
Back of figure
Figure 2.6-5 Existing Views in the Project Area (M)
Back of figure
| I-80/San Pablo Dam Road Interchange Project | Existing and Simulated View from Rollingwood Drive (View N) | Figure 2.6-6 |
Back of figure
Existing view from I-80 westbound off-ramp to San Pablo Dam Road

Simulated view with proposed project

I-80/San Pablo Dam Road
Interchange Project
Existing and Simulated View From I-80 Westbound Off-Ramp at San Pablo Dam Road
(View O)

Figure 2.6-7
Back of figure
Existing view north of San Pablo Dam Road, toward I-80 overcrossing

Simulated view with proposed project

I-80/San Pablo Dam Road Interchange Project  |  Existing and Simulated View of San Pablo Dam Road over I-80 (View P)  |  Figure 2.6-8
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Back of figure
Existing west from Humboldt Avenue of I-80 soundwall and Humboldt Avenue

Simulated view with proposed project

| I-80/San Pablo Dam Road Interchange Project | Existing and Simulated View along Humboldt Avenue (View Q) | Figure 2.6-9 |
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Back of figure
Existing view east from Amador Street of eastbound I-80 on-ramp at San Pablo Dam Road

Simulated view with proposed project

| I-80/San Pablo Dam Road Interchange Project | Existing and Simulated View (Alternative 1) from Amador St. at I-80/San Pablo Dam Road Intersection (View R-1) | Figure 2.6-10 |
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Back of figure
Existing view east from Amador Street of eastbound off-ramp from I-80 at San Pablo Dam Road

Simulated view with proposed project

I-80/San Pablo Dam Road Interchange Project

Existing and Simulated View (Alternative 2) from Amador St. at I-80/San Pablo Dam Road Intersection (View R-2)

Figure 2.6-11
Back of figure
Dam Road Interchange project would include extension of the city’s 8-foot-high masonry wall along the portion of the realigned El Portal Drive to shield the rear yards of the remaining homes within the project limits (see “Masonry Wall SW4” on layout sheet L-6 in Appendix A). The soundwall would replace existing wooden fences of approximately the same height. The masonry wall along El Portal Drive would not block any existing views and would provide a visual barrier to this busy arterial.

**San Pablo Dam Road Interchange**

The overcrossing would be reconstructed, would appear slightly higher and larger, and would modify the connection and alignment of Amador Street at the interchange. Visual changes resulting from the two alternatives at this location include the following.

- **Alternative 1.** With this alternative, the San Pablo Dam Road Overcrossing would be reconstructed in approximately the same location as the existing overcrossing but would be wider and higher. The westbound off-ramp would be approximately 16 feet wider. The increased overcrossing height would require installation of new retaining walls at the edge of the right-of-way on the west side of the I-80 and San Pablo Dam Road, adjacent to the restaurants on the southwest and northwest quadrants of the interchange. These retaining walls would replace existing walls. Some trees and shrubs between I-80 and the eastbound on-ramp would be removed, as illustrated in Figure 2.6-10. The recreational vehicle storage and sales business next to San Pablo Dam Road and the eastbound on-ramp, which is located on right-of-way leased from the Department, would be partially or entirely removed.

- **Alternative 2.** Alternative 2 would reconstruct the San Pablo Dam Road Overcrossing to the northeast of, and at an angle to, the existing alignment. The overcrossing would also be higher than the existing structure. View O (Figure 2.6-7) illustrates the changes at the westbound off-ramp, which would be widened, and shows the slight elevation change to the overcrossing. View P (Figure 2.6-8) shows the proposed changes from the viewpoint of an eastbound motorist on San Pablo Dam Road approaching the overcrossing. View R-2 (Figure 2.6-11) shows the changes from the viewpoint of a motorist traveling north on Amador Street toward the I-80/San Pablo Dam Road Interchange. This simulation illustrates the realignment of Amador Street to conform to the Amador Street/San Pablo Dam Road intersection, which would be relocated to

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8 These homes front Rollingwood Drive and Judith Court and have rear yards along El Portal Drive.
the north. All existing trees between the westbound on-ramp and I-80 would be removed.

**Humboldt Street to McBryde Avenue**

The project would require the acquisition and removal of homes on the east side of Humboldt Street. The existing soundwall would be reconstructed near the east side of Humboldt Street, and residents along this street would see the soundwall instead of the existing homes. More structural uniformity, characteristic of concrete and masonry structures, would be visible in views toward I-80. The existing self-storage business between Riverside Avenue and Wildcat Creek would be retained to the extent possible by minimizing right-of-way acquisition. If the entire property must be acquired, the soundwall would be extended along westbound I-80, and residents of the condominium complex to the west would view a soundwall in the distance instead of the self-storage buildings.

2.6.3.3. Construction Impacts

During construction, which would occur over a 2-year period, viewers would generally see materials, equipment, workers, and the operation of construction equipment. Impacts of construction are unavoidable but would be temporary. Motorists, pedestrians, and bicyclists would be exposed briefly to views of construction activities while passing through construction zones. Some residents near the soundwalls that would be reconstructed as part of the project would have views of construction activities after the existing walls are removed and before the new walls are constructed.

Lighting for nighttime construction activities could create a temporary source of light or glare in and directly adjacent to the project limits. Temporary lighting installations include site lighting for construction staging areas and portable generator-mounted lighting for paving and other construction activities. The construction contractor would be required to direct lighting away from residential areas.

The visual effects of project construction would be temporary and transient in nature.

2.6.4. Avoidance, Minimization, and/or Mitigation Measures

The measures listed in Table 2.6-2 should be considered to minimize visual impacts from the proposed project.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Table 2.6-2 Visual Minimization Measures

<table>
<thead>
<tr>
<th>Project Feature</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soundwalls and Retaining Walls</td>
<td>Architectural treatment of soundwalls and retaining walls should match other walls adjacent to the project. Wall surfaces should have an aesthetic treatment to reduce glare and visual monotony.</td>
</tr>
<tr>
<td>Replacement Planting</td>
<td>Replacement planting will help blend the project into the community, provide screening of highway features, and provide permanent slope stabilization. Vine planting to soften walls and control graffiti should be accommodated where possible. An emphasis on tree planting should be accommodated wherever possible. Tall evergreen trees should be considered for replacement planting in locations where existing large-scale trees are removed for the project.</td>
</tr>
<tr>
<td>Locations of Special Interest</td>
<td>Rollingwood Drive, Humboldt Avenue, and Amador Street are locations where the visual impacts from the project are predicted to have the highest viewer sensitivity. Special attention to accommodating the above recommendations should be paid to these areas, with emphasis on the following priorities: o Rollingwood Drive, Amador Street: Add trees or shrubs wherever possible to screen views of roadway and restore views of existing trees. o Humboldt Avenue: As replacement planting will not be possible along the side of the new soundwall facing the community, aesthetic wall treatments should be emphasized.</td>
</tr>
</tbody>
</table>

2.7. Cultural Resources

This section summarizes the Archaeological Survey Report (URS 2008c), Historic Property Survey Report (URS 2008d), and Historic Resources Evaluation Report (JRP 2008) prepared for the proposed project.

2.7.1. Regulatory Setting

“Cultural resources” as used in this document refers to all historical and archaeological resources, 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 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 among the Advisory Council, FHWA, State Historic
Preservation Officer (SHPO), and the Department went into effect for Department projects, both State and local, with FHWA involvement. The Programmatic Agreement takes the place of the Advisory Council’s regulations (36 CFR 800), streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007).

Historical resources are considered under CEQA and under 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 the Department to inventory State-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require State agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing State-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks.

2.7.2. Affected Environment

The study areas for cultural resources investigations are referred to as Areas of Potential Effect (APEs). The archaeological resources APE includes the existing and proposed right-of-way for the project, including both of the build alternatives, and additional area sufficient for project construction. This includes parcels that must be acquired for the project and area sufficient for temporary construction easements, staging, and access. The architectural APE includes the area of the archeological APE, as well as parcels with buildings or structures adjacent to the existing and proposed right-of-way that could be indirectly affected by project construction or operation. In addition, the project would reconstruct some non-State-owned roadway and driveway connections. Therefore, the APE areas also include existing and proposed changes to City of San Pablo and Contra Costa County right-of-way.

2.7.2.1. Records/Archival Review and Archaeological Field Survey Results

An archival search was completed at the California Historic Resources Inventory System, Northwest Information Center (CHRIS/NWIC) at California State University, Sonoma, for the project right-of-way and a 0.25-mile radius, as well as a
review of reports for all known cultural resource studies conducted within a 1-mile radius.

The records search, review of historical maps and General Land Office plats, and field survey did not identify any archaeological resources within the APE. Moreover, previous field surveys conducted within the APE also did not result in the recordation of any archaeological resources.

All accessible portions of the archaeological APE were subject to a pedestrian survey. No new resources or sites were identified or recorded.

2.7.2.2. Native American Consultation
A records search of the Sacred Lands File was conducted by the Native American Heritage Commission. No sacred lands were identified in the project’s APE. The Native American Heritage Commission provided the names and contact information for seven individuals or organizations that may have knowledge of cultural resources in the project area. Letters were sent to each seeking comments about any concerns or issues pertinent to the project. Follow-up emails and telephone messages were also sent. No comments were received.

2.7.2.3. Potential for Presence of Subsurface Resources
Due to the extensive modification of the ground surface at the project site and the proposed excavation within artificial fill soils, the probability of encountering subsurface archaeological deposits is considered very low.

2.7.2.4. Historic Resources Records and Field Inventory Results
The pedestrian survey of the archaeological APE did not identify any buildings and structures not already identified in the records search that were potentially constructed before 1961 (i.e., over 45 years) or that exhibited characteristics that potentially meet the criteria for listing in the National Register of Historic Places (NRHP). The records search and literature review identified 17 previously unrecorded historic-era properties. Caltrans Professionally Qualified Staff found, and the SHPO concurred, that the properties are not eligible for listing to the NRHP. Likewise, none of these properties appear to be eligible for the California Register of Historic Resources (CRHR), nor do they appear to be historical resources for the purposes of CEQA.
2.7.3. Environmental Consequences

No sensitive cultural resources exist within either the archaeological or historic structures APE areas. Consequently, the cultural resource finding for this project is No Historic Properties Affected. The project would also not affect, or use, a Section 4(f) historic resource.

The cultural resources studies and determinations that no properties within the APE areas are eligible for the NRHP were submitted to the State Historic Preservation Officer, who concurred with the findings. This consultation is included in Appendix I.

2.7.4. Avoidance, Minimization, and/or Mitigation Measures

No further archaeological work is necessary within the APE. Additional surveys will be required if the project changes to include areas not previously surveyed. The project does not warrant the completion of a formal discovery plan based on the absence of recorded, reported, or identified archaeological sites in and adjacent to the APE and the perceived low potential for exposing unknown archaeological resources during construction.

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

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code Section 5079.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission who will then notify the Most Likely Descendent. At this time, the person who discovered the remains will contact the District Environmental Branch so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of California Public Resources Code Section 5097.98 are to be followed as applicable.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Physical Environment

2.8. Hydrology and Floodplains

The following summarizes the findings of the *Location Hydraulic Study Report* (WRECO 2008) prepared for the proposed project.

2.8.1. 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. FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

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

2.8.2. Affected Environment

The project area is in the 22,621-acre Berkeley Hydrologic Area Watershed. The major drainages in the watershed are San Pablo Creek, Wildcat Creek, San Leandro Creek, and San Lorenzo Creek. Surface water resources in the project area include an unnamed drainage at approximately Station 40+70 and San Pablo and Wildcat creeks, which cross under I-80 in concrete culverts and flow west to San Pablo Bay. According to the U.S. Geological Survey, the unnamed drainage is not a perennial stream (WRECO 2008).

The project crosses Wildcat Creek between San Pablo Dam Road and McBryde Avenue and San Pablo Creek at the existing El Portal Drive on-ramp to westbound I-80. Both
creeks are in culverts where they cross I-80. San Pablo and Wildcat creeks within and near the project area have been confined by urban infill and altered with concrete, riprap, and bank stabilization devices, and the natural channels have become incised. However, the creeks are valued and protected by community members and organizations such as the San Pablo Watershed Neighbors Education and Restoration Society.

The project area is shown within two Federal Emergency Management Agency (FEMA) National Flood Insurance Program maps (Community Panel Numbers 0600360001E and 0600250230C; Figures 2.8-1 and 2.8-2). At Wildcat Creek upstream of Amador Street, the FEMA map indicates that the area is either a 500-year flood zone or a 100-year flood zone with average depths of less than one foot or with drainage areas of less than one square mile. At the San Pablo Creek crossing at I-80, the FEMA map indicates that 100-year base floodplains exist at an area immediately downstream of the cross culvert and also upstream of the cross culvert from the San Pablo city limit to El Portal Drive. The maps indicate the 100-year flood is contained within the channels for both Wildcat and San Pablo creeks; however, base flood elevations and flood hazard factors are not determined.

Figure 2.8-1 FEMA Flood Insurance Rate Map: Wildcat Creek 100-Year Floodplain
2.8.3. Environmental Consequences

2.8.3.1. Description of Work and Project Changes at Drainages/Channels

Wildcat and San Pablo creeks are in culverts where they cross existing freeway facilities. No structures would be placed within the creeks, and no work is proposed within the FEMA-designated floodplains for either project alternative. At San Pablo Creek, the pavement for the existing El Portal Drive on-ramp would be removed. No construction would take place in the creek or on its banks. At Wildcat Creek, a bridge structure would be placed at the top of the creek bank for the one-way frontage road to McBryde Avenue and the auxiliary lane to the westbound I-80 on-ramp from San Pablo Dam Road. No bridge construction would take place within the creek waters, and existing wingwalls would remain unaffected. The bridge structure is anticipated to clear-span the creek (meaning that no piers or footings would be placed within the creek) but would require installation of abutments at the top or outside of the creek banks.
2.8.3.2. Natural and Beneficial Floodplain Values and Regulatory Floodway

The hydraulic and floodplain evaluation determined that the proposed project would not result in any longitudinal encroachment, significant encroachment or risk, significant impact to natural and beneficial floodplain values, or support of incompatible floodplain development (see Appendix B of the Location Hydraulic Study Report [WRECO 2008]). Natural and beneficial floodplain values within the project area could include the presence of vegetation and natural habitat in San Pablo and Wildcat creeks, although limited habitat exists in the project because of existing concrete channels and wingwalls on the west side of I-80. The project would not change flood passage because the San Pablo Creek channel would be avoided and work at Wildcat Creek would be limited to above the existing wingwalls. The project would not change base flood elevations within a regulatory floodway.

2.8.3.3. Changes in Runoff Quantities

Increases in runoff from impervious surface area added by the project would be minimal (estimated at 3.76 acres) compared to the existing runoff from the off-site watershed areas. Further studies of any hydromodification from the project with regard to drainage facilities would be performed during the final project design phase when more detailed survey information becomes available. Although the project would not increase existing flood risk, it will change runoff and drainage as discussed in Section 2.9.

2.8.4. Avoidance, Minimization, and/or Mitigation Measures

The project design avoids changes to existing floodplain areas, and therefore no avoidance, minimization, and/or mitigation measures are required.

2.9. Water Quality and Stormwater Runoff

This section is based on the Water Quality Report (URS 2008d) prepared for the proposed project. Hydrology and floodplains are discussed in Section 2.8.

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9 A regulatory floodway is a floodplain area designated and reserved by a Federal, State, or local authority to allow or maintain unobstructed flood flows within 1 foot of the designated flood elevations.
2.9.1. Regulatory Setting

2.9.1.1. Federal and State

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resource Control Board (SWRCB) or a Regional Water Quality Control Board (RWQCB) when the project requires a Federal permit. Typically this means a CWA Section 404 permit to discharge dredge or fill into a water of the United States, or a permit from the Coast Guard to construct a bridge or causeway over a navigable water of the United States under the Rivers and Harbors Act.

Along with CWA Section 401, Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) for the discharge of any pollutant into waters of the United States. The Federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and the nine RWQCBs. To ensure compliance with Section 402, the SWRCB has developed and issued the Department an NPDES Statewide Storm Water Permit to regulate stormwater and non-stormwater discharges from Department right-of-way, properties, and facilities. This same permit also allows stormwater and non-stormwater discharges into waters of the State pursuant to the Porter-Cologne Water Quality Act.

Stormwater discharges from the Department’s construction activities disturbing one acre or more of soil are permitted under the Department’s Statewide Storm Water NPDES permit. These discharges must also comply with the substantive provisions of the SWRCB’s Statewide General Construction Permit. Non-Departmental construction projects (encroachments) are permitted and regulated by the SWRCB’s Statewide General Construction Permit. All construction projects exceeding one acre or more of disturbed soil require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. The SWPPP, which identifies construction activities that may cause discharges of pollutants or waste into waters of the United States or waters of the State, as well as measures to control these pollutants, is prepared by the construction contractor and is subject to Department review and approval.

Finally, the SWRCB and the RWQCBs have jurisdiction to enforce the Porter-Cologne Act to protect groundwater quality. Groundwater is not regulated by Federal law but is regulated under the State’s Porter-Cologne Act. Some projects may involve placement or replacement of on-site treatment systems such as leach fields or septic systems or propose implementation of infiltration or detention treatment systems that may pose a threat to groundwater quality.
2.9.1.2. Local

The Contra Costa County General Plan (2005) and the City of San Pablo General Plan (1996) include policies that provide development guidance specific to water resources. These include erosion control measures for construction, grading, and filling, especially near watercourses, to minimize impacts from erosion, sedimentation, biochemical degradation, or thermal pollution.

2.9.2. Affected Environment

2.9.2.1. Surface Water Resources

Surface water resources in the general project vicinity consist of San Pablo and Wildcat creeks and an unnamed drainage at the beginning of the westbound off-ramp at San Pablo Dam Road (approximately Station 40+70 on Layout Sheet L-3 in Appendix A). The creeks cross under I-80 in concrete culverts and flow west to San Pablo Bay. San Pablo Creek is perennial, and flows are controlled by the East Bay Municipal Utility District (EBMUD) from regulation of water levels in San Pablo Reservoir, which is approximately five miles upstream. Flows in Wildcat Creek are controlled by two reservoirs, Jewel Lake and Lake Anza, which are located well upstream in Tilden Park. Wildcat Creek is ephemeral, although a series of pools remain during the dry season, separated by stretches of dry creek bed (Wise et al. 2007). San Pablo and Wildcat creeks within and near the project area support a riparian corridor but have been confined by urban infill and altered with concrete, riprap, and bank stabilization devices. The natural channels of the creeks have eroded.

**Water Supply**

EBMUD supplies water and provides wastewater treatment to parts of Alameda and Contra Costa counties. The Mokelumne River is the primary source of water used to serve the 1.3 million people in the EBMUD service area and is fed by runoff from the Sierra Nevada, collected in Pardee and Camanche reservoirs, and ultimately transported to the San Francisco Bay Area. The San Pablo Reservoir can also be used for water supply.

**Existing Surface Water Quality**

Total Maximum Daily Loads (TMDLs) are thresholds established for specific pollutants and water bodies where water quality standards are not being met. TMDLs define how much of a pollutant a water body can tolerate and meet water quality standards. TMDLs have been established for the San Francisco Bay for mercury and for diazinon (from some insecticides). A TMDL is in development for
polychlorinated biphenyls (PCBs). California’s 303(d) list of Water Quality Limited Segments (SWRCB 2006) includes both San Pablo and Wildcat creeks as impaired for diazinon from urban runoff/storm sewers.

2.9.2.2. Groundwater Resources

The proposed project is in the large, regional Santa Clara Valley groundwater basin and the East Bay Plain groundwater subbasin. The subbasin aquifer system consists of unconsolidated sediments of Quaternary age. Groundwater levels have been recorded at relatively shallow depths (seven to 12 feet) in the China Slide area (directly east of San Pablo Dam Road at the interchange), at 30 to 40 feet depth near Riverside Elementary School, and at 43 feet below ground surface near El Portal Drive. Groundwater and surface water in the project area are not used as sources of municipal water supply.

The San Francisco RWQCB does not identify any wells or groundwater contamination areas at or near the project area (SFRWQCB 1999).

2.9.3. Environmental Consequences

Temporary impacts could occur during construction activity from runoff eroding exposed soils or washing away construction material, and oils and grease from construction equipment and activities. Permanent impacts can be associated with additional pollutants or sediments entering roadway runoff. The following summarizes the potential for these effects from the project.

2.9.3.1. Short-Term (Construction) Impacts

The project would be constructed in stages, depending on funding, with a total construction schedule estimated to last approximately two years, extending over two rainy seasons.

During construction, there is a potential for temporary adverse impacts due to increased erosion and subsequent transport of sediment to surface waters. Soil erosion could increase the suspended solids, dissolved solids, and organic pollutants in the stormwater runoff generated in the project area. Over the course of construction, project activities would disturb soils and potentially affect surface waters. These activities include, but are not limited to, surface excavation; stockpiling of soils, sediments, and gravels; possible relocation of utilities; installation of traffic signs; construction of new roadways; paving and grinding; and concrete curing.
The potential also exists for spills and leaks of fluids from vehicles and equipment used during construction. Spills and leaks could pose a threat to water quality if contaminants were to enter water bodies and adversely affect vegetation and wildlife habitat. The magnitude of the impact would depend on the amount and type of material spilled.

**2.9.3.2. Long-Term (Permanent) Impacts**

Permanent impacts could potentially result from sediment carried by stormwater from project-related erosion and vehicle traffic-related pollutants carried in stormwater runoff.

In general, heavy metals associated with vehicle tire and brake wear, oil, grease, and exhaust emissions are the primary toxic pollutants associated with transportation corridors. The project would not increase overall traffic volumes but would slightly increase impervious surface area; however, the total storm water runoff and change in water quality is expected to have no effect or minimal effect on total pollutant emissions or loadings related to vehicles.

**2.9.4. Avoidance, Minimization, and/or Mitigation Measures**

Caltrans has been issued a Statewide NPDES permit for construction activities, and each project must comply with the conditions of the permit. A SWPPP is required by this permit for this project. The SWPPP will include stormwater best management practices (BMPs) applicable to this project during construction. These BMPs are expected to include measures for temporary soil stabilization and sediment control. Additionally, permanent erosion control BMPs will be addressed as part of the project design process. The statewide Caltrans Storm Water Management Plan (SWMP) identifies temporary (short-term) and permanent (long-term) BMPs, which were reviewed for the preliminary recommendation of project specific measures summarized in the following subsections. BMPs fall into four categories: Design Pollution Prevention, Treatment, Construction Site, and Maintenance.

**2.9.4.1. Short-Term (Construction) BMPs**

Riparian areas exist within the channels of San Pablo and Wildcat creeks in the project area. These channels will be identified as environmentally sensitive areas (ESAs) for protection as necessary with high-visibility fencing and erosion control. Earth-moving activities will also be necessary during construction. Temporary pads such as crushed rock or stone will be used at construction entrances/ exits to “stabilize” or prevent the tracking of mud and dirt off-site.
The project would increase impervious areas and stormwater discharge. When undeveloped land is paved or otherwise becomes impervious, stormwater runoff may discharge to creeks at a faster rate. This can result in changes in erosion, sometimes referred to as “hydromodification.” Hydromodification requirements from the Contra Costa NPDES Provision of the Contra Costa Clean Water Program may apply to this project. These design measures are intended to increase retainage, detaining or infiltrating water runoff from the project area, and would be specified during the project’s final design development. Potential stormwater runoff devices that can be incorporated into the project have been preliminarily reviewed (listed at the end of this section) but require additional design detail to confirm the appropriate measure specific to each location, and that the measures are feasible and effective. Development of these measures will be coordinated with Contra Costa County and/or RWQCB during final design and permitting to meet the requirements for minimizing and treating runoff that may have the potential for hydromodification impacts.

Temporary BMPs will be implemented during project construction to comply with the NPDES conditions and will meet Caltrans Best Available Technology/Best Conventional Technology for construction projects. Compliance with the NPDES conditions and adherence to the City of San Pablo and Contra Costa County requirements would reduce or eliminate potentially adverse construction-related effects.

The most effective BMPs that can be used to minimize erosion include:

- Preserving existing vegetation;
- Avoiding or minimizing work during the rainy season (May to October) and during any rainfall events or immediately following precipitation when the ground surface is wet;
- Limiting the amount and length of exposure of graded soil and soil stockpiles; and
- Protecting exposed spoils through the use of mulches or erosion control blankets/mats.

Approved erosion control BMPs are described in the *Caltrans Construction Site Best Management Practices Manual* (Caltrans 2003). Temporary erosion control and water quality measures will be defined in detail in the project SWPPP and designated as line items in the plans, specifications, and estimates.
Table 2.9-1 lists the minimum requirements to be implemented during project construction.

### Table 2.9-1  Minimum Requirements for Temporary BMPs

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Stabilization Practices</td>
<td>SS-1 Scheduling&lt;br&gt;SS-2 Preservation of Existing Vegetation&lt;br&gt;SS-6 Straw Mulch&lt;br&gt;SS-7 Erosion Control Blankets&lt;br&gt;SS-10 Outlet Protection/Velocity Dissipation Devices</td>
</tr>
<tr>
<td>Sediment Control Practices</td>
<td>SC-1 Silt Fence&lt;br&gt;SC-5 Fiber Rolls&lt;br&gt;SC-7 Boulevard Sweeping and Vacuuming&lt;br&gt;SC-10 Storm Drain Inlet Protection</td>
</tr>
<tr>
<td>Wind Erosion Control</td>
<td>WE-1 Wind Erosion Control</td>
</tr>
<tr>
<td>Non-Storm Water Control</td>
<td>NS-2 Dewatering Operation&lt;br&gt;NS-6 Illicit Connection/Illegal Discharge Detection and Reporting&lt;br&gt;NS-8 Vehicle and Equipment Cleaning&lt;br&gt;NS-9 Vehicle and Equipment Fueling&lt;br&gt;NS-10 Vehicle and Equipment Maintenance</td>
</tr>
<tr>
<td>Waste Management &amp; Materials</td>
<td>WM-1 Material Delivery and Storage&lt;br&gt;WM-2 Material Use&lt;br&gt;WM-3 Stockpile Management&lt;br&gt;WM-4 Spill Prevention and Control&lt;br&gt;WM-5 Solid Waste Management&lt;br&gt;WM-8 Concrete Waste Management&lt;br&gt;WM-9 Sanitary/Septic Waste Management</td>
</tr>
<tr>
<td>Pollution Control</td>
<td></td>
</tr>
<tr>
<td>Temporary Construction Practice</td>
<td>TC-1 Stabilized Construction Entrance/Exit</td>
</tr>
</tbody>
</table>

Source: Caltrans 2003

### 2.9.4.2. Long-Term (Permanent) BMPs

Permanent (post-construction) BMPs include the minimization of land disturbance, minimization of impervious surfaces, treatment of runoff, and energy dissipation devices. Permanent BMPs included with the project will reduce the suspended particulate loads (and thus pollutants associated with the particulates) entering waterways after construction is completed. This category of water quality control measures can be identified as including both Design Pollution Prevention BMPs and Treatment BMPs.

Permanent Stormwater Treatment BMPs will be considered for this project as it will involve major construction over three acres and add more than one acre of new
impervious area. The Treatment BMP strategy is based on the General Purpose Pollutant Removal order and ranks the following measures for consideration:

I. Infiltration Devices
II. Biofiltration Strips and Wet Basins
III. Biofiltration Swales and Austin Vault Sand Filters
IV. Detention Devices, Delaware Filters, or Multi-Chambered Treatment Trains

2.9.4.3. BMPs Considered Feasible
Treatment of stormwater runoff for the project will be implemented to the Maximum Extent Practicable. However, the project is in a developed area with existing constraints that limit the extent and location of Treatment BMPs. Among the Treatment BMPs listed above, Biofiltration Swales and Strips, Austin Vault Sand Filters, and Detention Devices have been identified as potentially feasible for this project.

2.9.4.4. BMPs Considered Not Feasible
Treatment BMPs considered but preliminarily determined infeasible for this project include Infiltration Devices, Wet Basins, Delaware Sand Filters, and Multi-Chambered Treatment Trains. These measures could be reconsidered during final project design when more information about project plans, drainage design, and site conditions is available.

2.10. Geology, Soils, and Seismicity
This section is based on the geology and geotechnical assessments performed for the proposed project. A Phase 1 Geologic Hazards Evaluation Report summarizes the initial assessment of geologic conditions and constraints in the project area (URS 2007). Preliminary foundation reports were prepared to address subsurface conditions at four major structures proposed for the project (URS 2008f,m,n, and 2009a).

2.10.1. Regulatory Setting
For geologic and topographic features, the key Federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under 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. The Department’s Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department 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.

### 2.10.2. Affected Environment

#### 2.10.2.1. Site Geology

The project area is in the San Francisco Bay block of the northern Coast Ranges and the Coast Ranges seismotectonic province, a region characterized by a moderate to high level of seismicity. The Coast Ranges are a north-northwest to northwest-trending series of ridges and intervening valleys that extend from the Oregon border to the north to the Santa Ynez River near Santa Barbara to the south.

The I-80/San Pablo Dam Road Interchange is at the northwestern end of the San Pablo Ridge. Underlying the ridge is the Orinda Formation, which generally consists of discontinuous, lenticular beds (lens-shaped formations) of claystone/shale, sandstone, and minor conglomerate. Most rocks in this formation contain significant amounts of montmorillonite clay, which expands when saturated. Slope stability in the Orinda Formation is poor. The shrinkage and swelling from the high montmorillonite content of the clays facilitates downhill soil creep. Slope stability is also poor as a result of the weakness of the bedrock (Woodward Clyde Consultants 1978).

Colluvial soils and landslide deposits developed from the Orinda Formation overlie the bedrock to various depths. The existing El Portal Drive and McBryde Avenue bridge structures rest on undivided Quaternary deposits (Graymer et al. 1995). The Pleistocene or Holocene deposits include alluvial fan, levee, stream channel, bay mud, floodplain, and floodbasin deposits. Geotechnical test borings for the El Portal Drive and McBryde Avenue structures indicate subsurface soils generally consisting of loose to dense sands and stiff to hard clays, with occasional gravels (Caltrans 1952). In the northern part of the project area, I-80 was originally constructed on fill placed within an old drainage channel. The artificial fill, apparently as deep as 60 feet, consists of rock and surficial deposits imported from nearby cuts and quarries.
2.10.2.2. Geologic Hazards
Existing geologic hazards include the potential for landslide hazard, surface fault rupture, earthquake shaking, and liquefaction.

Landslide Hazard
At least one study of the northern Hayward fault indicates that the entire project area sits on a very large ancient landslide that extends westward past I-80 for more than 0.25 mile, essentially outlining the contact between the Contra Costa Group (Orinda Formation) and the Quaternary alluvial deposits to the south and west (Herd 1978). A review of a published landslide map of this same area indicates the presence of many small slides but does not show a large slide encompassing the entire project area (Nilsen 1975).

One of the specific principal geologic hazards in the project area is the China Slide east of San Pablo Dam Road (Caltrans 1984). This slide has shown instability since the late 1950s (Caltrans 1988). In 1957, as part of the improvements along San Pablo Dam Road for the I-80 construction, an 80-foot-high cut slope was completed. Movement developed in the cut face within a year after completion, and the instability gradually increased (Caltrans 1993a). For years, the toe of the slide created a recurring “hump” in the pavement in the eastbound lane of San Pablo Dam Road. Until Caltrans assumed maintenance of the roadway in 1974, the City of San Pablo had to remove the hump every year. In 1983, the hump was recorded as being three feet high and impeding traffic (Caltrans 1983). The roadway was subsequently realigned to the west to allow the active slide to continue heaving without affecting the adjacent pavement. The field investigations for the proposed project noted possible indications of pavement stress in the eastbound lanes of San Pablo Dam Road.

The China Slide is at least partially located in the Hayward fault zone. The presence of the fault is likely a cause of the continued instability of the slope. The fault is persistently creeping (Lienkaemper et al. 1991). Faulting has typically sheared and/or crushed the rock in this zone, weakening slope stability. The fault also creates erratic and discontinuous groundwater barriers, contributing to the saturation of the montmorillonite-rich clayey colluvium and claystone bedrock, which can increase slope movement.
Historic slope instability in the project area is also present on the east side of I-80, near the eastbound on-ramp from San Pablo Dam Road. The most recent episode of slope failures reportedly occurred in 2006. Slope failures in this area have been addressed with installation of rock fill buttresses, a soil nail wall, keystone walls; removal of unstable soils; and installation of drainage systems.

**Surface Fault Rupture**

The San Pablo Dam Road Overcrossing is close to the Hayward fault, an active, right-lateral, strike-slip fault that is considered the most likely source of the next major earthquake in the Bay Area (USGS 2003). The Hayward fault is part of the San Andreas fault system and extends for about 60 miles from the area of Mount Misery, east of San Jose, to Point Pinole on San Pablo Bay.

Surface fault rupture tends to occur along existing fault traces, and the highest potential for surface faulting is along existing fault traces that have had Holocene (last 11,000 years) fault displacement. The California Geological Survey (formerly the California Division of Mines and Geology) has produced maps showing Alquist-Priolo Earthquake Fault Zones along faults with known Holocene surface rupture activity. As shown on the official map of the Richmond Quadrangle (CGS 2003), the western boundary of the regulatory Alquist-Priolo Earthquake Fault Zone for the Hayward fault passes through San Pablo Dam Road in the vicinity of Amador Street, at least 100 feet east of the proposed replacement San Pablo Dam Road Overcrossing (Alternative 2).

Caltrans boring B-3, drilled in 1989 between I-80 and the eastbound on-ramp from San Pablo Dam Road, was logged as encountering serpentinite (Caltrans 1989). Although this boring was located outside of the regulatory Alquist-Priolo Earthquake Fault Zone, the presence of serpentinite this close to the Hayward fault is suggestive of a possible fault trace.

**Earthquake Shaking**

The project area would be subjected to strong ground shaking during future large earthquakes on the Hayward fault as well as from other regional faults. The last large earthquake on the Hayward fault occurred in October 1868, along the southern segment of the fault. This moment magnitude\(^{10}\) (M) 6.8 event toppled buildings in...
Hayward and other localities within about three miles of the fault. The surface rupture associated with this earthquake is thought to have extended for approximately 20 miles, from Warm Springs to San Leandro, with a maximum reported displacement of about three feet. Recent paleoseismic trenching indicates that the last surface-rupturing earthquake along the northern portion of the Hayward fault was sometime between 1626 and 1724 (Lienkaemper et al. 1997). The Working Group on California Earthquake Probabilities (USGS 2003) assigns mean maximum earthquakes of $M_{6.5}$ and 6.7, and mean recurrence intervals of 312 and 292 years, for the northern and southern segments of the Hayward fault, respectively.

Based on the estimated recurrence interval of this fault, and the length of time since the last known occurrence, the USGS (2003) considers the Hayward-Rodgers Creek fault system the most likely source of the next $M_{6.7}$ or larger earthquake in the Bay Area, with a 27 percent probability of occurring between 2002 and 2032. The USGS model also incorporates a scenario where the Hayward fault ruptures along with the Rodgers Creek fault. Rupture of the entire length of both faults would generate a mean maximum earthquake of $M_{7.3}$ (USGS 2003). Rupture of the Rodgers Creek fault and the northern segment of the Hayward Fault would generate a maximum event of $M_{7.1}$.

**Liquefaction and Lateral Spreading**

Liquefaction is a soil behavior phenomenon in which a soil loses a significant amount of strength from excess pore water pressure generated by strong earthquake shaking. Loose to medium dense sands below the groundwater table are generally considered to be susceptible to liquefaction. California Geological Survey Seismic Hazard Zone maps indicate that the liquefaction susceptibility of the Contra Costa County portion of the Richmond quadrangle has not yet been evaluated (CGS 2003). A review of the available logs of previously drilled geotechnical borings indicates that subsurface conditions in the area of the San Pablo Dam Road Interchange do not appear to be particularly conducive to liquefaction.

However, the logs of borings reviewed in other portions of the project area (in particular, the Riverside Avenue pedestrian overcrossing) indicate a potential for susceptibility to liquefaction. Boring logs show soil layers exceeding five feet in thickness, that were below groundwater level and within 50 feet of the surface, that had very low blow counts and were logged as loose or slightly compact (Caltrans 1952, 1954, 1956, 1976, 1989, 1992, 1993a–b, 1994a–b, 1997b–e, 1999).
Lateral spreading occurs when a subsurface layer liquefies and causes horizontal movement or displacement of the overlying mass. This is considered a low risk based on available information, but the potential for lateral spreading depends on actual subsurface conditions that would be specifically evaluated during final design.

2.10.3.  Environmental Consequences

2.10.3.1. Surface Fault Rupture and Earthquake Shaking

The Bay Area is seismically active, and all sites in the region have a reasonably high potential of experiencing strong earthquake shaking in the future. Elements of the project such as bridges and overcrossings would be exposed to strong ground shaking. The potential exists for substantial damage to engineered structures and risk of injury or loss of life at facilities that cannot withstand the ground motions created by a major seismic event. There is also a potential for surface fault rupture along the Hayward fault zone, which is near the project limits. A permanent structure such as a bridge or a retaining wall that crosses an area that suffers surface fault rupture could be significantly damaged or fail.

Because of the risk of surface fault rupture near the project, particular attention was focused on defining and comparing the location of the Alquist-Priolo Earthquake Fault Zone with the proposed structural elements of the project. Of the proposed structures, the replacement San Pablo Dam Road Overcrossing abutment on the east side of I-80 is the closest to the fault zone, which is over 100 feet from the San Pablo Dam Road/Amador Street intersection. A thorough review was performed of the available data, including previous fault investigation reports for nearby sites, to assess the risk of surface fault rupture to the proposed overcrossing (URS 2008f). The nearest part of the proposed closed-face eastern abutment for the Alternative 2 overcrossing would be at least 50 feet from Caltrans boring B-3. The conclusion of the review was that the risk of surface fault rupture to the proposed overcrossing is negligible. The Caltrans Office of Geotechnical Support concurred with this conclusion and stated that no further work to address surface faulting is needed if this abutment location is used.

According to the California Geological Survey map of the Richmond Quadrangle (CGS 2003), the western boundary of the Alquist-Priolo Earthquake Fault Zone for the Hayward fault is more than 500 feet east of the site of the replacement pedestrian overcrossing proposed for the project. Therefore, the risk of surface fault rupture at this site is also considered to be low.
Surface fault rupture at nonstructural elements of the project, such as roadway surfaces on the east side I-80, could still result in damage such as cracked or offset surfaces that could require temporary roadway closure until repaired. This risk is also present with the existing condition and the No Build Alternative.

2.10.3.2. Liquefaction
The I-80/San Pablo Dam Road Interchange area does not appear to be particularly conducive to liquefaction, although boring logs drilled for the existing pedestrian overcrossing at Riverside Drive (Caltrans 1994b) show a layer of loose to slightly compact, saturated silty sand/sandy silt encountered about 40 feet below ground surface. This layer could potentially liquefy under strong ground shaking conditions. Without further information on specific subsurface conditions, it is assumed that there is some risk of damage to the proposed replacement overcrossing and soundwalls or retaining walls built in this area.

2.10.3.3. Landslide
The China Slide has shown instability since the late 1950s, and its movement could damage proposed roadway surfaces. The portion of San Pablo Dam Road on the east side of I-80 at the toe of the China Slide slope area is especially at risk. The project also has the potential to exacerbate slope instability by excavating into the toe of the slope area. The two build alternatives have different potential for impacts and avoidance based on the location of the slide and the areas of known slope instability:

- **Lanes Added Alternative:** This alternative’s design would shift the current alignment of San Pablo Dam Road slightly east of, but not connecting to, the toe of the China Slide while staying within the existing right-of-way. The roadway would be on approximately the same alignment, but roadway shoulders may slightly extend toward the toe of the slide area, but this change is relatively minor.

- **Tight Diamond Alternative:** This alternative would realign the San Pablo Dam Road Overcrossing to the west of the toe of the China Slide area. This would reduce the risk of future slope failure affecting San Pablo Dam Road. Amador Street would be realigned and extended to its new intersection location with San Pablo Dam Road to the east of the current intersection. Realigning Amador Street would help avoid the toe of the existing unstable slope.
2.10.4. Avoidance, Minimization, and/or Mitigation Measures

Additional geotechnical subsurface and design investigations and recommendations will be performed during the final design and engineering phase for the project. The investigations will include site-specific evaluation of subsurface conditions at the actual locations of proposed foundations during final design. The following will be considered during that phase:

- Further engineering design work will be carried out in accordance with the Department’s Seismic Design Criteria and the regulations detailed in the Alquist-Priolo Earthquake Fault Zoning Act.
- Project elements will be designed and constructed to meet seismic design requirements for ground shaking and ground motions, as determined for the project location and site conditions.
- Additional field investigations will be performed, including geotechnical borings and evaluation of soil samples from the borings, to determine engineering properties of the soils and recommendations for foundations and footings. The investigations will include delineation of potentially liquefiable materials and soils that are highly expansive, prone to heaving or instability, or highly erosive. Preliminary geotechnical findings already include recommendations for borings at proposed footing and foundation locations, and laboratory testing to define engineering properties of the soils. Liquefaction and ground deformation susceptibility, effects on foundation capacity, and recommendations to accommodate anticipated consequences of liquefaction will be defined as a result of these studies.
- Measures to minimize landsliding and slope instability will also be further defined during final design. Retaining walls are already included in the project to strengthen proposed road cuts. Further geotechnical review and recommendations will be used to define or verify appropriate slope designs based on parent material, necessary roadcuts, and/or proposed fill.

Vegetative seeding, slope covers, and drainage measures to collect and control runoff will minimize potential soil erosion during and after construction. Stormwater runoff measures are discussed in Section 2.9.4.

2.11. Hazardous Waste and Materials

The following discussion is based on the Hazardous Waste Technical Report (URS 2008g) prepared for the proposed project.
2.11.1. Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many State and Federal laws. These laws 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 primary 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 latter 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 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; and

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

2.11.2. **Affected Environment**

A hazardous waste evaluation was conducted for the proposed project and is documented in the Hazardous Waste Technical Report (URS 2008g). The evaluation included the following:

- An Environmental Data Resources (EDR), Inc. environmental information database search. The records review study area extended approximately one mile around the I-80/San Pablo Dam Road Interchange and the I-80 corridor within the project limits.
- A review of the project plans, historical aerial photographs, topographic maps, and Sanborn® maps (historical fire insurance maps) within approximately 0.5 mile of the proposed right-of-way.
- A site and adjacent area field review of the existing and proposed right-of-way and adjoining properties.
- Contact and coordination with agencies and personnel to obtain information on sites identified in the EDR search. This included a review of available files at the Contra Costa County Health Services Department and at the City of San Pablo Building and Planning Department.

No potential hazardous waste sites were identified within the right-of-way of the project for either build alternative. Outside of the proposed right-of-way but within the 0.5-mile study area, 12 properties were identified that currently or previously handled or stored hazardous materials. At nine of the 12 properties or sites, no identified soil or groundwater contamination was reported or observed. The remaining three sites are retail gasoline stations with a record of petroleum hydrocarbon releases. All are located upgradient of the project, which can present a risk to the project if contaminant releases have migrated to the project site (or will in the future). These sites are not in the project right-of-way, and remediation has taken place or is ongoing.

Existing structures within the project limits were not inspected, entered, or tested for asbestos or other hazardous building materials as part of the hazardous waste evaluation. All visual observations were conducted from publicly available vantage points along the area roads and or properties.

2.11.3. **Environmental Consequences**

There are no known or listed hazardous waste sites or properties within the proposed right-of-way. Outside of the right-of-way, three retail gasoline stations were identified...
with a record of petroleum hydrocarbon releases. Two are located on San Pablo Avenue, and the third is 0.4 mile east of I-80 on San Pablo Dam Road. Based on their locations, the risk for hydrocarbons migrating from contaminated sites to shallow groundwater in the proposed right-of-way is considered low because of their distance from the project.

Exhaust from vehicle traffic on I-80 and San Pablo Dam Road may have contaminated surface soils within the project limits with aerially deposited lead (ADL). ADL resulted from the use of automotive leaded gasoline until the mid-1980s. This contamination is likely present in exposed soils on streets adjacent to I-80 and other nearby local streets.

The project would acquire and remove some existing residential and commercial structures within the proposed right-of-way. Building materials in these structures may contain hazardous materials such as asbestos and lead paint, and exposure to airborne contaminants from these materials during demolition could affect safety and health.

Gasoline, diesel fuel, oil, and lubricants for operation of construction equipment are typically used, handled, and stored by contractors on all roadway construction projects. In all construction projects, there is a potential for the accidental release of fuels or lubricants from construction equipment or vehicles. No specific risks related to such a release have been identified for the proposed project. Contractors are required to handle hazardous materials in accordance with applicable laws, including health and safety requirements. No acutely hazardous materials would be used or stored on-site during project construction.

2.11.4. Avoidance, Minimization, and/or Mitigation Measures

There is a potential for residual ADL in the surface soil and petroleum hydrocarbons in shallow groundwater. Testing for ADL will be performed at the Plans, Specifications and Estimates (PS&E) stage prior to project construction. If ADL is found, special handling of the contaminated soil would be required and would include implementing a health and safety plan. If construction encounters soil or groundwater contamination, all activities involving contaminated soil or groundwater will be planned to comply with the various regulatory agencies’ requirements.

Material from structures that is removed or modified by the project will be handled and disposed of in accordance with all local, State, and Federal requirements.
The costs for special handling of ADL-contaminated soils, if any, is unknown at this stage of preliminary design and environmental review, but could range from $50,000 to $75,000 or more depending on the number of samples collected and the laboratory analyses used. The costs for special handling, if required, of contaminated building materials from structures that have to be removed would be estimated during final design.

2.12.  Air Quality

This section summarizes the Air Quality Impact Assessment (URS 2009b) and Mobile Source Air Toxics (URS 2008h) technical reports prepared for the project.

2.12.1.  Regulatory Setting

The Clean Air Act as amended in 1990 is the Federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the Federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter, lead, and sulfur dioxide (SO₂).

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

Regional-level conformity in California is concerned with how well the region is meeting the standards set for CO, NO₂, O₃, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTPs) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 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 conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as MTC for the Bay Area and the appropriate Federal agencies, such as the Federal Highway
Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to 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 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 particulate matter analysis performed for NEPA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. 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 particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

A CO hot spot analysis was completed and is discussed in this section. A hot spot analysis for particulate matter of less than ten and 2.5 microns in diameter (PM\(_{10}\) and PM\(_{2.5}\), respectively) is not required for project-level Federal conformity purposes because the region is in attainment or is unclassified for these pollutants.

### 2.12.2. Affected Environment

The proposed project is located in a subregion that is defined by the Bay Area Air Quality Management District (BAAQMD 2001) within portions of northern Alameda County and western Contra Costa County and extends from north of Pinole to San Leandro. In this area, marine air traveling through the Golden Gate, as well as across San Francisco and through the San Bruno Gap, is a dominant weather factor. At the northern end of this subregion, near the project site, prevailing winds are from the south-southwest, keeping temperatures within a narrow range. Temperatures in summer average in the mid 70s, with lows in the mid 50s. Winter highs are in the mid to high 50s, with lows in the low to mid 40s.

The air pollution potential is lowest for the parts of the subregion that are closest to the Bay, due largely to good ventilation and few pollutants from upwind sources.
Light winds in the evenings and early mornings occasionally cause elevated pollutant levels. This subregion contains industrial air pollution sources located primarily north and south of the City of San Pablo. Traffic and congestion along I-80, San Pablo Dam Road, and San Pablo Avenue are major sources of local air pollution. Table 2.12-1 shows the applicable standards and attainment status of criteria pollutants in the project area.

2.12.3. Environmental Consequences

2.12.3.1. Permanent Impacts
Air quality issues relate to a range of different pollutants and their individual regulatory standards. The evaluation of air quality impacts addressed in this section focuses on the project’s conformity with the regional air quality framework and the project’s potential to result in an adverse impact to the region’s compliance with the relevant standards.

2.12.3.2. State Implementation Plan Conformity
This project will involve Federal transportation funds; therefore, the transportation conformity regulation, referred to as the Transportation Conformity Rule, applies. A version of the U.S. Environmental Protection Agency’s (USEPA’s) Transportation Conformity Rule has been incorporated into the Bay Area portion of the State Implementation Plan (SIP). For the San Francisco Bay Area, each updated version of the RTP and Regional Transportation Improvement Program (TIP) are evaluated in a regional conformity analysis by MTC, to support a request for approval by FHWA.

Project Design and Funding in RTP and TIP
The project is included in MTC’s most recent RTP, the Transportation 2035 Plan for the San Francisco Bay Area (MTC 2009). It is listed as RTP ID No. 22360, “Reconstruct I-80/San Pablo Dam Road Interchange and modify adjacent interchanges.” The project is also included in the 2009 TIP (TIP ID No. CC-070035), as “Upgrade and improve interchange including provisions for bicyclists and pedestrians.” An amendment to the TIP in 2009 (Revision ID No. CC-070035 in TIP Amendment 09-06) updated the project description and funding to include “and modifying adjacent interchanges” (consistent with the RTP description).
### Table 2.12-1 State and National Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standards</th>
<th>National Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Concentration</td>
<td>Attainment Status</td>
</tr>
<tr>
<td>Ozone (O₃)</td>
<td>8 Hour</td>
<td>0.070 ppm (137 µg/m³)</td>
<td>N³</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>0.09 ppm (180 µg/m³)</td>
<td>N</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>8 Hour</td>
<td>9.0 ppm (10 mg/m³)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>20 ppm (23 mg/m³)</td>
<td>A</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>1 Hour</td>
<td>0.18 ppm (338 µg/m³)</td>
<td>A</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>24 Hour</td>
<td>0.04 ppm (105 µg/m³)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>0.25 ppm (655 µg/m³)</td>
<td>A</td>
</tr>
<tr>
<td>Particulate Matter (PM₁₀)</td>
<td>Annual Arithmetic Mean</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Particulate Matter - Fine (PM₁₅)</td>
<td>Annual Arithmetic Mean</td>
<td>12 µg/m³</td>
<td>N⁴</td>
</tr>
<tr>
<td></td>
<td>24 Hour</td>
<td>20 µg/m³</td>
<td>N</td>
</tr>
<tr>
<td>Sulfates</td>
<td>24 Hour</td>
<td>25 µg/m³</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Calendar Quarter</td>
<td>1.5 µg/m³</td>
<td>A</td>
</tr>
<tr>
<td>Lead</td>
<td>30 Day Average</td>
<td>0.03 ppm (42 µg/m³)</td>
<td>U</td>
</tr>
<tr>
<td>Vinyl Chloride (chloroethene)</td>
<td>24 Hour</td>
<td>0.010 ppm (26 µg/m³)</td>
<td>No information available</td>
</tr>
<tr>
<td>Visibility Reducing particles</td>
<td>8 Hour (10:00 to 18:00 PST)</td>
<td>See Footnote 8</td>
<td>U</td>
</tr>
</tbody>
</table>

**Notes:**

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM₁₀, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. In particular, measurements are excluded that ARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

2. National standards shown are the “primary standards” designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The national standards for CO, NO₂, SO₂, and ozone are spatially-averaged across officially designated clusters of sites.

3. California standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM₁₀ annual standard), then some measurements may be excluded. In particular, measurements are excluded that ARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

4. In June 2004, the Bay Area was designated as a marginal nonattainment area of the national 8-hour ozone standard. US EPA lowered the national 8-hour ozone standard from 0.08 to 0.075 PPM (i.e. 75 ppb) effective May 27, 2008. EPA will issue final designations based upon the new 0.75 ppm ozone standard by March 2010.

5. The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.

6. In April 1996, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.

7. In June 2002, CARB established new annual standards for PM₂.₅ and PM₁₀.

8. Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

9. The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2006 and became effective on May 17, 2006.

10. US EPA lowered the 24-hour PM₂.₅ standard from 65 µg/m³ to 35 µg/m³ on June 22, 2008. EPA has designated the Bay Area as nonattainment for the 35 µg/m³ PM₂.₅ standard. The EPA designation will be effective 90 days after publication of the regulation in the Federal Register. President Obama has ordered a freeze on all pending Federal rules; therefore, the effective date of the designation is unknown at this time.

**Source:** BAAQMD, updated December 30, 2008; [http://www.baaqmd.gov/pln/air_quality/ambient_air_quality.htm](http://www.baaqmd.gov/pln/air_quality/ambient_air_quality.htm)
The following summarizes the regional transportation planning and conformity approvals related to this project.

MTC initiated its regional conformity analysis for the 2009 TIP in February 2008 with a consultation request to partner agencies, discussing the approach to the air quality assessment. The process included public consultation and was developed in compliance with FHWA regulations and guidance on financial constraint. MTC’s evaluation for the 2009 TIP determined that the regional emissions analysis was below the applicable budgets in the SIP. The regional air quality evaluation for the 2009 TIP was submitted to FHWA and FTA in May 28, 2008. The evaluation used the latest available socioeconomic and land use forecasts from Association of Bay Area Governments (ABAG) Projections 2005 and the latest MTC travel demand model (BAYCAST) (MTC 2008), which are less than five years old. As noted above, the 2009 TIP was approved by FHWA/FTA on November 17, 2008.

Similar to the process described for the TIP, MTC completed a regional conformity analysis for TIP Amendment 09-06 (for the updated project limits and funding). Public and agency consultation on the TIP amendment was completed in February 2009, and it was regionally evaluated consistent with the Federal transportation conformity regulations and MTC’s Bay Area Air Quality Conformity Protocol.

The proposed project is fully funded and is in the 2009 RTP, which was found to conform by MTC on April 22, 2009, and FHWA and FTA adopted the air quality conformity finding on May 29, 2009. The project is also included in MTC’s financially constrained 2009 TIP, page 252, and TIP Amendment 09-06, page 5 (TIP Revision Summary Report). The MTC TIP was found to conform by FHWA and FTA on November 17, 2008, and TIP Amendment 09-06 was approved by FHWA and FTA on May 29, 2009. The design concept and scope of the proposed project is consistent with the project description in the 2009 RTP, the amended 2009 TIP, and the assumptions in MTC’s regional emissions analysis. The project is in conformity with the SIP and will not otherwise interfere with timely implementation of any Transportation Control Measure in the applicable SIP.

2.12.3.3. Evaluation of Potential for Traffic-Related CO Impacts

The CO impacts analysis followed the procedures in Transportation Project-Level Carbon Monoxide Protocol, prepared by the University of California, Davis, Institute of Transportation Studies (CO Protocol; Garza, Graney, and Sperling 1998). This
protocol applies screening procedures, based on the attainment status of the area in which the project is planned, to evaluate potential CO impacts of the project and assess the need for any further detailed analysis. The project is within a CO maintenance area where continued attainment of the Federal CO standard has been verified. The area is in attainment for the State CO standard. The project is included in a conforming RTP and TIP. Based on the CO Protocol, the screening procedure in “Level 7” was followed to screen the build vs. no build alternatives for the following criteria:

a. **The project would not significantly increase the percentage of vehicles operating in cold-start mode.** The proposed project includes on-ramps and off-ramps that will be accessed by automobiles that have been traveling along the road network a sufficient amount of time to not be operating in cold-start mode. The I-80 corridor at San Pablo Dam Road is relatively built out. No new traffic generators are expected to result from the proposed interchange improvements. There would be no expected change in the percentage of cold starts, and the project complies with this criterion (a less than a two percent change in cold starts).

b. **The project would not significantly increase traffic volumes.** The project would result in a less than five percent change in traffic volumes. Specifically, the project would result in a less than two percent total change of traffic volumes in both eastbound and westbound directions, with the exception of two locations where the total volume change would be three to four percent. The proposed project would maintain or improve levels of service within the study area, and thus there would be no reduction in average speeds.

c. **The project would not worsen traffic flow.** The project would improve traffic flow through the San Pablo Dam Road Interchange and on I-80. The project would improve traffic flow by adding an auxiliary lane and improving on-ramps and off-ramps, thereby reducing delays that result in queues at the interchange, as well as improving the LOS at the intersections at San Pablo Dam Road on-ramp and off-ramp.

Following the protocol methods, a comparison was also made of the proposed interchange facility with an existing interchange in the same air district, in this case the U.S. Highway 101 (US 101)/Tully Road interchange in San Jose (Table 2.12-2).

The I-80/San Pablo Dam Road Interchange facility carries a similar range of traffic to the comparison location. The project location in Contra Costa County has recorded
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

CO levels well below the CO standard and approximately half the recorded levels of the comparison location. The proposed project is located in an area that continues to meet air quality standards (within a CO maintenance area), and the documentation satisfies the conditions in the CO Protocol supporting a conclusion that there is no reason to expect higher concentrations at the project location than the comparative facility/location. Therefore, the project is not expected to cause any localized exceedances of State or Federal carbon monoxide standards.

Table 2.12-2 Comparison of Project to an Existing Interchange per CO Protocol Criteria

<table>
<thead>
<tr>
<th>Parameter</th>
<th>I-80/San Pablo Dam Road Interchange Project (from El Portal Drive to McBryde Avenue, Contra Costa) (Build/Project)</th>
<th>US 101/Tully Road Interchange (on US 101 north and south of Tully Road interchange, San Jose (Existing/Comparison)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearest Receptor Distance</td>
<td>Approximately 30–50 feet. Nearest receptors to proposed improvements include residential rear yards at Joel Court, homes along El Portal Drive, and homes on north end of Amador Street.</td>
<td>Approximately 30–50 feet. Nearest receptors appear to be residential rear yards on the northwest, northeast, and southwest sides of the interchange, and rear yards adjacent to southbound US 101.</td>
</tr>
<tr>
<td>Roadway Geometry</td>
<td>I-80 = six to eight lanes San Pablo Dam Road = four lanes</td>
<td>US 101 = eight lanes plus collector-distributor roads Tully Road = six lanes</td>
</tr>
<tr>
<td>Worst-Case Meteorology</td>
<td>Coastal Valley</td>
<td>Coastal Valley</td>
</tr>
<tr>
<td>AADT Mainline Volumes¹</td>
<td>202,000 to 213,000 (I-80 between El Portal Drive and McBryde Avenue)</td>
<td>188,000 to 228,000 (US 101 at Tully Road)</td>
</tr>
<tr>
<td>Hot/Cold Starts</td>
<td>50/10</td>
<td>50/10</td>
</tr>
<tr>
<td>Percent Heavy Duty Gasoline Trucks²</td>
<td>4.6%</td>
<td>6%</td>
</tr>
<tr>
<td>8-Hour Background (CO)³ (2007 highest daily reported)</td>
<td>1.41 ppm (Concord, 2975 Treat Blvd)</td>
<td>2.71 ppm (San Jose, Jackson Street)</td>
</tr>
<tr>
<td></td>
<td>1.23 ppm (San Pablo, Rumrill Blvd.)</td>
<td></td>
</tr>
</tbody>
</table>


² Truck AADT is from 2006 Annual Average Daily Truck Traffic on the California State Highway System (Caltrans 2006a). The component of Heavy Duty Gasoline Trucks as part of the truck count is not available; the value listed represents all trucks, of which a portion would be HDGT. The same data source was used for both facilities compared in this table.

³ California Air Resources Board (http://www.arb.ca.gov/adam/cqi-bin/db2www/adamtop4b.d2w/Branch) for 2007 reporting year.
2.12.3.4. Particulate Matter “Hot Spot” Analysis

A qualitative particulate hot spot analysis or discussion is required for transportation projects that are funded or approved by FHWA or the Federal Transit Administration and are in Federal PM$_{10}$ nonattainment or maintenance areas. This project is in an area that is in attainment or unclassified for the Federal PM$_{10}$ and PM$_{2.5}$ standards. Qualitative hot-spot analyses for PM$_{10}$ and PM$_{2.5}$ are therefore not required for project-level conformity purposes.

2.12.3.5. Ozone

The BAAQMD adopted the 2005 Ozone Strategy for planning and achieving compliance with the Federal and State ozone standards. This project will not interfere with the strategy and will provide transportation benefits that reduce pollutant emissions, including precursors to the formation of ozone, by improving traffic operations and efficiency. This project is included in the Bay Area region’s RTP (MTC 2009), which has undergone regional evaluation for conformity with Federal air quality standards, including ozone. In addition, the modified project design is in the RTP and TIP, as discussed previously. The project also includes pedestrian and bicycle access improvement, which are measures that are consistent with the 2005 Ozone Strategy.

2.12.3.6. Mobile Source Air Toxics

In addition to the criteria air pollutants for which standards exist, the USEPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources. Mobile source air toxics (MSATs) are a subset of the air toxics defined by the Clean Air Act. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

This section includes a basic analysis of the likely MSAT emission impacts of the proposed project. Available technical tools do not enable prediction of project-specific health impacts of the emission changes associated with this project. Due to these limitations, the following discussion is included in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations 1502.22[b]).

Evaluating the environmental and health impacts from MSATs on a proposed highway project requires several key elements, including emissions modeling; dispersion
modeling to estimate ambient concentrations resulting from the estimated emissions; exposure modeling to estimate human exposure to the estimated concentrations; and 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. Detail on these limitations is provided in FHWA guidance on air toxic analysis.11

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though no reliable methods exist that accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can provide a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled “A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives” (FHWA 2006).

For each alternative considered in this IS/EA, the amount of MSATs emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. The VMTs estimated for the build alternatives are slightly higher than those for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to USEPA’s MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

Because the estimated VMT under each alternative is nearly the same (varying by less than four percent during peak hours), no appreciable difference in overall MSAT

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emissions is expected among the alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of USEPA’s national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the build alternatives would move some traffic closer to nearby homes and businesses; therefore, the build alternatives may have localized areas where ambient concentrations of MSATs could be higher than those of the No Build Alternative. The localized increases in MSAT concentrations could occur nearest the proposed auxiliary lane (southbound I-80 between El Portal Drive and San Pablo Dam Road) and the proposed new frontage road (between San Pablo Dam Road and McBryde Avenue). However, as discussed above, the magnitude and the duration of these potential increases compared to the No Build Alternative cannot be accurately quantified due to the inherent deficiencies of current models. In sum, when a highway is modified and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSATs would be lower in other locations when the proposed project attracts rerouted trips from elsewhere in the transportation network. However, on a regional basis, USEPA’s vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause regionwide MSAT levels to be significantly lower than today.

2.12.3.7. Naturally Occurring Asbestos and Structural Asbestos

In late 2007, two borings drilled to characterize subsurface conditions for the foundations of the proposed San Pablo Dam Road Overcrossing encountered serpentinite rock fragments (URS 2008f). A geotechnical boring drilled between I-80 and the eastbound on-ramp from San Pablo Dam Road also encountered serpentinite, as described in Section 2.10. Serpentinite rock is associated with naturally occurring asbestos. The project area is not within a mapped area of naturally occurring asbestos (California Geological Survey 2000), and laboratory analysis of the serpentinite from the 2007 borings did not detect asbestos.
If serpentinite or other ultramafic rocks are present in project construction areas, a minor potential exists for subsurface excavation to result in the release of asbestos fibers from rocks into the air. The release of asbestos fibers could pose a potential public health hazard, depending on the concentration, duration of exposure, and physical characteristics of the asbestos fibers. The BAAQMD’s Asbestos Airborne Toxic Control Measures require regulated operations for road construction and maintenance activities in the Bay Area, where naturally occurring asbestos may be present (see Section 2.12.4).

The project would acquire and remove some existing residential and commercial structures within the proposed right-of-way. Structures may contain asbestos in building materials, but this cannot be determined until right-of-way acquisition. Exposure to airborne contaminants from asbestos materials during demolition could affect safety and health.

2.12.3.8. Construction Impacts

Construction activities associated with the proposed project would generate emissions of criteria pollutants throughout the construction period, estimated at two years. Because the overall construction period is less than five years and the area is in attainment or is unclassified for Federal particulate matter standards, construction-related emissions were not evaluated in a hot-spot analysis. The following is a qualitative description of the range of potential construction 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 various other activities. Emissions from construction equipment also are anticipated and would include CO, nitrogen oxides (NOx), volatile organic compounds (VOCs), directly emitted particulate matter (PM10 and PM2.5), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, 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. If not properly controlled, these activities would temporarily generate PM10, PM2.5, and small amounts of CO, SO2, NOx, and VOCs. 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 would deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM$_{10}$ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM$_{10}$ 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 U.S. Environmental Protection Agency (USEPA) to add 1.09 metric tons (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. Caltrans’ Standard Specifications (Section 10) pertaining to dust minimization requirements requires use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

In addition to dust-related PM$_{10}$ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO$_2$, NO$_x$, VOCs and some soot particulate (PM$_{10}$ and PM$_{2.5}$) 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.

SO$_2$ is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting Federal Standards can contain up to 5,000 parts per million (ppm) of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under State law and California Air Resources Board regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel, so SO$_2$-related issues due to diesel exhaust will be minimal. Some construction activities, 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.

### 2.12.4. Avoidance, Minimization, and/or Mitigation Measures

Project impacts would be construction-related. Implementation of the following measures will reduce any air quality impacts resulting from construction activities:
• The construction contractor will comply with Caltrans’ Standard Specifications Section 7-1.01F and Section 10 of Caltrans’ Standard Specifications (1999).
  o Section 7, "Legal Relations and Responsibility," addresses the contractor's responsibility on many items of concern, such as air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; and convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
  o Section 10 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.
• Water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions.
• Soil binder will be spread on any unpaved roads used for construction purposes and on all project construction parking areas.
• Trucks will be washed off as they leave the right-of-way as necessary to control fugitive dust emissions.
• Construction equipment and vehicles will be properly tuned and maintained. Low-sulfur fuel will be used in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.
• Develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
• Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.
• Prohibit construction activities involving extended idling of diesel equipment at sensitive land uses such as residents and schools.
• Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
• Cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM$_{10}$ and deposition of particulate during transportation.
• Remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.
To the extent feasible, route and schedule construction traffic to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

- Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.

To avoid or minimize potential impacts from naturally occurring asbestos and structural asbestos, the following measures would be implemented:

- Foundation locations for project structures will be investigated for the presence of naturally occurring asbestos during final project design.

- If soils or geotechnical investigations during design encounter serpentinite materials in construction areas, then the BAAQMD’s requirements for road construction and maintenance will be followed to minimize dust\(^\text{12}\). These measures are similar to the dust controls previously explained in this subsection. They include wetting of unpaved areas or otherwise stabilizing soils in unpaved areas subject to construction, slowing speeds to less than 15 mph, wetting of storage areas, and conducting activities so that no track-out occurs from road construction.

- Material from structures that is removed or modified by the project will be handled and disposed of in accordance with all local, State, and Federal requirements.

Climate change is analyzed in Chapter 2 under “Climate Change (CEQA)”. Neither EPA nor FHWA has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA’s climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

\(^{12}\) The BAAQMD Asbestos Dust Mitigation Plan requirements and controls can be found at: http://www.baaqmd.gov/Divisions/Compliance-and-Enforcement/Asbestos-Programs/Asbestos-ATCM.aspx
Because there have been more requirements set forth in California legislation and executive orders regarding climate change, the issue is addressed in the CEQA chapter of this environmental document 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.

### 2.13. Noise

The following summarizes the *Noise Study Report* (Illingworth & Rodkin 2009).

#### 2.13.1. 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.

**2.13.1.1. California Environmental Quality Act**

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

**2.13.1.2. National Environmental Policy Act and 23 CFR 772**

For highway transportation projects with FHWA (and the Department, as assigned) involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for
commercial areas (72 dBA). Table 2.13-1 lists the noise abatement criteria for use in the NEPA 23 CFR 772 analysis.

### Table 2.13-1 Federal Noise Abatement Criteria

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>Noise Abatement Criteria, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)^{1,2}$</th>
<th>Description of Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57 Exterior</td>
<td>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</td>
</tr>
<tr>
<td>B</td>
<td>67 Exterior</td>
<td>Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.</td>
</tr>
<tr>
<td>C</td>
<td>72 Exterior</td>
<td>Developed lands, properties, or activities not included in Categories A or B above</td>
</tr>
<tr>
<td>D</td>
<td>–</td>
<td>Undeveloped lands.</td>
</tr>
<tr>
<td>E</td>
<td>52 Interior</td>
<td>Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums</td>
</tr>
</tbody>
</table>

1 Noisiest hour is expressed as the energy average of the A-weighted noise level occurring during a one-hour period, or $L_{eq}(h)$.
2 Note that criteria is applied as ‘approach or exceed’ the thresholds, which has been defined as one dBA. For Category B, the “approaching the NAC” is therefore 66 dBA, as applied in this study.

Figure 2.13-1 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.

In accordance with the Department’s 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 one 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 document discusses noise abatement measures that would likely be incorporated in the project.
### Figure 2.13-1 Noise Levels of Common Activities

<table>
<thead>
<tr>
<th>Common Outdoor Activities</th>
<th>Noise Level (dBA)</th>
<th>Common Indoor Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet Fly-over at 300m (1000 ft)</td>
<td>110</td>
<td>Rock Band</td>
</tr>
<tr>
<td>Gas Lawn Mower at 1 m (3 ft)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Diesel Truck at 15 m (50 ft) at 80 km (50 mph)</td>
<td>90</td>
<td>Food Blender at 1 m (3 ft)</td>
</tr>
<tr>
<td>Noisy Urban Area, Daytime</td>
<td>80</td>
<td>Garbage Disposal at 1 m (3 ft)</td>
</tr>
<tr>
<td>Gas Lawn Mower, 30 m (100 ft)</td>
<td>70</td>
<td>Vacuum Cleaner at 3 m (10 ft)</td>
</tr>
<tr>
<td>Commercial Area</td>
<td>60</td>
<td>Normal Speech at 1 m (3 ft)</td>
</tr>
<tr>
<td>Heavy Traffic at 90 m (300 ft)</td>
<td>50</td>
<td>Large Business Office</td>
</tr>
<tr>
<td>Quiet Urban Daytime</td>
<td></td>
<td>Dishwasher Next Room</td>
</tr>
<tr>
<td>Quiet Urban Nighttime</td>
<td>40</td>
<td>Theater, Large Conference Room (Background)</td>
</tr>
<tr>
<td>Quiet Suburban Nighttime</td>
<td></td>
<td>Library</td>
</tr>
<tr>
<td>Quiet Rural Nighttime</td>
<td>30</td>
<td>Bedroom at Night, Concert Hall (Background)</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>Broadcast/Recording Studio</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Lowest Threshold of Human Hearing</td>
<td>0</td>
<td>Lowest Threshold of Human Hearing</td>
</tr>
</tbody>
</table>

The Department’s *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 five 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.

#### 2.13.2. Affected Environment

Noise-sensitive land uses within the project limits are single-family and multi-family residences. Residential land uses are located along portions of both sides of I-80, and previous projects have constructed soundwalls to help reduce existing freeway noise. The following areas have homes and existing soundwalls along or near the freeway:
• **El Portal Drive, west of I-80**: The rear yards of some single-family homes with addresses on Rollingwood Drive, Judith Court, Avon Lane, Glenlock Street, and Arundel Way have rear yards along El Portal Drive. The City of San Pablo is building an 8-foot-high masonry soundwall along the western edge of El Portal Drive. A 16-foot-high masonry soundwall already exists along the edge of the shoulder of I-80 where it parallels El Portal Drive.

• **Ridge Drive and Vale Road, west of I-80**: This hilly area just southwest of St. Joseph Cemetery contains single-family homes. The topography descends steeply to the west of I-80. A home at the end of Ridge Drive is on a steep bluff above and in back of I-80, and several other homes are in a steep ravine area. There are no soundwalls along I-80 in this area.

• **Humboldt Avenue west of I-80, between approximately San Pablo Dam Road and Riverside Avenue**: This area has single- and multi-family homes and apartment buildings. The homes are behind an existing soundwall that extends from the Denny’s restaurant on the south side of the interchange to the existing pedestrian overcrossing at Riverside Avenue. South of the pedestrian overcrossing, one-story buildings for a self-storage business line the west side of I-80 to approximately Wildcat Creek. The self-storage buildings help shield freeway noise at a condominium development to the west of the freeway.

• **Joel Court, west of I-80 to approximately Glenn Avenue (along the existing McBryde Avenue westbound off-ramp)**: Single-family homes on the east side of this cul-de-sac have rear yards that face an existing soundwall. I-80 is below the ramp, and hence the existing soundwall is located at the top of a cut slope.

• **Amador Street between approximately Glenn Avenue (near McBryde Avenue) and San Pablo Dam Road, east of I-80**: Single-family homes and Riverside Elementary School line the east side of Amador Street. Amador Street is generally above I-80, and an existing 14-foot-high soundwall is located at the top of the freeway embankment along most of I-80 within this segment. The residential uses on the east side of I-80 and Amador Street extend into the hills above the project area.

• **San Pablo Dam Road to El Portal Drive, east of I-80**: The area between San Pablo Dam Road and the east side of I-80 in this segment is generally undeveloped except for a recreational vehicle storage and sales business. Some residential land uses are located at the northeastern extent of this segment but are well separated from the existing freeway and off-ramps.
The above land uses fall within the definition of activity Category B of the NAC. The definition of approaching the NAC is considered one dBA below the NAC, and therefore 66 dBA is the applicable criteria for evaluating noise abatement for this study. The study area for noise impacts included the land uses adjacent to I-80 and the on-ramps and off-ramps in the project limits. The study area has no Category C land uses that would have frequent human use that would benefit from a lower noise level.

Noise measurements were conducted in May 2008 to determine the existing noise conditions at representative receptor locations in the project area. Both long-term (24 hours) and short-term (one or two 10-minute increments) measurements were collected. Measurements were taken at locations that are primarily affected by traffic noise and consisted of residential yards or positions in adjacent areas considered to be acoustically equivalent to the Category B activity uses. Traffic conditions were also documented during each measurement. The locations of the measurements are shown in the map sheets in Appendix A.

Following established methods for a traffic noise study, the short-term and long-term measurements, together with the measured traffic conditions, vehicle mix, and site-specific geographical information, were then used to determine future noise levels in the project area. Calculated and measured noise levels were compared to assess any differences, to calibrate or validate the Federal Highway Administration’s Traffic Noise Model (TNM) for use in determining noise levels with and without the project, and to consider any applicable noise abatement measures.

Existing noise levels were estimated to range from 61 to 68 dBA at 23 representative receptor locations. Fifteen of the locations have estimated levels approaching or exceeding the NAC (i.e., they are already at or above 66 dBA without the project). The locations that may exceed the NAC are discussed in Section 2.13.3.

2.13.3. Environmental Consequences

2.13.3.1. Traffic Noise

The project would require removal and reconstruction of some of the existing soundwalls (or segments of existing soundwalls) within the project limits to accommodate the proposed changes to westbound I-80 and the interchange ramps between El Portal Drive and McBryde Avenue. Specifically, the project would require the following:
- A portion of the existing soundwall on I-80 at the El Portal Drive undercrossing would be removed to accommodate the proposed relocation of the westbound El Portal Drive on-ramp.
- Portions of the existing soundwall between the El Portal Drive undercrossing and the existing El Portal Drive on-ramp must be relocated to allow construction of the westbound auxiliary lane.
- The existing soundwall on westbound I-80 between the San Pablo Dam Road on-ramp and the pedestrian overcrossing must be relocated to accommodate the proposed westbound on-ramp and frontage road construction.
- A portion of the soundwall adjacent to the McBryde Avenue off-ramp would be reconstructed to accommodate the proposed change in height of the frontage road with respect to the existing freeway and soundwall.\(^{13}\)

The project would result in temporary traffic noise increases after the existing soundwalls are removed and before the replacement soundwalls are constructed. The noise increases could be up to 11 dBA. Table 2.13-2 lists the future traffic noise conditions at design year 2035. The “No Build” column in Table 2.13-2 lists future traffic-generated noise levels with all existing soundwalls still in place. The noise levels listed in columns “Alt. 1” and “Alt. 2” of Table 2.13-2 are the predicted future maximum noise levels with the project. The increases are primarily due to the necessary removal of some existing soundwalls during construction (before any of the removed soundwalls are replaced). Future noise levels would be the same with either build alternative.

**Table 2.13-2 Loudest Hour Noise Levels and Impacts, L_{eq(hr)} dBA**

<table>
<thead>
<tr>
<th>Receiver ID</th>
<th>No Build (dBA)</th>
<th>Alt. 1 Lanes Added (dBA)</th>
<th>Alt. 2 Tight Diamond (dBA)</th>
<th>Type of Development</th>
<th>Existing Soundwall Shielding?</th>
<th>Noise Increase (dBA)</th>
<th>Approach or Exceeds NAC?</th>
<th>Number of Units Exceeding NAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>66</td>
<td>73(^5)</td>
<td>73(^5)</td>
<td>SFR</td>
<td>Yes(^5)</td>
<td>7(^5)</td>
<td>Yes</td>
<td>5 SFR</td>
</tr>
<tr>
<td>R2</td>
<td>67</td>
<td>77(^5,5)</td>
<td>77(^5,5)</td>
<td>SFR</td>
<td>Yes(^5)</td>
<td>10(^7)</td>
<td>Yes</td>
<td>7 SFR</td>
</tr>
<tr>
<td>R3</td>
<td>67</td>
<td>78(^5,5)</td>
<td>78(^5,5)</td>
<td>SFR</td>
<td>Yes(^5)</td>
<td>11(^5)</td>
<td>Yes</td>
<td>5 SFR</td>
</tr>
<tr>
<td>R4</td>
<td>68</td>
<td>78(^5,5)</td>
<td>78(^5,5)</td>
<td>SFR</td>
<td>Yes(^5)</td>
<td>10(^7)</td>
<td>Yes</td>
<td>7 SFR</td>
</tr>
<tr>
<td>R5</td>
<td>63</td>
<td>63</td>
<td>63</td>
<td>SFR</td>
<td>No</td>
<td>0</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>R6</td>
<td>68</td>
<td>78(^5,5)</td>
<td>78(^5,5)</td>
<td>SFR</td>
<td>Yes(^5)</td>
<td>10(^7)</td>
<td>Yes</td>
<td>7 SFR</td>
</tr>
<tr>
<td>R7</td>
<td>67</td>
<td>75(^5,5)</td>
<td>75(^5,5)</td>
<td>SFR</td>
<td>Yes(^5)</td>
<td>8(^5)</td>
<td>Yes</td>
<td>7 SFR</td>
</tr>
</tbody>
</table>

\(^{13}\) The proposed frontage road bridge over Wildcat Creek will be on a higher grade than the existing I-80 roadway and McBryde Avenue off-ramp. The existing soundwall along the right-of-way in this area (at the end of Joel Court) may not be tall enough to break the line of sight between vehicles (especially trucks) and the proposed frontage road.
Table 2.13-2 Loudest Hour Noise Levels and Impacts, $L_{eq(hr)}$ dBA

<table>
<thead>
<tr>
<th>Receiver ID</th>
<th>No Build (dBA)</th>
<th>Alt. 1 Lanes Added (dBA)</th>
<th>Alt. 2 Tight Diamond (dBA)</th>
<th>Type of Development</th>
<th>Existing Soundwall Shielding?</th>
<th>Noise Increase (dBA)</th>
<th>Approach or Exceeds NAC?</th>
<th>Number of Units Exceeding NAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>R8</td>
<td>68</td>
<td>72&lt;sup&gt;3&lt;/sup&gt;</td>
<td>72&lt;sup&gt;3&lt;/sup&gt;</td>
<td>SFR</td>
<td>Yes&lt;sup&gt;5&lt;/sup&gt;</td>
<td>4&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Yes</td>
<td>2 SFR</td>
</tr>
<tr>
<td>R9</td>
<td>61</td>
<td>65&lt;sup&gt;5&lt;/sup&gt;</td>
<td>65&lt;sup&gt;5&lt;/sup&gt;</td>
<td>SFR</td>
<td>Yes&lt;sup&gt;5&lt;/sup&gt;</td>
<td>4</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>R10</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>MFR</td>
<td>No</td>
<td>0</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>R11</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>MH</td>
<td>No</td>
<td>0</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>R12</td>
<td>64</td>
<td>65</td>
<td>65</td>
<td>SFR</td>
<td>No</td>
<td>1</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>R13</td>
<td>62</td>
<td>63</td>
<td>63</td>
<td>SFR</td>
<td>No</td>
<td>1</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>R14</td>
<td>68</td>
<td>69</td>
<td>69</td>
<td>MFR</td>
<td>No</td>
<td>1</td>
<td>Yes</td>
<td>12 MFR</td>
</tr>
<tr>
<td>R15</td>
<td>66</td>
<td>66</td>
<td>66</td>
<td>MFR, SFR</td>
<td>Yes</td>
<td>0</td>
<td>Yes</td>
<td>6 MFR, 6 SFR</td>
</tr>
<tr>
<td>R16</td>
<td>64</td>
<td>65</td>
<td>65</td>
<td>SFR</td>
<td>Yes</td>
<td>1</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>R17</td>
<td>67</td>
<td>68</td>
<td>68</td>
<td>SFR, FU</td>
<td>Yes</td>
<td>1</td>
<td>Yes</td>
<td>7 SFR, 6 FU</td>
</tr>
<tr>
<td>R18</td>
<td>65&lt;sup&gt;3&lt;/sup&gt;</td>
<td>72&lt;sup&gt;3&lt;/sup&gt;</td>
<td>72&lt;sup&gt;3&lt;/sup&gt;</td>
<td>SFR</td>
<td>Yes&lt;sup&gt;5&lt;/sup&gt;</td>
<td>7&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Yes</td>
<td>6 SFR</td>
</tr>
<tr>
<td>R19</td>
<td>64</td>
<td>70&lt;sup&gt;5&lt;/sup&gt;</td>
<td>70&lt;sup&gt;5&lt;/sup&gt;</td>
<td>SFR</td>
<td>Yes&lt;sup&gt;5&lt;/sup&gt;</td>
<td>6&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Yes</td>
<td>9 SFR</td>
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<tr>
<td>R20</td>
<td>65</td>
<td>NA&lt;sup&gt;4&lt;/sup&gt;</td>
<td>NA&lt;sup&gt;4&lt;/sup&gt;</td>
<td>SFR</td>
<td>Yes</td>
<td>NA&lt;sup&gt;4&lt;/sup&gt;</td>
<td>No</td>
<td>0</td>
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<td>R21</td>
<td>69</td>
<td>71&lt;sup&gt;4&lt;/sup&gt;</td>
<td>71&lt;sup&gt;4&lt;/sup&gt;</td>
<td>SFR</td>
<td>Yes</td>
<td>2</td>
<td>Yes</td>
<td>4 SFR</td>
</tr>
<tr>
<td>R22</td>
<td>66</td>
<td>68</td>
<td>67</td>
<td>SFR</td>
<td>Yes</td>
<td>1</td>
<td>Yes</td>
<td>3 SFR</td>
</tr>
<tr>
<td>R23</td>
<td>65</td>
<td>66</td>
<td>66</td>
<td>SFR</td>
<td>Yes</td>
<td>1</td>
<td>Yes</td>
<td>3 SFR</td>
</tr>
</tbody>
</table>

1. Receiver locations are shown on the layout sheets in Appendix A
2. SFR = single-family residence, MFR = multi-family residence, MH = mobile home, FU = frontage unit
3. Possible severe noise impact
4. Project would remove receptor location
5. Project would remove existing soundwall; level represents noise after soundwall is removed.
6. Locations that approach or exceed the Noise Abatement Criteria require consideration of noise abatement measures. For residential land uses, 67 dBA is the level considered to approach or exceed the NAC.

The worst-case impact from the project would occur during the construction period after portions of some existing soundwalls have been removed and before the abatement measures described in Section 2.13.4 have been installed. The maximum increase would not exceed 12 dBA $L_{eq(hr)}$ and would therefore not be considered a substantial increase based on the Federal criteria. The increase would, however, be an adverse impact. Section 2.13.4 proposes noise abatement measures in accordance with the Department’s Traffic Noise Analysis Protocol procedures.

The Traffic Noise Analysis Protocol states that a traffic noise impact may be considered significant under CEQA if the project is predicted to result in a substantial

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increase in traffic noise. A substantial noise increase is defined as an increase of 12 dBA $L_{eq(hr)}$ above existing conditions. The results of the traffic noise modeling indicate that the project would typically result in increases of zero to five dBA $L_{eq(hr)}$ throughout the study area. In areas where existing soundwalls would either be partially or completely removed with construction of the project, noise levels are expected to temporarily increase up to 11 dBA until replacement walls can be constructed. The traffic noise impacts of the proposed project are considered less than significant under CEQA because all future predicted increases would be less than 12 dBA $L_{eq(hr)}$ and increases greater than five dBA $L_{eq(hr)}$ would be temporary, until replacement walls are constructed.

2.13.3.2. Construction Noise

Project construction activities that would generate noise include clearing and grubbing, earthwork, paving, and the construction of roadway structures, which could involve pile driving. At times, construction activities could be within 50 feet of noise-sensitive receptors (during soundwall removal and construction). The highest noise levels would result from activities such as pile driving and demolition. Highway construction activities typically take place for relatively short periods of time as construction proceeds along the project’s alignment. Construction noise would mostly be of concern in areas where the noise would be concentrated for extended periods of time, where noise levels from individual pieces of equipment are substantially higher than ambient conditions, or when noise-intensive activities such as pile driving or demolition occur during nighttime hours.

Project construction is anticipated to take place during daytime and nighttime hours. During the day, ambient traffic noise levels are on average about 72 dBA $L_{eq(hr)}$ at the nearest unshielded locations. The proposed construction activities would generate noise above ambient average daytime traffic noise levels when construction is within approximately 100 feet of sensitive receptors. At night, ambient average traffic noise levels are approximately 69 dBA $L_{eq(hr)}$. Construction activities within about 200 feet of sensitive receptors would generate noise above ambient nighttime traffic noise levels.

The Noise Element of the City of San Pablo General Plan states: “Typically, projects are conditioned upon a guarantee of no work between 9:00 p.m. and 7:00 a.m., weekdays and between 5:00 p.m. and 9:00 a.m., weekends and holidays.” Work within the Caltrans right-of-way is generally not subject to local noise ordinances;
however, if work is planned outside of these hours, a special permit from the City of San Pablo may be required.

2.13.4. Avoidance, Minimization, and/or Abatement Measures

Noise abatement measures were evaluated for sensitive land uses (“Category B” in Table 2.13-1) that would approach or exceed the Noise Abatement Criteria. Noise abatement measures identified in the Traffic Noise Analysis Protocol include consideration of:

- Avoiding a noise impact by using design alternatives, such as altering the horizontal and vertical alignment of the project;
- Constructing noise barriers;
- Using traffic management measures to regulate types of vehicles and speeds;
- Acquiring property to serve as a buffer zone; and
- Acoustically insulating public use or nonprofit institutional structures.

The primary noise source within the project limits is I-80, and changing the alignment of the freeway or regulating I-80 traffic volumes or speeds is not within the practicable scope of this project. Acquiring property would have additional adverse community impacts. Soundwalls were determined to be more effective and practicable than insulating buildings. Some soundwalls already exist in the project limits and in some cases would only require partial reconstruction to conform to the new right-of-way. Therefore, soundwalls are the preferred noise abatement measure for this project.

The following describes the evaluation and determination for each location where future traffic noise levels would exceed the NAC with the proposed project and with full or partial removal of existing soundwalls. Only areas within the project limits that are predicted to exceed the NAC with future traffic conditions are discussed (Table 2.12-2, “Approach or Exceeds NAC” column). Soundwalls SW1 through SW5 were determined to be feasible based on their predicted effectiveness in reducing traffic noise levels by five dBA or more. Soundwalls SW6 through SW8 would reduce sound levels by less than five dBA and were consequently determined not feasible. The soundwalls studied are shown in Appendix A.

Table 2.13-3 is a summary of soundwall feasibility determinations, including the calculated cost allowance and estimated total cost to construct each wall. As
described at the end of Section 2.13.1.2, the decision to implement a proposed noise abatement measure is based on total cost as well as other factors such as acceptance by affected residents, the absolute noise level, noise levels with the project versus existing noise, environmental impacts of abatement, public and local agency input, the presence of newly constructed development versus development pre-dating 1978, and cost per benefited residence. The preliminary decision on soundwalls for this project is also summarized in the Noise Abatement Decision Report (NADR); the findings of the NADR are summarized in the following subsections.

Table 2.13-3 Summary of Soundwall Feasibility and Reasonable Allowances (Alternatives 1 and 2)

<table>
<thead>
<tr>
<th>Wall ID</th>
<th>Approx. Stationing</th>
<th>Length (feet)</th>
<th>Soundwall Considered</th>
<th>Wall Height (feet)</th>
<th>Noise Reduction (dBA)</th>
<th>Number of Benefited Receivers</th>
<th>Total Reasonable Monetary Allowance</th>
<th>Estimated Construction Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW1</td>
<td>Sta. 10+00 to 30+00</td>
<td>1,900</td>
<td>Height Increase/Replacement Wall</td>
<td>10 5 9</td>
<td>$468,000</td>
<td>$765,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 6 15</td>
<td>$810,000</td>
<td>$918,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14 5 to 7 19</td>
<td>$1,154,000</td>
<td>$1,070,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16 6 to 8 19</td>
<td>$1,168,000</td>
<td>$1,223,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW4</td>
<td>Sta 0+00 to 9+00</td>
<td>900</td>
<td>Height Increase/Replacement Wall</td>
<td>8</td>
<td>Would be constructed to complete/replace portion of City of San Pablo’s masonry wall along El Portal Drive that would be realigned by the proposed project.</td>
<td>$294,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW2, SW3, SW5</td>
<td>Segments between Sta. 57+00 to 77+00</td>
<td>150 380 560</td>
<td>Replacement Wall Segments</td>
<td>16 5 to 10 38</td>
<td>$2,198,000</td>
<td>$716,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.13.4.1. Soundwall SW1
Soundwall SW1 would protect land uses from just east of McBryde Avenue to San Pablo Dam Road. Receptors R21, R22, and R23 represent ten single-family homes from the end of the cul-de-sac of Joel Court (south of Wildcat Creek) to the Joel Court/Glenn Avenue intersection. These homes have rear yards along the right-of-way of the existing westbound I-80/McBryde Avenue off-ramp. An existing masonry soundwall at the top of the slope above the off-ramp currently helps shield these homes from freeway and off-ramp traffic noise. Short-term noise measurements taken at the end of Glenn Avenue indicated noise levels of 60 to 61 dBA, and a long-term measurement taken along the McBryde Avenue off-ramp near Wildcat Creek registered a peak of 72 dBA. Existing and future No Build modeled noise levels range from 65 to 69 dBA in the rear yards of homes on Joel Court. No right-of-way would
be acquired at any of these homes, but a portion of the existing masonry soundwall just west of San Pablo Creek would require reconstruction to provide line-of-sight protection from vehicles traveling on the proposed frontage road and bridge over Wildcat Creek. Peak noise levels with the project are predicted at 66 to 71 dBA, an increase of one to two decibels.

From Wildcat Creek to west of the existing pedestrian overcrossing, the existing land use is a commercial self-storage business. I-80 has no soundwalls fronting the self-storage buildings. The buildings partially shield a condominium complex west of the storage business. At least a partial acquisition of the self-storage business property would be necessary near the freeway, but this can only be determined during the right-of-way acquisition process. If acquisition only affects a portion of one or more of the buildings and maintains a line of buildings fronting I-80 similar to the existing setting, there should be no discernable change in noise levels. If acquisition requires the removal of one or more entire building, the condominiums west of the self-storage business may experience greater exposure to freeway traffic noise, depending on how many buildings are removed.

East of the self-storage business are single-family and multi-family residences off Riverside Avenue and Humboldt Avenue that are currently protected by a masonry soundwall along the I-80 right-of-way. The project would require removal of the existing soundwall and residences on the east side of Humboldt Avenue and at the east end of Riverside Avenue. A short-term measurement at the end of Riverside Avenue (R20) was 64 dBA, with a predicted 65 dBA future level without the project. Homes along Humboldt Avenue (R18 and R19) have existing and future predicted levels of 64 and 65 dBA, respectively, without the proposed project. Removal of the soundwall would increase traffic noise levels by six to seven dBA at 15 homes.

With the project (including removal of the existing soundwall between the self-storage business and San Pablo Dam Road, potential removal of entire self-storage buildings, and the elevation of the proposed frontage road near its crossing of Wildcat Creek), remaining residences would experience noise levels that exceed the NAC. A 14- to 16-foot-high soundwall would achieve at least a five dBA reduction at receptors R18 through R22. Increasing the height of the existing wall west of R22 would not achieve a five dBA reduction because homes are more effectively shielded by existing topography (the slope of the freeway below the existing McBryde Avenue off-ramp and proposed frontage road) and the existing soundwall. The reasonable cost allowance for soundwall SW1 was estimated at $1,168,000, and the estimated
construction cost was up to $1,223,000, depending on the height of the wall (Table 2.13-3).

2.13.4.2. Soundwall Segments SW2, SW3, and SW5 on I-80 and Extension of El Portal Drive Masonry Wall (SW4)

Soundwall segments SW2, SW3, and SW5 would replace portions of an existing soundwall that must be relocated for the project along westbound I-80 between the existing and proposed El Portal Drive on-ramps. SW4 would extend a city-built eight-foot-high masonry soundwall along the rear yard property lines along El Portal Drive east of Glenlock Street, protecting homes with addresses on Judith Court and Rollingwood Drive.

Soundwalls SW2, SW3, and SW5 together with the existing segments of the I-80 soundwall that can be saved would provide a continuous replacement for the existing soundwall that protects homes with rear yards bordering El Portal Drive near westbound I-80 within the project limits. Short-term noise levels were measured at 65 to 68 dBA along El Portal Drive, and a long-term measurement near the existing El Portal Drive westbound on-ramp measured a peak of 68 dBA. Modeled noise levels for the No Build Alternative ranged from 66 to 68 dBA at receptors representing the rear yards of homes along El Portal Drive. Future noise levels were modeled with the existing I-80 soundwall segments removed to accommodate project construction and ranged from 72 to 78 dBA, a four to 11 dBA increase. Five of the modeled locations had noise levels of 75 dBA or higher, representing a “severe” noise level under the Federal criteria but less than a “substantial increase” (12 dBA or more). These effects occur primarily because the project would have to remove the existing soundwall, but the increase in traffic on El Portal Drive with the relocation of the freeway on-ramp would also contribute to the higher noise level.

A 16-foot-high soundwall along I-80 would provide a five dBA or more reduction at 19 single-family homes (up to six dBA). The I-80 soundwall combined with an eight-foot-high soundwall along El Portal Drive provides a five dBA or more reduction at an estimated 38 residences, with a maximum reduction of ten dBA. The City of San Pablo plans to construct the eight-foot-high soundwall along El Portal Drive to approximately 200 feet east of Glenlock Street. SW-4 would extend this eight-foot-high soundwall to the east end of the project, which would help shield the remaining home on Rollingwood Drive. (The project would remove and relocate two residences on Rollingwood Drive to accommodate the realignment of El Portal Drive to the intersection at the freeway ramps). The reasonable cost allowance calculated for
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SW2, SW3, SW4, and SW5 is $2,198,000, and would effectively protect the 38 homes and abate the severe noise level impacts. The estimated cost for these walls is $716,000.

2.13.4.3. Land Uses Studied That Do Not Exceed the NAC, and Soundwalls Studied But Determined Not Feasible

The noise study considered and evaluated all residential land uses within the project limits. Some land uses did not qualify for further evaluation either because measured and predicted future noise levels would not exceed the NAC listed in Table 2.13-1, or because an evaluated soundwall would not achieve the minimum five dBA reduction necessary to be considered feasible. The following locations were measured and modeled and the sound levels would not exceed the NAC:

- Homes accessed from or at the end of Ridge Drive and Vale Road, west of I-80, southwest of St. Joseph Cemetery; and
- Residences off Morrow Drive and San Pablo Dam Road, east of I-80 and the existing I-80/San Pablo Dam Road Interchange.

At the following segments, predicted future noise levels would exceed the NAC but construction of a soundwall would not achieve a minimum five dBA noise level reduction:

- **Along Amador Street between McBryde Avenue and Alpine Drive.** An existing soundwall along the west side of Amador Street already helps reduce freeway noise to homes on the east side of the street. Increasing the height of this 14-foot-high soundwall was studied and was found to achieve no more than a one dBA reduction in noise levels along most of its length.
- **Along Amador Street from Alpine Drive to the San Pablo Dam Road intersection.** Extending the existing soundwall would reduce traffic noise levels by three dBA or less.
- **Along westbound I-80, from the El Portal Drive undercrossing to the proposed westbound on-ramp merge.** Retaining a short segment of soundwall along westbound I-80, from the El Portal Drive undercrossing to the proposed westbound on-ramp merge. The proposed relocation of the westbound I-80/El Portal on-ramp would require removal of the existing soundwall, but construction of a new soundwall along the edge of I-80 at this eastern extent of the project limits is limited because of the need to allow for the proposed on-ramp to merge with the traffic lanes, and allow for adequate sight distance for drivers on the on-
ramp to adequately see on-coming westbound I-80 traffic. Placement of this barrier would only reduce noise levels by up to one dBA. Extension of the 8-foot masonry wall will achieve a five dBA reduction along El Portal Drive at the residence evaluated in this area, and therefore the extension of the El Portal Drive wall was included in the project.

2.13.4.4. Noise Abatement Decision

This IS/EA was circulated for public review, as described in Section 3.4 and Appendix J. The locations of the proposed soundwalls were included in the IS/EA and presented at the August 19, 2009, public hearing. Three comments regarding noise were received during the review period. These comments related to planting or landscaping as noise abatement and existing noise levels exceeding a standard. Responses to those comments are presented in Appendix J (see the responses to Comments C-12-A, D-01-B, and D-06-B).

The Department will incorporate noise abatement in the form of soundwalls in the following locations:

- Along westbound I-80 from just west of Wildcat Creek to San Pablo Dam Road (SW1);
- Along segments between the existing I-80 westbound El Portal Drive on-ramp and the proposed relocated westbound El Portal Drive on-ramp (SW2, SW3, and SW5); and
- As an extension of the 8-foot-high masonry soundwall that the City of San Pablo plans to construction along El Portal Drive (SW4).

The respective lengths and average heights of these soundwalls are listed in Table 2.13-3. Calculations based on preliminary design data indicate that the soundwalls would reduce noise levels by five to ten dBA for 60 residences at a total construction cost of $2,233,000 (assuming a 16-foot-high soundwall SW1). If, during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.

2.13.4.5. Construction Noise Abatement

Noise generated while constructing the proposed project could at times reach levels higher than the existing traffic noise. The increase in noise from construction activities would be temporary and will be reasonably minimized by implementing provisions in Section 7-1.01I, “Sound Control Requirements,” of the Caltrans Standard Specifications and the following abatement measures:
Consider construction of the soundwall replacements along westbound I-80 and San Pablo Dam Road as early as possible to minimize noise exposure to homes.

Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

Prohibit unnecessary idling of internal combustion engines within 100 feet of residences.

Avoid staging of construction equipment within 200 feet of residences and locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far practical from noise-sensitive residences.

Require all construction equipment to conform to Section 7-1.01I, Sound Control Requirements of the latest Standard Specifications.

Avoid nighttime construction work when feasible.

Limit demolition and pile-driving activities to daytime hours only. If nighttime work is required, implement a construction noise-monitoring program and provide additional mitigation as necessary (in the form of noise control blankets or other temporary noise barriers, etc.) for affected receptors.
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Biological Environment

The following sections are summarized from the Natural Environment Study (URS 2008i), Biological Assessment (URS 2008j), and Fisheries Biological Assessment (URS 2008k) for the proposed project.

2.14. Natural Communities

The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, fish passage, 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.

Wetlands and other waters of the United States are discussed in Section 2.15. Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in Section 2.18.

2.14.1. Affected Environment

The land surrounding the project limits is largely a developed urban area with a mixture of commercial and residential structures. The Alvarado District of Wildcat Canyon Regional Park is located about 1,000 feet east of the project area between San Pablo Dam Road and McBryde Avenue. Vegetation communities consist of ornamental or nonnative plants, and riparian scrub is present along the banks of Wildcat, Garrity, and San Pablo creeks.

Where both Wildcat and San Pablo creeks flow through urban San Pablo at I-80 and west of I-80 in the biological study area (BSA),\(^\text{15}\) creek banks tend to be steep, high (approximately 15 to 20 feet), and heavily overgrown with English ivy (*Hedera helix*). Many culverts are present and range in length from a few feet to several city blocks. Creeks are heavily littered with garbage and large items such as shopping carts, bicycles, and mattresses. Many culverts show evidence of homeless encampments.

\(^{15}\) The BSA consists of the existing State right-of-way in the project limits and additional right-to-way to be acquired for the proposed project. To assess effects to California red-legged frog habitat, the study area included creek drainages for 1 mile outside of the project limits.
The riparian areas along the creeks provide wildlife habitat within this urbanized area. The vegetation provides nesting habitat to migratory songbirds such as warblers, vireos, grosbeaks, and flycatchers. Riparian areas provide foraging habitat for many species of reptiles and amphibians and act as wildlife migration and movement corridors. The canopy and subcanopy layers provide shade and protection for San Pablo and Wildcat creeks. No regional or habitat conservation plans or programs apply to the project area.

2.14.2. **Environmental Consequences**

The project would require removal of vegetation adjacent to westbound I-80 for the construction of a new auxiliary lane between El Portal Drive and San Pablo Dam Road, as well as a frontage road between San Pablo Dam Road and McBryde Avenue. This would affect mostly nonnative grasses and shrubs. Mature eucalyptus trees in the vicinity of the west side of the El Portal Drive undercrossing of I-80 would also be removed. Although project construction would largely avoid impacts to stream corridors, which are the most sensitive habitats in the project area, construction would affect the top of the banks of Wildcat Creek. No work would take place within the banks of Wildcat Creek or the creek itself. San Pablo Creek and its banks would be entirely avoided by the project. The proposed bridge over Wildcat Creek would be constructed at the top of the creek bank. No piers or footings would be placed within the creek but abutments would be installed at the top and outside of the creek banks. No bridge construction would take place within the creek bed or bank, and existing wingwalls would remain unaffected. Installation of the abutments would require removal of upland vegetation above the culvert wingwalls in the construction area.

2.14.3. **Avoidance, Minimization, and/or Mitigation Measures**

No construction would take place in either San Pablo or Wildcat creeks. No impacts would occur to any natural biological communities, and no further avoidance measures are necessary.

2.15. **Wetlands and Other Waters of the United States**

2.15.1. **Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the Federal level, the Clean Water Act (CWA) (33 USC 1344) is the primary law
regulating wetlands and waters. The CWA regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Other 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 subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by the USACE with oversight by the USEPA.

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

At the State level, wetlands and waters are regulated primarily by the California Department of Fish and Game (CDFG) and the RWQCBs. In certain circumstances, the California Coastal Commission (or Bay Conservation and Development Commission) 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 the CDFG before beginning construction. If the CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.
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The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCBs also issues water quality certifications in compliance with Section 401 of the CWA. See Section 2.9 for additional details.

2.15.2. Affected Environment
San Pablo and Wildcat creeks cross beneath I-80 in culverts in the project area. San Pablo Creek, a perennial stream, crosses under I-80 at the existing westbound on-ramp from El Portal Drive. Wildcat Creek crosses under I-80 in a 260-foot-long concrete double-box culvert between San Pablo Dam Road and just east of McBryde Avenue. Wildcat Creek has been ephemeral since the creation of Lake Anza in 1937–38.

An unnamed drainage crosses I-80 in a 36-inch concrete culvert at approximately Station 40+70. The culvert would be extended to accommodate the freeway widening. According to the USGS, the drainage is not a perennial stream (WRECO 2008).

2.15.3. Environmental Consequences
The El Portal Drive on-ramp over San Pablo Creek would be closed as part of the proposed project. This would entail removal of the existing road surface. No work would take place in the stream or its banks. The existing culvert would not be altered.

The proposed new frontage road connecting to McBryde Avenue would cross Wildcat Creek on a new bridge adjacent to the existing I-80 culvert. This bridge has been included in the project specifically to avoid having to extend the existing culvert and work in the creek. The bridge would span the creek, which is bordered by high concrete wingwalls downstream of the culvert. No construction activities would take place below the top of the existing wingwalls. No work would take place in the creek.

No impacts to any jurisdictional waters regulated by the USACE under Section 404 of the Federal CWA would occur. The project does not appear to meet the definition for either a “reporting” or “nonreporting” authorization by the USACE because the project would avoid the creeks.

2.15.4. Avoidance, Minimization, and/or Mitigation Measures
The portion of Wildcat Creek below the existing wingwalls will be designated as an environmentally sensitive area (ESA) and flagged to exclude construction workers and equipment. Best management practices (BMPs) will be implemented during bridge construction to prevent stormwater runoff from the construction area from
entering Wildcat Creek. San Pablo Creek will be avoided and will also be designated as an ESA.

2.16. Plant Species

2.16.1. Regulatory Setting
The U.S. Fish and Wildlife Service (USFWS) and CDFG share regulatory responsibility for the protection of special-status plant species. Special-status species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Section 2.18 presents detailed information about threatened and endangered species.

This section discusses all the other special-status plant species, including CDFG 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 FESA can be found at 16 USC Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act (California Fish and Game Code Sections 1900–1913) and CEQA (PRC Sections 2100–21177).

2.16.2. Affected Environment
Lands in the project area are highly disturbed, generally urbanized, and dominated by nonnative or landscape species. At the rural/suburban interface near the east side of I-80, single-family homes with large gardens, ornamental vegetation, and small agricultural plots such as a small vineyard back onto the creeks. Where San Pablo and Wildcat creeks cross I-80 in the project limits, riparian shrub areas are present along their steep banks, and the creeks are overgrown with English ivy. Above the creek banks is upland habitat heavily overgrown with Himalayan blackberry (*Rubus discolor*). No special-status plant species were observed during several surveys and visual assessments of the study area in 2007 and 2008. Based on the disturbed
condition of the project vicinity, it was determined that no special-status plant species occur in the project limits.

2.16.3. **Environmental Consequences**
No natural plant communities of special concern exist within the study area. No adverse impacts would occur to special-status plant species.

2.16.4. **Avoidance, Minimization, and/or Mitigation Measures**
No avoidance and minimization measures are necessary.

2.17. **Animal Species**

2.17.1. **Regulatory Setting**
Many State and Federal laws regulate impacts to wildlife. The USFWS, the National Marine Fisheries Service (NOAA Fisheries), and the CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under CESA or FESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.18. All other special-status animal species are discussed here, including CDFG 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;
- Migratory Bird Treaty Act; and
- Fish and Wildlife Coordination Act.

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act;
- Sections 1600–1603 of the Fish and Game Code; and
- Section 4150 and 4152 of the Fish and Game Code.
2.17.2. Affected Environment

The riparian corridors along San Pablo and Wildcat creeks provide some wildlife habitat and serve as migration and movement corridors. The vegetation provides nesting habitat to migratory songbirds and foraging habitat for many species of reptiles and amphibians. The canopy and subcanopy layers provide shade and protection for water features and their aquatic inhabitants. Species that are expected to frequent this community include the common garter snake (*Thamnophis* sp.), Pacific tree frog (*Hyla regilla*), western toad (*Bufo boreas*), and American crow (*Corvus brachyrhynchos*) in addition to the raccoon, striped skunk, and opossum.

The trees and shrubs in the BSA may provide nesting, foraging, and resting habitat for a variety of bird species, including raptors and passerine birds. Small mammals, such as mice (*Peromyscus* sp.), raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), and opossums (*Didelphis virginiana*) may also be present. Mallard ducks (*Anas platyrhynchos*) were observed during one of the field surveys (February 20, 2007).

The Migratory Bird Treaty Act makes it unlawful at any time, by any means, or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. The trees and shrubs in the BSA may provide nesting, foraging, and resting habitat for a variety of bird species, including raptors and passerine birds (perching birds, including song birds, many of which are migratory).

Essential Fish Habitat (EFH) includes waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity. No EFH is identified within San Pablo or Wildcat creeks within the project limits or downstream of I-80.

2.17.3. Environmental Consequences

The project would require vegetation removal in the construction areas on the east side of I-80 within the project limits. The loss of habitat would be minimal as the project area is already heavily urbanized, and construction would be limited to areas bordering the existing freeway. Mature eucalyptus trees and nonnative understory next to the freeway would be removed at the proposed realignment of El Portal Drive to accommodate a new on-ramp. Some vegetation would be removed at the top of the banks at Wildcat Creek, which are dominated by English ivy and provide limited habitat. Vegetation removal could affect migratory birds if it occurs during (and
disrupts) their nesting and breeding season. The nesting season for songbirds and other migratory birds that might occupy the BSA is generally March 1 to August 31.

The project would not adversely affect EFH or fish passage.

2.17.4. **Avoidance, Minimization, and/or Mitigation Measures**

The project has been designed to avoid construction in the creeks crossed by I-80 within the project limits. To minimize adverse affects to the riparian corridors at San Pablo and Wildcat Creeks, erosion control measures will be required of the construction contractor to prevent material and sediments from entering the drainages. Existing cut slopes along I-80, dominated by grassy habitat that might be used by common wildlife species, will be reseeded following construction. Landscaping will be installed following construction.

Vegetation removal shall be timed to avoid the general nesting period for songbirds and other migratory birds (approximately March 1 to August 31). If vegetation must be removed during this period, preconstruction surveys should be conducted to check for the presence of active nests, and a perimeter established to avoid construction near active nests until the breeding pair and any fledglings leave.

2.18. **Threatened and Endangered Species**

2.18.1. **Regulatory Setting**

The primary Federal law protecting threatened and endangered species is the 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 the FESA, Federal agencies such as FHWA are required to consult with the 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.”
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

California has enacted a similar law at the State level, the 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 CDFG is the agency responsible for implementing CESA. Section 2081 of the California 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 California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFG. For projects requiring a Biological Opinion under Section 7 of the FESA, the CDFG may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

2.18.2. Affected Environment

2.18.2.1. Federal Consultation Process

USFWS species records were reviewed at the outset of the biological studies for the project and were rechecked for updates in July 2008. A copy of the records list is included in Appendix I. The California red-legged frog (CRLF; *Rana aurora draytonii*, listed as threatened under FESA) was identified as potentially of concern in the project region. A habitat site assessment for CRLF was performed within a 1-mile radius of the project limits and submitted to USFWS for comment on November 27, 2007. In a letter dated March 18, 2008, the USFWS recommended that Caltrans further analyze the potential effects of the proposed project on the species (see Appendix I). In response, a Biological Assessment was prepared and submitted to USFWS on September 10, 2008. The Biological Assessment detailed the studies performed to date and identified potentially affected upland habitat in the project limits. USFWS issued the Biological Opinion in September 2009 for the potential project impact on threatened CLRF.

A Biological Assessment addressing the potential for presence of the Central California Coast steelhead in the BSA was submitted to NOAA Fisheries on September 9, 2008. NOAA Fisheries had no comments on the “no effect” determination of the Biological Assessment, thereby concluding formal consultation.
No State-listed endangered, threatened, or fully protected species were identified as being potentially present in the project’s study area. No formal consultation with the CDFG was necessary.

### 2.18.2.2. Species Addressed in Consultation

#### California Red-Legged Frog

The CRLF is the only special-status species with the potential to occur in the project area. The species has been recorded in San Pablo and Wildcat creeks approximately 6.3 and 4.7 miles upstream of the project area, respectively. The project is not within a USFWS CRLF Recovery Plan Core Area or a Priority Watershed.

It was concluded that the potential exists for migrating CRLF to disperse through the riparian corridors provided by San Pablo and Wildcat creeks and potentially occur in the project area. San Pablo and Wildcat creeks may provide suitable CRLF breeding and dispersal habitat to the east (upstream), where these creeks are relatively flat or mildly steep and have riffles and pools. Upland areas within one mile of potential breeding sites east of I-80 provide dispersal and aestivation\(^{16}\) habitat.

From I-80 west, the creeks do not appear to be suitable for breeding and dispersal due to steep banks. Moreover, many culverts extending from a few feet to several city blocks in length are present. They are heavily littered and show substantial siltation from slope erosion. San Pablo Creek is perennial in this area and may support bullfrogs, which prey on CRLF. Other creekside vegetation may shelter cats, rats, and other predators of the CRLF.

#### Central California Coast Steelhead

Designated critical habitat for the Central California Coast steelhead includes San Pablo Creek and Wildcat Creek within the project vicinity. However, significant passage barriers exist downstream of the project limits, and neither creek contains known populations of steelhead. Suitable habitat is available for steelhead spawning and rearing upstream, but downstream fish barriers render those areas functionally inaccessible to anadromous populations in the San Francisco Bay.

Wildcat Creek is not considered an anchor stream or a high-priority watershed for fish passage restoration because it has been ephemeral since the creation of Lake Anza in 1937–38 and contains barriers to fish passage between San Francisco Bay and I-80. Downstream of the I-80 crossing, a section of Wildcat Creek receives year-

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\(^{16}\) Aestivation is the cessation or slowing of an animal’s activity during the summer or a hot period.
round water discharge from the Doctors Medical Center (located downstream of the project). While suitable habitat is available for steelhead spawning and rearing upstream of the project limits, downstream fish barriers render those areas functionally inaccessible to anadromous populations in the San Francisco Bay. Previous surveys have identified a viable population of rainbow trout in this creek, which are likely the descendants of coastal anadromous stock transplanted in 1983 (Leidy et al. 2005).

2.18.3. Environmental Consequences

**California Red-Legged Frog**

The project is likely to adversely affect, but not jeopardize, CRLF. No CRLF were observed, and no populations are known to exist in the project area. However, without further surveys to confirm the absence of CRLF, the USFWS indicated during consultation that the project area has sufficient connectivity with CRLF breeding sites for the species to be potentially present. Even if surveys were performed, CRLF cannot be ruled out as potentially occurring at the project site in the future.

The project would disturb only one area of potential CRLF habitat: the upper banks of Wildcat Creek. The project would remove vegetation from an area of approximately 0.008 acre (temporary) and 0.031 acre (permanent).

**Central California Coast Steelhead**

The project would have no effect on Central California Coast steelhead or its critical habitat. No project construction would occur within San Pablo Creek, and construction at Wildcat Creek would be restricted to the top of the banks and outside of the creek bed and adjacent wingwalls. Downstream barriers obstruct fish passage to the project area, and therefore the likelihood for this species to be present within the project limits is very low. Measures are proposed in Section 2.18.4 to ensure that project construction would not affect this species.

2.18.4. Avoidance, Minimization, and/or Mitigation Measures

The following measures were identified to avoid and minimize potential construction impacts:

- Construction-area delineation: Before any ground disturbance occurs, project area boundaries will be clearly delineated with ESA fencing and solid barriers. At San Pablo Creek, the work area will be designated around the existing ramp where pavement will be removed, such that no work will be allowed at or within
the creek banks. At Wildcat Creek, the work area will be designated to allow construction of the new bridge abutments near the top of the bank, and barriers will be placed to prevent construction activities, equipment, and erosion from extending beyond the top of the bank area. The ESA fencing and barriers will be put in place outside of the steelhead migratory season, between June 15 and October 15.

- Construction monitoring: A biological monitor will inspect and record placement of the construction ESA fencing and barriers prior to start of construction. A biologist will monitor the initial ground disturbance activities and during vegetation clearance at Wildcat Creek.

- Vegetation: Vegetation near Wildcat Creek will be removed without the use of heavy machinery or herbicidal sprays to minimize impacts to any special-status species.

- Implementation of erosion control measures: Erosion control measures will be undertaken to minimize sedimentation impacts to the creek. The measures will be limited to tightly woven fiber netting or similar materials to ensure that CRLF do not become entrapped. Erosion control measures developed by the contractor will comply with the Caltrans Statewide Stormwater Program (http://www.dot.ca.gov/hq/env/stormwater/; Caltrans 2007).

- Onsite construction personnel education program: The USFWS-approved biologist will conduct onsite training with construction personnel for CRLF.

- Spill avoidance and response: Avoidance of spills through implementation of a spill avoidance and response plan will be enforced.

- Entrapment avoidance: To avoid entrapment of CRLF, all excavated steep-walled holes or trenches more than two feet deep will be covered at the end of each working day. Holes or trenches will be fitted with at least one escape ramp. Construction pipes, culverts, and similar structures will be inspected for CRLF before being buried, capped, moved, or otherwise used in any way.

- Following completion of the proposed project, all temporary roads, staging areas, and work areas will be removed and temporary impact areas restored to a natural condition to provide baseline habitat values. All construction-related equipment, including erosion control and ESA fencing, will be removed. At Wildcat Creek, the banks are steep and range from approximately 15 to 20 feet above the creekbed. The banks are dominated by English ivy (Hedera helix), a very invasive species. Within the State right-of-way, the ivy will be removed and restored with appropriate native riparian species.
Mitigation for impacts to upland CRLF habitat will be provided at a 1:1 ratio for temporary impacts and at a 3:1 ratio for permanent impacts, as shown in Table 2.18-1. Mitigation credits will be purchased for this species from a USFWS-approved mitigation bank. The Ohlone Preserve Conservation Bank currently has availability for upland CRLF habitat that is appropriate for this mitigation, but other banks may be used if acceptable to USFWS. Alternatively, habitat enhancement could be performed at Wildcat Creek. Final mitigation plans will be defined during final design and permitting of the project.

<table>
<thead>
<tr>
<th>Wildcat Creek impacts</th>
<th>0.008</th>
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<tr>
<td>Mitigation</td>
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### 2.19. Invasive Species

#### 2.19.1. 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.

#### 2.19.2. Affected Environment

Plants in the project area include invasive species. The California Invasive Plant Council’s Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php) lists plants categorized as having high, moderate, or low impacts based on their documented impacts, potential to spread, and the range of habitats they tolerate. The species found in the project that are considered to be threats based on these ratings are as follows:
English ivy (*Hedera helix*);
Himalayan blackberry (*Rubus discolor*); and
Scotch broom (*Cytisus scoparius*).

2.19.3. **Environmental Consequences**
None of the identified species on the California list of noxious weeds is currently used by Caltrans for erosion control or landscaping. However, project construction activities could have the potential to inadvertently spread these species if they are present.

2.19.4. **Avoidance, Minimization, and/or Mitigation Measures**
In compliance with the Executive Order on Invasive Species, E.O. 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as noxious weeds. The contractor will be required to use equipment that is cleaned and inspected for plant material prior to arrival and use at the project site.
2.20. **Cumulative Impacts**

2.20.1. **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 considers the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

Section 15130 of the CEQA Guidelines 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 appears in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under NEPA appears in 40 CFR Section 1508.7 of the Council on Environmental Quality Regulations.

2.20.2. **Projects Considered for Cumulative Impacts**

To evaluate the potential for cumulative impacts, a list of projects was defined through review of available development and public works projects posted by the Cities of San Pablo and Richmond and by Contra Costa County. The Governor’s Office of Planning and Research CEQAnet database was also reviewed to identify proposed projects for which notices of preparation or completion of an environmental document were filed with the State Clearinghouse. The study area for the cumulative
impacts assessment was up to approximately three miles from the project limits and considered conceptual, planned and recently completed projects.

2.20.2.1. Private Development and Nontransportation Projects

Table 2.1-1 in Section 2.1 lists the projects identified through the review of projects to consider for cumulative impacts. The following briefly summarizes the nature of and status of the developments, if known. State Clearinghouse reference numbers (SCH#) are included where available.

- **Abella Paseo, near San Pablo Avenue and El Portal Drive, San Pablo.** This mixed-use development will consist of 292 homes on 36 acres. The first phase of development was completed in 2006.

- **Amador Street to San Pablo Dam Road Sidewalk Gap Closure.** Construction will involve concrete curb, gutter, and sidewalk installation where none exists on Amador Street.

- **El Paseo Family Apartments (Brookside Drive Family Housing), Brookside Drive and Giant Road, San Pablo (SCH#2006079024).** The project includes construction of 144 apartments on approximately 3.7 acres of vacant land on the bank of Wildcat Creek.

- **College Center Shops, San Pablo Avenue at El Portal Drive, San Pablo.** The development will maintain an existing supermarket and restaurant business and add two new commercial buildings. Construction is scheduled to proceed in phases in 2008–2009.

- **Forest Green Estates Residential Project, San Pablo Dam Road at Clark Road, El Sobrante (SCH#2000012110).** The proposed project consists of 121 detached single-family dwellings and a neighborhood park developed on 81.12 acres of vacant land. The project plan also includes 31.7 acres of common open space, 4.3 acres of park, and 7.0 acres of streets and emergency vehicle access. The site is currently undeveloped and has gently sloping terrain.

- **Caprigo Construction, 14345 San Pablo Avenue, San Pablo.** This project will construct four new residential structures with associated driveways and walkways on the 22nd Street frontage, and a two-story mixed-use commercial facility on the San Pablo Avenue frontage with retail/office on the lower floor and residential on the upper floor.

- **El Portal Drive corridor improvements.** The project includes a pedestrian walkway, masonry wall along the edge of right-of-way, landscaping, streetlights, architectural entry features, improvements to signalized intersections, paving, and restriping. The current phase of work consists of the section that parallels the
I-80 within the limits of the proposed I-80/San Pablo Dam Road Interchange Project. Utility undergrounding has been completed. Street improvements are being coordinated to accommodate the interchange project’s westbound I-80 on-ramp.

- **El Portal School Site, near Moraga Road/El Portal Drive, San Pablo.** The City of San Pablo Redevelopment Agency acquired this nine-acre site for potential development as recreational fields or open space.

- **Contra Costa College Improvements Implementation Project, El Portal Drive near San Pablo Avenue, San Pablo (SCH #2008112091).** The Contra Costa Community College District is proposing to demolish, construct, and renovate various buildings and make improvements to the landscaping and campus facilities on the Contra Costa College campus as described in the District’s 2007 Facilities Master Plan. The District would also make improvements to landscaping and hardscape features at campus entry points and several plazas and would construct a pedestrian bridge over Rheem Creek.

- **Davis Park Master Plan (SCH#2008072042).** Davis Park is an approximately 12-acre park located on the west side of San Pablo. The park is along Wildcat Creek, between 23rd Avenue and Rumrill Road, about 1.2 miles west of I-80. The City of San Pablo proposes to implement a series of improvements at Davis Park that would enhance existing facilities and provide new facilities to meet various needs, including community gatherings, family recreation, and civic activities.

- **San Pablo Dam Seismic Upgrade, San Pablo Dam Road, about 3.5 miles east of I-80 (SCH#2005092021).** The purpose of the San Pablo Dam Seismic Upgrade Project is to improve the embankment and foundation soils downstream of San Pablo Dam to withstand shaking generated by the maximum credible earthquake on the Hayward–Rogers Creek fault without significant strength loss, to limit permanent deformation or settlement at the dam crest to acceptable levels, and to prevent damage to the outlet works. The proposed project involves the use of large, multiple-auger equipment to inject and mix cement grout into portions of the dam foundation material, and the construction of a larger buttress fill on the downstream face of the dam.

- **Rumrill Boulevard Bridge Replacement Project (PW-442), Rumrill Boulevard near Brookside Drive, San Pablo (SCH#2008012045).** This seismic retrofit and widening project will replace the existing five-lane, 76-foot-wide bridge on Rumrill Boulevard over San Pablo Creek with a new five-lane, 84-foot-wide bridge. The project will improve approach roadways, including
reconstructing the Rumrill Boulevard/Brookside Drive signalized intersection. The project, which is about 1.3 miles west of I-80, will require acquisition of two adjacent residential properties on southwest and southeast corners of the bridge.

- **Wanlass Park Improvements Project, Rivers Street west of San Pablo Avenue, San Pablo (SCH#2007092086).** The proposed development includes the construction of a park about 1.1 miles west of I-80. Improvements include an Environmental Education Center, vehicle/pedestrian bridge, restoration of a portion of Rheem Creek, play areas for children aged two to five and five to 12, picnic areas, walking trails, a large grass field, a covered rest area, a public restroom, and maintenance storage building. To provide security and facilitate limited nighttime recreational activities, the development will also include park lighting. The site will have perimeter fencing along the western, eastern, and southern sides.

- **Wildcat Creek Trail / Davis Park to 23rd Street.** This project involves the development and construction of a paved pedestrian/bicycle trail along the north bank of Wildcat Creek between Davis Park and 23rd Street (about 0.9 mile west of I-80). This is a planned extension of the existing trail system from Davis Park to the Bay, and a link in the future Wildcat Creek Regional Trail connecting the Bay and Ridge trails. The project includes creek restoration and a park at the trailhead at 23rd Street.

- **Wildcat / San Pablo Creeks Flood Control.** The first phase of the USACE flood control project on the creeks was completed just downstream of the City of San Pablo. The second phase is planned within the City of San Pablo and will take years to complete. The USACE has completed a reconnaissance study but project construction has not yet been scheduled.

- **Scotts Valley Casino Project.** The Scotts Valley Band of the Pomo Indians proposed a 225,000-square-foot casino complex and parking facilities at Richmond Parkway and Parr Boulevard in unincorporated Contra Costa County. The project completed environmental review, but was challenged in court and was still in appeal in 2009.

### 2.20.2.2. Transportation Projects

Transportation projects in San Pablo and Richmond include the following:

- **I-80/Central Avenue Interchange Improvement Project.** Improvements are planned as two separate projects. Operational modifications to the I-80/Central Avenue interchange are included in the I-80 integrated mobility project, which is
in design and scheduled for construction in 2011. Local road realignment is planned, but has not completed environmental review; it is planned for construction in 2014/2015.

- **Road 20/El Portal Drive Intersection Reconfiguration.** The intersection of Road 20 and El Portal Drive will be reconfigured to eliminate the single lane from Road 20 to Church Lane and instead bring all traffic to the signalized intersection.
- **Richmond Parkway Upgrade Study.** This existing route is being evaluated for costs and feasibility for adoption as an Urban Arterial.
- **I-80 Eastbound HOV Lanes.** The project will extend the eastbound HOV lanes from State Route 4 to the Crockett interchange.
- **San Pablo Dam Road Transit and Pedestrian Improvements.** Transit stops, sidewalks, and pedestrian amenities are planned on San Pablo Dam Road in El Sobrante.
- **San Pablo Avenue Bicycle and Pedestrian Improvements.** Bicycle and pedestrian improvements are planned along San Pablo Avenue from El Cerrito to Crockett to support transit-oriented development.
- **El Portal Drive Improvements and 8-Foot Masonry Wall.** The City of San Pablo will construct an 8-foot-high masonry wall along the east side of El Portal Drive, anticipated in 2009. The wall will replace existing wooden fences.
- **North Richmond Truck Route Study.** The County Redevelopment Agency is completing a truck route study to improve community conditions with respect to routing of truck traffic in north Richmond.

### 2.20.3. Environmental Consequences

The projects listed above were considered together with the proposed I-80/San Pablo Dam Road Interchange Project for the potential for cumulative impacts. The potential impacts are described by resource area below.

#### 2.20.3.1. Land Use and Community Resources

A number of the recently completed and proposed projects added or will add homes, commercial/retail, school improvements, and parks in the region surrounding the I-80/San Pablo Dam Road Interchange Project area. None of these projects overlap geographically or combine with the proposed interchange improvements to create adverse cumulative impacts for land use or community resources. The Rumrill Boulevard Bridge Replacement Project (SCH#2008012045) will acquire two homes, but other projects have added or will add 500 to 600 new residential units to the area.
Many of the projects listed in Table 2.1-1 (Planned or Recently Completed Projects in the Study Area) are local housing and small commercial developments. They are consistent with the City of San Pablo’s housing and Gateway District development efforts, to attract more jobs and housing to the area. The interchange project will result in an influx of temporary, skilled construction jobs, some of which will be filled by workers who live or relocate to the area. Unemployment levels for the San Francisco Bay Area are historically high in 2010, and although unknown for the planned construction year in 2015, it is expected that the cumulative job increase for construction of the project combined with local economic development efforts can be accommodated by the diverse Bay Area regional job market. The reconstruction of the interchange will not otherwise cumulatively affect buildout or redevelopment of the project area, as the construction jobs will be temporary, and will not change access to any of the areas where cumulative development is identified.

2.20.3.2. Traffic and Transportation
The transportation analysis for the I-80/San Pablo Dam Road Interchange Project included growth projections through 2035 from regional land use projections that are based on Association of Bay Area Governments and Metropolitan Transportation Commission forecasts. The cumulative list of projects identified 500 to 600 new residential units that have recently been added or are planned for construction in the cumulative impact study area. The additional traffic from the new residential units will be distributed over local and regional roads, are within the 2035 growth forecasts used for the traffic analysis, and would not change the conclusions of the transportation analysis. Traffic from the cumulative impact projects is likely to predominantly use San Pablo Avenue, El Portal Drive, and San Pablo Dam Road. The I-80/San Pablo Dam Road Interchange Project will improve capacity on I-80 and help to reduce traffic on local roads. The identified and planned developments will not cumulatively affect emergency services; access through the interchange will be maintained during construction, and none of the planned developments further impacts long-term access at the San Pablo Dam Road, El Portal Drive, or McBryde Avenue interchanges.

2.20.3.3. Visual Resources
The I-80/San Pablo Dam Road Interchange Project will mostly replace sections of existing soundwalls on I-80, similar to the existing setting. Following construction, drivers will continue to see soundwalls along the freeway in approximately the same locations. Residents along Humboldt Avenue will have a direct view of a relocated soundwall, instead of neighboring homes, which will add to the urbanized appearance.
of this area. The City of San Pablo will construct an eight-foot-high wall on El Portal Drive that will replace existing wooden fencing. Views on El Portal Drive will include the up to 16-foot-high soundwall on the east side and an eight-foot-high wall on the west side. El Portal Drive will appear more enclosed than under current conditions, although the existing wooden fencing contributes to this cumulative effect. These changes affect the local properties where the walls will be located, which are streets in developed neighborhoods; there will be no cumulative affect on views of open space, which are outside of the immediate interchange area. The majority of the other cumulative projects identified will add or replace housing and commercial uses within the already urbanized areas of San Pablo, Richmond, and Contra Costa County to the west of I-80, and no noticeable change in the visual landscape or viewshed is expected.

### 2.20.3.4. Air Quality and Noise

The cumulative impact projects include housing and commercial developments that will add vehicle trips to regional roadways and potentially affect existing and future air quality and local noise levels. As noted in Section 2.20.3.2, growth in traffic through the year 2035 was accounted for in the traffic study for the I-80/San Pablo Dam Road Interchange Project, which was the basis for the modeling and analysis of air quality and noise impacts. Therefore, regional and local increases in traffic have already been used to evaluate these impacts, and the local development projects fall well within the growth projections used in these studies. In addition, the proposed interchange project is considered to meet regional air quality conformity requirements if it is included in a current TIP and RTP. The TIP and RTP undergo a cumulative transportation project, land use growth, and air quality evaluation.

None of the cumulative projects identified will add homes or businesses directly adjacent to I-80 or the roads within the project limits that might be exposed to freeway noise or air quality emissions.

Construction of the cumulative projects would result in temporary air quality and noise impacts, including dust and diesel emissions from construction equipment and activities. The City of San Pablo’s El Portal Drive corridor improvements project would overlap geographically with the I-80/San Pablo Dam Road Interchange Project, but the city’s project would be completed at least one year before construction would begin at the interchange. Construction emissions would not occur at the same time, and no substantial cumulative air quality impacts are predicted. All of the cumulative projects must adhere to the same BAAQMD and local ordinance
requirements. Likewise, all of the cumulative projects’ construction contractors will have to comply with local noise ordinances.

**2.20.3.5. Biological Environment**

The proposed I-80/San Pablo Dam Road Interchange Project would require the removal of vegetation, primarily on the west side of I-80 within the project limits. The majority of this vegetation is grasses, shrubs, and nonnative trees (such as eucalyptus). Impacts to San Pablo Creek would be entirely avoided, and construction at Wildcat Creek would be limited to the top of the bank. No wetland impacts would occur. Impacts to biological resources have been minimized and would be mitigated through replacement planting. Potential impacts to California red-legged frog habitat at Wildcat Creek will be offset through habitat restoration or contribution to a mitigation bank.

Some of the cumulative projects have or will have effects on San Pablo and Wildcat creeks. The Rumrill Bridge project is on San Pablo Creek 1.3 miles downstream, the Davis Park Master Plan is on Wildcat Creek 1.2 miles downstream, and the San Pablo Dam Seismic Upgrade project is on San Pablo Creek about 3.3 miles upstream. The I-80/San Pablo Dam Road Interchange Project would not affect San Pablo Creek, and would therefore not contribute to any cumulative effects from other projects on this creek. On Wildcat Creek, the only project identified was the Davis Park Master Plan, which is at a planning stage of development. No details are available about potential biological impacts to Wildcat Creek. The Davis Park Master Plan would not be expected to have an adverse impact on the creek because the park already exists. Other than San Pablo and Wildcat creeks, no sensitive biological habitat was identified in the project corridor. Therefore, the I-80/San Pablo Dam Road Interchange Project would not result in any cumulative adverse biological impacts.

**2.21. Climate Change (CEQA)**

**2.21.1. Regulatory Setting**

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization’s Intergovernmental Panel on Climate Change, the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include carbon dioxide (CO₂), methane, nitrous
oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2–tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the State level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year; however, in order to enact the standards, California needed a waiver from the USEPA. The waiver was denied by USEPA in December 2007. See California v. Environmental Protection Agency, 9th Cir. Jul. 25, 2008, No. 08-70011. However, on January 26, 2009, it was announced that the USEPA will reconsider their decision regarding the denial of California’s waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 miles per gallon (mpg) fuel economy standard for automobiles and light duty trucks, which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California’s GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020, and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of AB 32, the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” Executive Order S-20-06 further directs State agencies to begin implementing AB 32, including the recommendations made by the State’s Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by 2020.
Climate change and GHG reduction are also a concern at the Federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the USEPA to regulate GHG as a pollutant under the Clean Air Act (Massachusetts v. Environmental Protection Agency et al., 549 U.S. 497 (2007)). The court ruled that GHG does fit within the Clean Air Act’s definition of a pollutant, and that the USEPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated Federal regulations to date limiting GHG emissions.

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable.” See CEQA Guidelines Sections 15064(i)(1) and 15130. To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

As part of its supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Figure 2.21-1 is a graph from that update that shows the total GHG emissions for California for 1990, 2002–2004 average, and 2020 projected if no action is taken.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

I-80/San Pablo Dam Road Interchange Project IS/EA 2-177

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

Figure 2.21-1 California Greenhouse Gas Inventory

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans, which was published in December 2006. This document can be found at: http://www.dot.ca.gov/docs/ClimateReport.pdf.

2.21.2. Project Analysis

One of the main strategies in the Department’s Climate Action Program to reduce GHG emissions is to make California’s transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0 to 25 miles per hour) and speeds over 55 mph; the most severe emissions occur from 0 to 25 miles per hour (see Figure 2.21-2). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors GHG emissions, particularly CO₂, may be reduced.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Figure 2.21-2  Fleet CO₂ Emissions vs. Speed (Highway)

The project focuses on improving traffic operations and bicycle/pedestrian access at the I-80/San Pablo Dam Road Interchange. Current traffic operations are limited at the interchange ramps and intersections, which create long queues on San Pablo Dam Road and Amador Street. The project would improve traffic operations at congested intersection and ramp locations, reducing or avoiding traffic queues that currently impact I-80 operations between El Portal Drive and McBryde Avenue. The Traffic Operations Report for this project estimates an increase in the number of vehicles on the freeway that will travel through the project area (four percent to 20 percent, depending on direction and AM or PM peak travel period) but an overall reduction in total travel time of 12 percent to 19 percent, and reductions in delay time of five percent to 64 percent (URS 2008a). Reductions in delays will also reduce emissions of pollutants, including carbon dioxide. The project is also included in the 2009 RTP and TIP, which contain adopted strategies for greenhouse gas emissions from transportation sources. Specifically, TIP reference number 230550, “Transportation Climate Action Campaign,” is an adopted five-year program for the Bay Area region involving outreach and education, promotion of safe routes to school and transit, and funding for transit priorities. The adopted TIP also demonstrates that the region will remain below all approved “vehicle emission budgets” through the 2035 study year.

The project design incorporates facilities that will improve access to alternative modes of transportation (specifically, the proposed bike and pedestrian facilities described in Section 1.3.1). This project focuses on improving the traffic operations at San Pablo Dam Road and the interchange ramps. The project would not add capacity to I-80. Transit alternatives were not evaluated, as additional buses or other transit
service would not sufficiently meet the need to improve the operations at intersections on San Pablo Dam Road at the freeway on- and off-ramps, or reduce weaving conflicts for traffic entering or exiting the freeway. The project area is already served by existing Alameda-Contra Costa (AC) Transit bus routes\textsuperscript{17} that connect to the Bay Area Rapid Transit (BART) El Cerrito Del Norte and Richmond stations. The project is limited to improvements at the interchanges within the project limits, would not add capacity to I-80, and would not affect traffic flow at a regional level (compared to the No Build Alternative).

\textbf{2.21.2.1. Construction Emissions}

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. Measures to reduce construction emissions are listed in Section 2.12.4 and include maintenance of construction equipment and vehicles, limiting of construction vehicle idling time, and scheduling and routing of construction traffic to reduce engine emissions.

\textit{CEQA Conclusion}

While construction will result in a slight increase in GHG emissions during construction, it is anticipated that any increase in GHG emissions due to construction will be offset by the improvement in operational GHG emissions. While it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project’s direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

\textsuperscript{17} Local AC Transit routes 70, 72, and 74 pass through or near (along San Pablo Avenue) the project area. These routes connect to the BART Richmond-Daly City/SFO Airport and Richmond-Fremont lines.
2.21.2.2. AB 32 Compliance

The Department continues to be actively involved on the Governor’s Climate Action Team as CARB works to implement the Governor’s Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies that the Department is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Schwarzenegger’s Strategic Growth Plan calls for a $238.6 billion infrastructure improvement program to fortify the State’s transportation system, education, housing, and waterways, including $100.7 billion in transportation funding through 2016. As shown in Figure 2.21-3, the Strategic Growth Plan targets a significant decrease in traffic congestion below today’s level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

Figure 2.21-3  Outcome of Strategic Growth Plan

As part of the Climate Action Program at Caltrans (December 2006, http://www.dot.ca.gov/docs/ClimateReport.pdf), the Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans is working closely with local
jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks. Caltrans is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by the USEPA and CARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at UC Davis.

Table 2.21-1 summarizes Department and statewide efforts that Caltrans is implementing to reduce GHG emissions. For more detailed information about each strategy, please see the Climate Action Program at Caltrans (December 2006, available at http://www.dot.ca.gov/docs/ClimateReport.pdf).

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. Caltrans and the California Highway Patrol are working with regional agencies to implement intelligent transportation systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

2. I-80 is part of the Bay Area high occupancy vehicle lane network, and the MTC and other agencies actively encourage ridesharing (e.g., the “511.org” ridesharing information link provides resources for ride sharing and trip planning). Ridesharing, or carpooling, reduces vehicle trips and their associated emissions.
### Table 2.21-1 Climate Change Strategies

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3. Landscaping reduces surface warming, and through photosynthesis, decreases CO₂. The project will include landscaping as described in Section 2.6.4. The landscaping will help to offset potential CO₂ emissions.

4. The project will utilize energy efficient lighting, which will be defined during final design.

2.21.2.3. Adaptation Strategies

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

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

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08, which directed a number of State agencies to address California’s vulnerability to sea level rise caused by climate change.

The California Resources Agency (now the Natural Resources Agency [Resources Agency]), through the interagency Climate Action Team, was directed to coordinate with local, regional, State and Federal public and private entities to develop a State Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California's vulnerability to the identified impacts, and then outline solutions that can be implemented within and across State agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, the Resources Agency was directed to request the National Academy of Science to prepare a Sea Level Rise
Assessment Report by December 2010 to advise how California should plan for future sea level rise. The report is to include:

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

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

Prior to the release of the final Sea Level Rise Assessment Report, all State agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding during the next five years (through 2013), or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement.)

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. The Department is an active participant in the efforts being conducted as part of Governor’s Schwarzenegger’s Executive Order on Sea Level Rise and is mobilizing to be able to
respond to the National Academy of Science report on Sea Level Rise Assessment, which is due to be released by December 2010.

On August 3, 2009, Natural Resources Agency in cooperation and partnership with multiple state agencies, released the 2009 California Climate Adaptation Strategy Discussion Draft, which summarizes the best known science on climate change impacts in seven specific sectors and provides recommendations on how to manage against those threats. The release of the draft document set in motion a 45-day public comment period.

Led by the California Natural Resources Agency, numerous other state agencies were involved in the creation of discussion draft, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The discussion draft focuses on sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. The strategy is in direct response to Gov. Schwarzenegger's November 2008 Executive Order S-13-08 that specifically asked the Natural Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. As data continues to be developed and collected, the state’s adaptation strategy will be updated to reflect current findings.

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

Potential effects of climate change to the project and its immediately surrounding area are unknown. The project area is inland and at about 50 feet elevation above sea level, and therefore it would require a substantial increase in the elevation of the Bay before experiencing seawater intrusion. Increased erosion from more frequent and intense storm events could increase erosion of creek banks, requiring more frequent maintenance or repair at I-80 creek crossings within the project area.
Chapter 3. Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, and public information meetings. This chapter summarizes the results of the Department’s efforts to fully identify, address, and resolve project-related issues through early and continuing coordination. Copies of consultation correspondence are included in Appendix I. A description of the steps taken for circulation and notification of the Draft IS/EA, the comments received, and the responses to comments are included in Appendix J.

3.1. Initial Project Development and Public Participation

Public outreach for the proposed project began with a community meeting held on July 23, 2003, at the San Pablo Civic Center in Alvarado Square, 13831 San Pablo Avenue, San Pablo (about 0.5 mile from the project limits). At the time of the meeting, three build alternatives and a No Build Alternative were being considered. Representatives from the Department, City of San Pablo, and CCTA made presentations describing the project alternatives, the Department’s planning process, the history and need for the project, the project partners, the tentative planning schedule, and how to remain involved as the project planning progressed. The information was provided in English and Spanish. A total of 46 individuals signed in, including area residents and business representatives, members of the City Council, County and City administrators, the Richmond Chapter of the National Association for the Advancement of Colored People, various cycling organizations, the San Pablo Hispanic Chamber of Commerce, ethnic media outlets, and religious organizations/congregations. Meeting invitations were distributed by direct mail to approximately 300 individuals and organizations. Approximately two weeks before the meeting, a follow-up flyer was mailed to the same mailing list along with about 400 additional names provided by the San Pablo Hispanic Chamber of Commerce and the West Contra Costa Transportation Advisory Committee. Flyers advertising the
meeting were also handed out and posted in business areas. Press releases were distributed, resulting in coverage by the Contra Costa Times newspaper.

A number of commenters expressed the desire for the project to accommodate bicycle and pedestrian facilities and a preference for the Tight Diamond Alternative (Alternative 2 with the current project). Other comments included concerns about the China Slide area and proximity to the Hayward fault, issues with signal timing, a request to consider a left-turn movement at Amador Street/San Pablo Dam Road, and concerns about traffic congestion during construction and potential impacts to the existing San Pablo RV Center.

A Project Study Report/Project Development Support (PSR/PDS) document for the project was completed in May 2004. The PSR/PDS defined three potential alternatives for replacement of the I-80/San Pablo Dam Road Interchange.

### 3.2. Consultation and Coordination with Public Agencies

This section summarizes the results of contact and consultation with other public agencies during project development. These include specific consultation with Federal, State, and local agencies as listed below. Public agencies were also included in the notification of the public workshops and meetings held, which are described in Section 3.3. Copies of written consultation with agencies are included in Appendix I except otherwise noted.

#### U.S. Fish and Wildlife Service

- July 2008: A list of species of concern was obtained from the California Department of Fish and Game’s California Natural Diversity Database (CNDDB) and from the online database of the United States Fish and Wildlife Service (USFWS) Sacramento field office. These lists were used to assist in the identification of sensitive plant and wildlife species that might occur in the project region.
- November 27, 2007: A habitat assessment for California red-legged frog was completed and submitted to the USFWS.
- March 18, 2008: USFWS responded to the habitat assessment that the project area has sufficient connectivity with California red-legged frog breeding sites for the species to be potentially present.
October 2007 and April 2008: East Bay Regional Park District (EBRPD) and East Bay Municipal Utility District (EBMUD) were contacted to request any information about the potential for California red-legged frog presence in the project vicinity.

September 10, 2008: Transmittal of Biological Assessment for California red-legged frog to USFWS, with request to initiate consultation under Section 7 of the Endangered Species Act.

September 21, 2009: Formal consultation with USFWS was completed and a Biological Opinion for threatened CRLF was issued.

**NOAA Fisheries**

September 9, 2008: A Biological Assessment for the Central California Coast Steelhead was completed and submitted with a request for concurrence with a no effect determination. NOAA Fisheries did not have any comments on the BA. Consultation has been completed.

**West Contra Costa Unified School District**

October 1, 2008: As a result of the public notification and coordination actions summarized in Section 3.3, the West Contra Costa Unified School District expressed interest in relocating the eastern touchdown of the pedestrian overcrossing from its existing location on the west side of Amador Street to the east side of Amador Street. This change in the project design would allow students of Riverside Elementary School (and the public) reach the school and the surrounding area from the west side of I-80 without having to cross busy Amador Street. The District’s October 1, 2008, letter comments on this proposed relocation of the structure, requesting that CCTA continue to work with District staff during the design phase of the project. The District is in concurrence with the concept to relocate the facility.

**East Bay Municipal Utility District**

September 4, 2009: In a comment provided during the public review period, EBMUD requested that during the project design phase, further consultation with EBMUD would be undertaken to coordinate the relocation of any pipelines, including the 54-inch transmission pipeline along El Portal Drive. The text of this comment is included in Appendix J (Section B, Comment B-02).
3.3. Public Participation in Development of the Draft Environmental Document and Draft Project Report

A series of public meetings that involved presentations of the project and receipt of comments were held during the development of the Draft Project Report and Draft Environmental Document. Each meeting is summarized below.

3.3.1. Project Information Posted on Agency and Community Websites

Links to websites that contain project description information, project schedule, public informational events, and meeting information, and contacts for additional information have been posted with the City of San Pablo (http://www.ci.san-pablo.ca.us/main/NewsEvents.htm), the City of Richmond (http://www.ci.richmond.ca.us/CurrentEvents.asp?EID=3431), and Contra Costa Transportation Authority (http://www.ccta.net/roads/sanpablo.shtml).

3.3.2. November 29, 2007, Property Owner Meeting

The project team held a meeting on November 29, 2007 (6:30 PM to 8 PM) at the San Pablo Civic Center, City Hall, to inform property owners about partial or entire acquisitions of their properties for the purposes of the project. The meeting was designed to ensure the project team made direct contact with residents and businesses that might be directly affected by property acquisition. The most important reasons for doing so were to inform those parties about the project development process and timing, and their rights during any future right-of-way acquisition.

U.S. mail notices were sent to 57 owners and residents (all owners and occupants of properties subject to potential land acquisition), and follow-up phone calls were made to invite them to attend this meeting. Eight residents attended, as well as employees of the self-storage business on Riverside Avenue. The project team provided an overview of the project and alternatives and conducted a question and answer session. Project maps were provided, including details of the potentially affected parcels. Department right-of-way specialists participated and provided pamphlets on the process that will be followed during right-of-way acquisition.

Questions and issues raised included the following:

- How does the property acquisition process work?
- Does the Department or local agency assist with relocation?
Can a property owner negotiate between multiple appraisals?
Questions about impacts to individual parcels.

Questions were also raised about the following concerns:

- The relationship of the Department’s project to the City of San Pablo’s El Portal Drive improvements;
- Fences and walls on El Portal Drive;
- The proposed on-ramp at El Portal Drive;
- Enclosure of the pedestrian overcrossing; and
- The project schedule with regard to property acquisition.

3.3.3. December 3, 2007, Public Information Meeting

The project team hosted a two-part public information meeting on December 3, 2007. The first part of the meeting was in an open house format, and the second was held in conjunction with a San Pablo City Council Study Session. The purposes of the meeting were to provide the public and the Council with an update on the project and an overview of the proposed alternatives, and to receive public input and comments from the community.

This meeting was advertised in the City of San Pablo Newsletter (the October/November 2007 edition, and the December 2007/January 2008 edition). Bilingual (English and Spanish) notices were sent to over 5,600 residents, businesses and interest groups in the surrounding area (the mailing list included the contacts identified during the development of the PSR/PDS document; see Section 3.1). Press releases were distributed on November 26, 2007, and two local papers (Contra Costa Times and West County Times) published articles about the project and meeting.

Exhibits about the project were on display during the initial open-house meeting, held at Maples Hall from 6 PM to 7 PM, and project staff members were available for questions. A presentation on the project began at 7 PM in the adjacent City Council Chambers as part of San Pablo City Council’s Study Session. Public comments were taken during this period, and due to the level of interest, the open house resumed after the study session for an additional half hour. A Spanish translator participated in the open house and presentation.

Fifty-three people signed into the meeting and many others attended the City Council’s Study Session. A range of comments and concerns were noted at the
Chapter 3 Comments and Coordination

Meeting. Some of the repeat questions and issues raised included the following (with answers and other comments noted in italics):

- The changes at McBryde Avenue off-ramp could make traffic worse.
- How would closing of McBryde Avenue off-ramp function, and would drivers understand to take the proposed San Pablo Dam Road exit? *Vehicles would exit westbound I-80 at the San Pablo Dam Road Interchange, travel through the intersection of the off-ramp and San Pablo Dam Road, and proceed along a frontage road to McBryde Avenue. Signage would be placed along the freeway and off-ramp directing traffic.*
- El Portal Drive would likely experience heavier traffic with the change in location of the westbound on-ramp. *Traffic will increase on El Portal Drive with the relocation of the off-ramp.*
- Alternative 2 (Tight Diamond) was preferred by some, because of the realignment of San Pablo Dam Road away from the China Slide area and because it appeared to address the existing traffic congestion at the intersection of San Pablo Dam Road and Amador Street. *No attendees identified a preference for Alternative 1, Lanes Added.*
- Traffic signals should be coordinated and some additional intersections should be considered for signals (e.g., along Amador Street).
- How will traffic be coordinated (remain open) during construction of the new San Pablo Dam Road Overcrossing of I-80? *A construction staging plan will be developed during final design.*
- More pedestrian facilities (crosswalks and sidewalks) are needed, including the facilities that are proposed in the project.

3.3.4. July 29, 2008, Presentation of Project to Richmond City Council

On July 29, 2008, CCTA staff presented an update to the Richmond City Council regarding the proposed plans to reconstruct the I-80/San Pablo Dam Road Interchange. Subjects presented included the purpose and need for the project to reduce traffic congestion and improve traffic operations, improvements for bicycle and pedestrian access, and accommodations for future traffic volumes. The planned presentation was included by the City of Richmond in their regularly scheduled City Council meeting agenda, and the meeting minutes were posted on their website (www.ci.richmond.ca.us). No public comments were received.
3.3.5. October 2, 2008, Public Information Meeting

The project team hosted a public meeting on October 2, 2008, from 6:30 PM to 8:30 PM at Riverside Elementary School in San Pablo. The purpose of the meeting was to provide the public with an update on the project, an overview of the proposed alternatives, and to receive public input and comments from the community.

The meeting was announced/advertised with bilingual mailers sent to over 7,500 property owners, residents, and stakeholders in the proposed project vicinity, notifying them of the event and the opportunity to comment in person and in writing. Display advertisements were placed in the City of San Pablo’s bimonthly newsletter and two local newspapers (the Richmond Globe [a weekly] on September 24, 2008, and the West County Times [a daily] on October 1, 2008. An announcement was also posted on the City of Richmond’s website.

A total of 78 attendees signed in, and seven submitted comment forms. Exhibits were displayed and a presentation was made, followed by questions and answers.

Similar to the previous public meetings, a range of comments and questions were received and addressed. The following list shows those comments and questions, with project team responses (where appropriate) shown in italics:

- Concern expressed about overnight construction that will impact property owners/residents, and how the right-of-way acquisition process works.
- Preference expressed by some for Alternative 2 (Tight Diamond) because of improvements on Amador Street (that help alleviate backup at Amador Street and San Pablo Dam Road intersection), the ability to turn left from Amador Street onto San Pablo Dam Road, and at the westbound El Portal Road on-ramp. Questions were raised about how access to Amador Street would be improved by Alternative 2.
  *This access would be improved by separating the Amador Street intersection at San Pablo Dam Road away from the currently adjacent eastbound off-ramp.*
- How will a preferred alternative be selected?
  *The preferred alternative will be selected after the public hearing and receipt of all comments on the environmental document, and consideration of all impacts and benefits of the project alternatives.*
- What will happen to the existing recreational vehicle business on San Pablo Dam Road east of I-80?
  *The portion of the RV business nearest the interchange will be closed; it is*
already on land owned by Caltrans and the lease to the private business will be allowed to expire or be terminated.

- Would the proposed changes at McBryde Avenue be the same with both Alternatives?
  Yes; both alternatives are identical with regard to McBryde Avenue and the westbound interchange facilities.

- How will the on-ramp at westbound San Pablo Dam Road and the frontage road leading to McBryde Avenue function?
  Drivers will be able to choose between taking a westbound I-80 on-ramp or staying to their right and traveling on the frontage road to McBryde Avenue. Drivers on San Pablo Dam Road (vehicles traveling from San Pablo Avenue toward I-80) will be able to turn right and either enter the freeway westbound on-ramp or stay right toward McBryde Avenue.

- Will the project change the existing McBryde Avenue/westbound off-ramp intersection or at the Amador Street/McBryde Avenue intersection?
  No changes are proposed at this intersection. The existing off-ramp lanes will be used for the proposed frontage road where it connects with McBryde Avenue. No changes will be made to the McBryde Avenue/Amador Street intersection.

- Consider closing the access to McBryde Avenue because it is used as a “cut-through” by traffic from I-80.
  Closing the McBryde Avenue off-ramp completely was initially considered but rejected because of the need expressed to maintain freeway access to this street.

- Will the San Pablo Dam Road Overcrossing of I-80 be higher in elevation than the current structure, and will there be changes to the multiple access points on San Pablo Dam Road from the commercial property parking lots?
  The overcrossing will be higher in elevation, and therefore San Pablo Dam Road will be raised on the west side of I-80, requiring reconstruction of the driveway connections from the commercial parking lot area to San Pablo Dam Road. No change will be made to the driveway access points along San Pablo Dam Road.

- Consider a pedestrian/bicycle trail parallel to I-80 and adjacent to the cemetery.
  Construction of this trail would require separation from I-80 for safety, and the necessary right-of-way would require considerable land acquisition and retaining wall structures that cannot be cost-effectively included in the project.

- Consider including a bridge over Wildcat Creek for pedestrian access, and existing trash problems exist at Amador Avenue because people throw trash from the bridge.
  A pedestrian bridge over Wildcat Creek on the west side of I-80 would have no
current trail connections to any maintained trail facilities and was therefore not considered. The pedestrian overcrossing will be enclosed by a fence on the sides and top, which will preclude anybody from throwing trash on Amador Street.

- Will there be Federal funding of the project, and a request to consider the no project alternative because of the potential current lack of public money, and priorities for using the money for nontransportation uses. 

  Federal funding is anticipated and needed for this project to proceed. Any State or Federal funding obtained will already be designated for transportation improvements, and cannot be used for nontransportation uses.


The Draft IS/EA was distributed for public review and comment beginning on August 5 and ending on September 8, 2009. Availability of the document and notification of a public meeting was advertised by direct mail to residences and businesses within and surrounding the project area, display advertisements in newspapers, and other means. A public meeting was held that included a slide show presentation with an overview of the project and displays of the proposed project and design features. Members of the project team were available to answer questions, and oral comments from the public were recorded as testimony. During the public review period, comments were submitted in the form of letters, e-mails, and comment cards that were distributed at the public meeting. This information is included in more detail in Appendix J.
Chapter 4. List of Preparers

This document and its related technical studies were prepared under the supervision of Caltrans District 4. The Project Development Team (PDT) was responsible for oversight of the project and consists of representatives from Caltrans, CCTA, and the Contra Costa Public Works Department.

**Key PDT Members Involved in Project Management**

- Laura Hameister, Project Manager, Caltrans District 4
- Bonnita Chow, Senior Transportation Engineer, Caltrans District 4 Design
- Greg McConnell, Senior Environmental Planner, Caltrans District 4
- Sheryl Garcia, Associate Environmental Planner, Caltrans District 4
- Susan Miller, Director, Projects, Contra Costa Transportation Authority
- Hisham Noeimi, Engineering Manager, Contra Costa Transportation Authority
- Adele Ho, City of San Pablo Public Works Director
- John Pulliam, Contra Costa County Department of Public Works
- Sujan Punyamurthula, Contract Manager, URS Corporation
- Ramesh Sathiamurthy, Project Manager, URS Corporation
- Jeff Zimmerman, Environmental Manager, URS Corporation
- Erdal Karataylioglu, Project Engineer, URS Corporation

**Individuals Involved in Caltrans Oversight of the Environmental Studies**

- Glenn Kinoshita, District Branch Chief Air/Noise Studies – Reviewed Noise and Air Quality
- Brett Rushing, Associate Environmental Planner (Cultural Resources) – Reviewed Cultural Resources
- Connie Yip, Associate Landscape Architect – Reviewed Visual Resources
- Alicia Otani, Associate Environmental Planner (Cultural Resources) – Reviewed Historic Resources
- Ahmad Hashemi, Senior Environmental Planner – Reviewed Wetlands, Biological Assessments, and Natural Environment Study
- Sheryl Garcia, Associate Environmental Planner – Reviewed Community Impact Assessment and Environmental Document
- Gregory McConnell, Senior Environmental Planner – Manager of Caltrans environmental oversight and Environmental Document preparation
- Grant Wilcox, Senior Engineering Geologist – Reviewed Geology
• Ray Boyer, District Branch Chief – Reviewed Hazardous Waste/Initial Site Assessment
• Aman Zareai, Senior Specialist – Reviewed Hydrology/Water Quality
• Vahid Khata-O-Khotan, Transportation Engineer – Reviewed Traffic

**Individuals Involved in Technical Studies and Environmental Document Preparation**

The following key consulting team staff were responsible for the preparation of the environmental technical studies and the environmental:


Chris Colwick, CirclePoint. Community outreach and organization. Contribution: Responsible for community meeting planning/organization and notification.


Chapter 4 List of Preparers


Han-Bin Liang, WRECO, Ph.D., Civil Engineering. Contribution: Oversight and review of Storm Water Data Report and Location Hydraulic Study.

Irene Liu, WRECO. Contribution: Preparation of Storm Water Data Report and Location Hydraulic Study.


Joe Morgan, URS Corporation, B.S., Chemistry. Experience in environmental document preparation and hazardous materials management. Contribution: Phase 1 Site Assessment oversight.


Chapter 5. Distribution List

The following agencies, organizations, and individuals received printed or electronic copies of this document. Agencies, organizations, and individuals on the project mailing list, which included over 7,500 addresses, were notified of the availability of this document and public meetings as described in Section 3.

**Federal Agencies**

Federal Highway Administration  
650 Capitol Mall  
Sacramento, CA 95814

National Marine Fisheries Service  
Bay Area Office  
777 Sonoma Avenue, Room 325  
Santa Rosa, CA 94502

U.S. Army Corp of Engineers  
Regulatory Branch  
San Francisco District  
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San Francisco, CA 94105

U.S. Department of Agriculture  
Natural Resources Conservation Service  
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Davis, CA 95616

U.S. Fish and Wildlife Service  
U.S. Department of Interior  
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Sacramento, CA 95825

**State Agencies**

Executive Director  
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Sacramento, CA 95814

* Agency received document through State Clearinghouse

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Sacramento, CA 94296

California Department of Water Resources*  
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1416 Ninth Street, Room 1601  
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Chapter 5 Distribution List

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California Department of General Services*
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1325 J Street, Suite 1910
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Sacramento, CA 95814

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California State Lands Commission
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Honorable George Miller
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Richmond, CA 94804

Leonard McNeil, Mayor
City of San Pablo
13831 San Pablo Avenue
San Pablo, CA 94806
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<td>Interchange Project, unpublished letter report prepared for Contra</td>
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<td>URS 2008b</td>
<td>Community Impact Assessment, Interstate 80 / San Pablo Dam Road</td>
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<td>Interchange Project, Prepared for Contra Costa Transportation Authority.</td>
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<td>URS 2008c</td>
<td>Archaeological Survey Report, Interstate 80/San Pablo Dam Road</td>
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<td>URS 2008e</td>
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<td>URS 2008f</td>
<td>Final Preliminary Foundation Report, San Pablo Dam Road</td>
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<td>Overcrossing (Replace), Interstate 80/San Pablo Dam Road</td>
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Chapter 6 References

URS 2009a Final Preliminary Foundation Report, Riverside Avenue Pedestrian Overcrossing (Replace), Interstate 80/San Pablo Dam Road Interchange Project, Contra Costa County, California, 4-CC-80 PM 3.8/5.3, EA 0A0800. Prepared for Caltrans and CCTA by URS. January.

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Appendix A  Project Plans

Layout sheets L-1 through L-6 illustrate the preliminary project plans. Two sets of layout sheets L-2 through L-4 are provided, one for each build alternative, labeled accordingly. Layout sheets L-1, L-5, and L-6 are the same for both alternatives.
Appendix B  CEQA Checklist

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

The CEQA impact levels in the following checklist include potentially significant impact, less-than-significant impact with mitigation, less-than-significant impact, and no impact. Please refer to the following for detailed discussions regarding impacts:

- Guidance: Title 14, Chapter 3, California Code of Regulations, Sections 15000 et seq. (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/)
- Statutes: Division 13, California Public Resources Code, Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/)
AESTHETICS - Would the project:

a) Have a substantial adverse effect on a scenic vista?  

☐ ☐ ☐ X

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

☐ ☐ ☐ X

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

☐ ☐ ☒ ☐

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

☐ ☐ ☒ ☐

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

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

☐ ☐ ☐ X

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

☐ ☐ ☐ X

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use?

☐ ☐ ☐ X

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

a) Conflict with or obstruct implementation of the applicable air quality plan?

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<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
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<td>c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
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<td>d) Expose sensitive receptors to substantial pollutant concentration?</td>
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<td>e) Create objectionable odors affecting a substantial number of people?</td>
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**BIOLOGICAL RESOURCES - Would the project:**

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?  

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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 U.S. Fish and Wildlife Service?

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b) 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?

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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?

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e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

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<td>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?</td>
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**CULTURAL RESOURCES** - Would the project:

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

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☑️ | ☑️ | ☑️ | ☑️ |

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☑️ | ☑️ | ☑️ | ☑️ |

d) Disturb any human remains, including those interred outside of formal cemeteries? | ☑️ | ☑️ | ☑️ | ☑️ |

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

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | ☑️ | ☑️ | ☑️ | ☑️ |

   ii) Strong seismic ground shaking? | ☑️ | ☑️ | ☑️ | ☑️ |

   iii) Seismic-related ground failure, including liquefaction? | ☑️ | ☑️ | ☑️ | ☑️ |

   iv) Landslides? | ☑️ | ☑️ | ☑️ | ☑️ |

b) Result in substantial soil erosion or the loss of topsoil? | ☑️ | ☑️ | ☑️ | ☑️ |

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | ☑️ | ☑️ | ☑️ | ☑️ |
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

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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?

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**HAZARDS AND HAZARDOUS MATERIALS –**

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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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?

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c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?

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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?

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e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

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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?

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g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

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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?

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</table>
HYDROLOGY AND WATER QUALITY - Would be the project:

a) Violate any water quality standards or waste discharge requirements?  

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

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

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?
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**LAND USE AND PLANNING - Would be the project:**

a) Physically divide an established community?  X

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?  X

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?  X

**MINERAL RESOURCES - Would the project:**

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

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?  X

**NOISE - Would the project:**

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

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?  X

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  X

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  X

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

POPULATION AND HOUSING - Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

PUBLIC SERVICES -

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

   Fire protection?

   Police protection?

   Schools?

   Parks?

   Other public facilities?

RECREATION -

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

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

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Result in inadequate parking capacity?

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

**UTILITY AND SERVICE SYSTEMS -** Would be the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) 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?
<table>
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<th>MANDATORY FINDINGS OF SIGNIFICANCE -</th>
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<td>a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
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<tr>
<td>b) Does the project have impacts that are individually limited, but cumulatively considerable? (&quot;Cumulatively considerable&quot; 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)?</td>
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<td>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td>
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Appendix C  Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA  94273-0001
PHONE  (916) 654-5365
FAX   (916) 654-5608
TTY  (916) 653-4066

January 14, 2005

TITLE VI
POLICY STATEMENT

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

WILL KEMPTON
Director
Appendix D  Summary of Relocation Benefits

I. Important Relocation Assistance Information
The following explanation is general in nature and is not intended to be a complete statement of Federal and State relocation laws and regulations. Any questions concerning relocation should be addressed to the California Department of Transportation (Caltrans). Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order 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 first written offer to purchase, owner-occupants are given a detailed explanation of Caltrans’ relocation services. Tenant occupants of properties to be acquired are contacted soon after the first written offer to purchase, and also are given a detailed explanation of the Caltrans Relocation Program. 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 Caltrans relocation advisor.

II. Relocation Assistance Advisory Services
In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans 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. Caltrans will assist 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 Section IV.)

Residential replacement dwellings will be in equal or better neighborhoods at rents or prices 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 that are open to all persons regardless of race, color, religion, sex, and national origin, and which are consistent with the
requirements of Title VIII of the Civil Rights Act of 1968, will be offered to
displacees. This assistance will also include the supply of information concerning
Federal 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 payment(s) and who are legally occupying a
property required for the project will not be asked to move without first being given
at least 90 days written notice, and not unless at least one decent, safe and sanitary
replacement residence, available on the market, is offered to them by Caltrans.

III. Residential Relocation Payments Program

The Relocation Payment 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 the 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 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.

Purchase Supplement

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 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.)

**Rental Supplement**
Tenants who have occupied the property to be acquired by Caltrans for 90 days or more and owner/occupants of 90-179 days prior to the date of the first written offer to purchase may qualify to receive a rental differential payment. This payment is made when Caltrans determines that the cost to rent a comparable “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 below under the Down Payment section. The maximum amount payable to any tenant of 90 days or more and any owner-occupant of 90-179 days, in addition to moving expenses, is $5,250. If the total entitlement for rental supplement exceeds $5,250, the Last Resort Housing will be used.

In addition to the occupancy requirements, in order 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 department 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 90-179 days and tenants with no less than 90 days of continuous occupancy prior to Caltrans’ first written offer. 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 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on Federal-aid projects. Last resort housing benefits are, except for the amounts of payments and the methods in making them, 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 $5,250 and $22,500 limits of
the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances. In certain exceptional situations, Last Resort Housing may also be used for tenants of less than 90 days.

**Other Relocation Information**

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

- Preferences in area of relocation;
- Number of people to be displaced and the distribution of adults and children according to age and sex;
- Location of school and employment;
- Specific arrangements needed to accommodate any family members’ special needs;
- Financial ability to relocate into comparable replacement dwelling that will adequately house all members of the family.

**IV. The 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 moving and searching 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; dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property.
• Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
• Expenses related to searching for a new business site, up to $1,000 for reasonable expenses actually incurred.

V. Important Notice
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 Department of Transportation relocation advisor at:

State of California
Department of Transportation, District #4
111 Grand Avenue
Oakland, CA 94612
## Appendix E  Glossary of Technical Terms

This appendix briefly explains the technical terms and names used in this IS/EA. Appendix G provides a list of acronyms.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Best Management Practice (BMP)</strong></td>
<td>Any program, technology, process, operating method, measure or device that controls, prevents, removes or reduces pollution.</td>
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<td><strong>Basin Plan</strong></td>
<td>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.</td>
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<tr>
<td><strong>Cumulative effects</strong></td>
<td>Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.</td>
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<td><strong>Decibel</strong></td>
<td>A numerical expression of the relative loudness of a sound.</td>
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<tr>
<td><strong>Encroachment</strong></td>
<td>An action within the limits of the 100-year floodplain.</td>
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<tr>
<td><strong>Endangered</strong></td>
<td>Plant or animal species that are in danger of extinction throughout all or a significant portion of its range.</td>
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<tr>
<td><strong>Erosion</strong></td>
<td>The wearing away of the land surface by running water, wind, ice, or other geological agents.</td>
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<tr>
<td><strong>Federal Register</strong></td>
<td>Federal publication that provides official notice of Federal administrative hearings and issuance of proposed and final Federal administrative rules and regulations.</td>
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<tr>
<td><strong>Floodplain (100-year)</strong></td>
<td>The area subject to flooding by a flood or tide that has a one percent chance of being exceeded in any given year.</td>
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<tr>
<td><strong>FONSI</strong></td>
<td>Finding of No Significant Effect, issued by Caltrans upon approval of the NEPA review process</td>
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<tr>
<td><strong>Habitat</strong></td>
<td>The place or type of site where a plant or animal naturally or normally lives and grows.</td>
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<tr>
<td><strong>Hectare</strong></td>
<td>A unit of surface measure in the metric system, equal to 10,000 square meters.</td>
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<tr>
<td><strong>Initial Study (IS)</strong></td>
<td>Environmental review document prepared to comply with CEQA.</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>Initial Site Assessment (ISA)</td>
<td>A Department of Transportation term for an initial study to determine hazardous waste issues on a project.</td>
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<tr>
<td>$L_{eq}$</td>
<td>A unit used for evaluation of sound impacts, $L_{eq}$ is the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually one hour).</td>
</tr>
<tr>
<td>Level of Service (LOS)</td>
<td>A measurement of capacity of a roadway.</td>
</tr>
<tr>
<td>Mitigation</td>
<td>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.</td>
</tr>
<tr>
<td>Negative Declaration (ND)</td>
<td>Issued upon approval of the environmental review process under CEQA</td>
</tr>
<tr>
<td>NPDES</td>
<td>National Pollutant Discharge Elimination System. A permit regulated by the Regional Water Quality Control Board that is required if more than one acre of original ground is graded. One condition of this permit is that the contractor must submit a Storm Water Pollution Prevention Plan (SWPPP), which is similar to the Water Pollution Control Plan required by Caltrans’ Standard Specification 7-1.01G.</td>
</tr>
<tr>
<td>Practicable</td>
<td>An action that is capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.</td>
</tr>
<tr>
<td>Receptors</td>
<td>Term used in air quality and noise studies that refers to houses or businesses that could be affected by a project.</td>
</tr>
<tr>
<td>Regulatory agency</td>
<td>An agency that has jurisdiction by law.</td>
</tr>
<tr>
<td>Responsible agency</td>
<td>A public agency other than the Lead Agency that has responsibility for carrying out or approving a project under CEQA.</td>
</tr>
<tr>
<td>Right-of-way</td>
<td>A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.</td>
</tr>
</tbody>
</table>
Appendix E Glossary of Technical Terms

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.

RTP
Regional Transportation Plan, prepared by the Metropolitan Transportation Commission (MTC), the regional agency responsible for transportation planning and funding.

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 Game codes, or species of special concern listings and policies; (4) recognized by national, State, or local environmental organizations (e.g., California Native Plant Society).

STIP
The State Transportation Improvement Program, updated every two years, is the California Transportation Commission’s priorities for improvements on and off the State highway system.

SWPPP
A Storm Water Pollution Prevention Plan is prepared to evaluate sources of discharges and activities that may affect stormwater runoff, and implement measures or practices to reduce or prevent such discharges.

Threatened
A species that is likely to become endangered in the foreseeable future in the absence of special protection.

Waters of the United States
As defined by the USACE in 33 Code of Federal Regulations 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

When used in a formal context, such as in this IS/EA, wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances will 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 F  Minimization and/or Mitigation Summary

This appendix summarizes the minimization and/or mitigation measures discussed in Chapter 2. Section F.1 lists avoidance and minimization measures, and Section F.2 lists mitigation measures, which are above and beyond standard construction contract requirements. Mitigation is provided for relocations and potential effects to threatened and endangered species. Section F.3 contains a completed draft of the Department form “Summary of Required Permits and Environmental Commitments—PS&E Phase.” The form identifies the avoidance, minimization, and mitigation measures that must be incorporated into the plans, specifications, and estimates (PS&E) for the proposed project, along with the timing and the party responsible for each action.

F.1 Avoidance and Minimization Measures

Land Use

- Reconstruction of the proposed pedestrian overcrossing will be timed in consultation with the school district to avoid school sessions to the extent possible, although the school is in session throughout most of the year.
- Riverside Elementary School staff and parents will be given notice well in advance of construction to adequately inform them of the construction plans and timing.
- The pedestrian overcrossing will be designed so that Riverside Elementary School staff can lock a gate preventing entrance to school property while still allowing continued public access between the overcrossing landing and Amador Street.
- Reconstruction of the overcrossing prior to reconstruction of the I-80/San Pablo Dam Road Interchange will be investigated and considered during final design and planning for construction staging.

Community Impacts

Community Character and Cohesion

- Temporary pedestrian access impacts during construction will be minimized by the measures outlined for Land Use effects (Section 2.1.4).
- The Department and CCTA will determine final impacts to any parking areas at the businesses bordering San Pablo Dam Road on the west side of I-80 and will either reconfigure the striping/layout of the existing parking lot or provide
compensation for loss of parking. These steps will take place during the right-of-way and final design stages of project development.

**Utilities and Emergency Services**

EBMUD has requested that the schedule for the I-80/San Pablo Dam Road Interchange improvements allow sufficient time for the relocation of all utilities. EBMUD estimates that the relocation of their 54-inch transmission main would take approximately 18 months or longer to complete (exact schedule to be determined) after final improvement plans for the project are completed. EBMUD requires this period of time to prepare an outage plan, detailed design drawings, and specifications, as well as to complete the actual relocation work prior to start of the project. Due to outage restrictions, the relocated pipeline must be in-service prior to taking the existing 54-inch transmission line out of service. The crossover from the existing 54-inch transmission main to the relocated pipeline may only take place during the winter months. EBMUD has specifically requested that Caltrans’ overall project schedule accommodate the requested outage restrictions.

**Visual/Aesthetics**

The following measures are recommended for the proposed project:

<table>
<thead>
<tr>
<th>Project Feature</th>
<th>Minimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soundwalls and Retaining Walls</td>
<td>Architectural treatment of soundwalls and retaining walls should match other walls adjacent to the project. Wall surfaces should have an aesthetic treatment to reduce glare and visual monotony.</td>
</tr>
<tr>
<td>Replacement Planting</td>
<td>Replacement planting will help blend the project into the community, provide screening of highway features, and provide permanent slope stabilization. Vine planting to soften walls and control graffiti should be accommodated where possible. An emphasis on tree planting should be accommodated wherever possible. Tall evergreen trees should be considered for replacement planting in locations where existing large-scale trees are removed for the project.</td>
</tr>
</tbody>
</table>
| Locations of Special Interest | Rollingwood Drive, Humboldt Avenue, and Amador Street are locations where the visual impacts from the project are predicted to have the highest viewer sensitivity. Special attention to accommodating the above recommendations should be paid to these areas, with emphasis on the following priorities:  
  o Rollingwood Drive, Amador Street: Add trees or shrubs wherever possible to screen views of roadway and restore views of existing trees.  
  o Humboldt Avenue: As replacement planting will not be possible along the side of the new soundwall facing the community, aesthetic wall treatments should be emphasized. |
Cultural Resources

- Additional surveys will be required if the project changes to include areas not previously surveyed.
- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code Section 5079.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission who will then notify the Most Likely Descendent. At this time, the person who discovered the remains will contact the District Environmental Branch so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of California Public Resources Code Section 5097.98 are to be followed as applicable.

Water Quality and Stormwater Runoff

Permanent erosion control best management practices (BMPs) will included in the project, including feasible temporary (short-term) and permanent (long-term) BMPs. The required Storm Water Pollution Prevention Plan (SWPPP) will include stormwater BMPs for temporary soil stabilization and sediment control.

Temporary (Short-term) BMPs

- Riparian areas in the channels of San Pablo and Wildcat creeks in the project area will be identified as environmentally sensitive areas (ESAs) for protection as necessary with high-visibility fencing and erosion control.
- Stabilized construction entrances/exits will be used to prevent the tracking of mud and dirt off-site.
- Hydromodification requirements from the Contra Costa NPDES Provision of the Contra Costa Clean Water Program may apply to this project. These design measures are intended to increase retainage, detaining or infiltrating water runoff from the project area, and would be specified during the project’s final design development. Development of these measures will be coordinated with Contra Costa County and/or RWQCB during final design and permitting to meet the
requirements for minimizing and treating runoff that may have the potential for hydromodification impacts.

- Temporary BMPs will be implemented during project construction to comply with the NPDES conditions and will meet Caltrans Best Available Technology/Best Conventional Technology for construction projects. The most effective BMPs that can be used to minimize erosion include:
  - Preserving existing vegetation;
  - Avoiding or minimizing work during the rainy season (May to October) and during any rainfall events or immediately following precipitation when the ground surface is wet;
  - Limiting the amount and length of exposure of graded soil and soil stockpiles; and
  - Protecting exposed spoils through the use of mulches or erosion control blankets/mats.

- Temporary erosion control and water quality measures will be defined in detail in the project SWPPP and designated as line items in the plans, specifications, and estimates.

- Table 2.9-1 lists the minimum requirements for temporary BMPS to be implemented during project construction.

**Permanent (Long-term) BMPs**

- Permanent (post-construction) BMPs include the minimization of land disturbance, minimization of impervious surfaces, treatment of runoff, and energy dissipation devices. Permanent BMPs included with the project will reduce the suspended particulate loads (and thus pollutants associated with the particulates) entering waterways after construction is completed.

- Permanent Stormwater Treatment BMPs will be included. Biofiltration Swales and Strips, Austin Vault Sand Filters, and Detention Devices have been identified as potentially feasible for this project.

**Geology, Soils, and Seismicity**

- Additional geotechnical design investigations will be performed during final design and engineering:
  - Further engineering design work will be carried out in accordance with the Department’s Seismic Design Criteria and the regulations detailed in the Alquist-Priolo Earthquake Fault Zoning Act.
– Project elements will be designed and constructed to meet seismic design requirements for ground shaking and ground motions, as determined for the project location and site conditions.
– Additional field investigations will be performed, including geotechnical borings and evaluation of soil samples from the borings, to determine engineering properties of the soils and recommendations for foundations and footings.
– Measures to minimize landsliding and slope instability will also be further defined during final design, including retaining wall and slope/cut design.

- Vegetative seeding, slope covers, and drainage measures to collect and control runoff will minimize potential soil erosion during and after construction, as discussed in Section 2.9.4.

**Hazardous Waste and Materials**
- Testing for ADL will be performed at the Plans, Specifications and Estimates (PS&E) stage prior to project construction. If ADL is found, special handling of the contaminated soil would be required and would include implementing a health and safety plan.
- If construction encounters soil or groundwater contamination, all activities involving contaminated soil or groundwater will be planned to comply with the various regulatory agencies’ requirements.
- Material from structures that is removed or modified by the project will be handled and disposed in accordance with local, State, and Federal requirements.

**Air Quality**
- The construction contractor will comply with Caltrans’ Standard Specifications Section 7-1.01F and Section 10 of Caltrans’ Standard Specifications (1999).
- Water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions.
- Soil binder will be spread on any unpaved roads used for construction purposes and on all project construction parking areas.
- Trucks will be washed off as they leave the right-of-way as necessary to control fugitive dust emissions.
- Construction equipment and vehicles will be properly tuned and maintained. Low-sulfur fuel will be used in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.
• Develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
• Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.
• Prohibit construction activities involving extended idling of diesel equipment at sensitive land uses such as residents and schools.
• Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
• Cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to reduce PM$_{10}$ and deposition of particulate during transportation.
• Remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.
• To the extent feasible, route and schedule construction traffic to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
• Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.

To avoid or minimize potential impacts from naturally occurring asbestos and structural asbestos, the following measures would be implemented:

• Foundation locations for project structures will be investigated for the presence of naturally occurring asbestos during final project design.
• If soils or geotechnical investigations during design encounter serpentinite materials in construction areas, then the BAAQMD’s requirements for road construction and maintenance will be followed to minimize dust\textsuperscript{18}. These measures are similar to the dust controls previously explained in this subsection. They include wetting of unpaved areas or otherwise stabilizing soils in unpaved areas subject to construction, slowing speeds to less than 15 mph, wetting of storage areas, and conducting activities so that no track-out occurs from road construction.

\textsuperscript{18} The BAAQMD Asbestos Dust Mitigation Plan requirements and controls can be found at: http://www.baaqmd.gov/Divisions/Compliance-and-Enforcement/Asbestos-Programs/Asbestos-ATCM.aspx
• Existing structures that will be removed or modified by the project will be tested for the presence of asbestos-containing materials. If present, these materials will be handled and disposed accordingly.

Noise

• The Department will incorporate noise abatement in the form of soundwalls in the following locations, which have been determined to be feasible at the following locations:
  – Along westbound I-80 from just west of Wildcat Creek to San Pablo Dam Road (SW1);
  – Along segments between the existing I-80 westbound El Portal Drive on-ramp and the proposed relocated westbound El Portal Drive on-ramp (SW2, SW3, and SW5); and
  – As an extension of the 8-foot-high masonry soundwall that the City of San Pablo plans to construction along El Portal Drive (SW4).

If, during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.

• The increase in noise from construction activities will be reasonably minimized by implementing provisions in Section 7-1.01I, “Sound Control Requirements,” of the Caltrans Standard Specifications and the following abatement measures:
  – Consider construction of the soundwall replacements along westbound I-80 and San Pablo Dam Road as early as possible to minimize noise exposure to homes.
  – Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
  – Prohibit unnecessary idling of internal combustion engines within 100 feet of residences.
  – Avoid staging of construction equipment within 200 feet of residences and locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far practical from noise-sensitive residences.
  – Require all construction equipment to conform to Section 7-1.01I, Sound Control Requirements of the latest Standard Specifications.
  – Avoid nighttime construction work when feasible.
  – Limit demolition and pile-driving activities to daytime hours only. If nighttime work is required, implement a construction noise-monitoring
program and provide additional mitigation as necessary (in the form of noise control blankets or other temporary noise barriers, etc.) for affected receptors.

**Wetlands and Other Waters of the United States**
- The portion of Wildcat Creek below the existing wingwalls will be designated as an environmentally sensitive area (ESA) and flagged to exclude construction workers and equipment. Work is planned at the top of the creek bank for installation of the proposed frontage road bridge.
- Best management practices (BMPs) will be implemented during bridge construction to prevent stormwater runoff from the construction area from entering Wildcat Creek.
- San Pablo Creek will be avoided and also designated as an ESA.

**Animal Species**
- Erosion control measures will be required of the construction contractor to prevent material and sediments from entering the creeks.
- Existing cut slopes, dominated by grassy habitat alongside I-80, will be reseeded following construction.
- Landscaping will be installed following construction.
- Vegetation removal will be timed to avoid the general nesting period for songbirds and other migratory birds (approximately March 1 to August 31). If vegetation must be removed during this period, preconstruction surveys should be conducted to check for the presence of active nests, and a perimeter established to avoid construction near active nests until the breeding pair and any fledglings leave.

**Threatened and Endangered Species**
- Construction-area delineation: Before any ground disturbance occurs, project area boundaries will be clearly delineated with ESA fencing and solid barriers. At San Pablo Creek, the work area will be designated around the existing ramp where pavement will be removed, such that no work will be allowed at or within the creek banks. At Wildcat Creek, the work area will be designated to allow construction of the new bridge abutments near the top of the bank, and barriers will be placed to prevent construction activities, equipment, and erosion from extending beyond the top of the bank area. The ESA fencing and barriers will be put in place outside of the steelhead migratory season, between June 15 and October 15.
- Construction monitoring: A biological monitor will inspect and record placement of the construction ESA fencing and barriers prior to start of construction. A biologist will monitor the initial ground disturbance activities and during vegetation clearance at Wildcat Creek.
- Vegetation: Vegetation near Wildcat Creek will be removed without the use of heavy machinery or herbicidal sprays to minimize impacts to any special-status species.
- Implementation of erosion control measures: Erosion control measures will be undertaken to minimize sedimentation impacts to the creek. The measures will be limited to tightly woven fiber netting or similar materials to ensure that CRLF do not become entrapped. Erosion control measures developed by the contractor will comply with the Caltrans Statewide Stormwater Program (http://www.dot.ca.gov/hq/env/stormwater/; Caltrans 2007).
- Onsite construction personnel education program: The USFWS-approved biologist will conduct onsite training with construction personnel for CRLF.
- Spill avoidance and response: Avoidance of spills through implementation of a spill avoidance and response plan will be enforced.
- Entrapment avoidance: To avoid entrapment of CRLF, all excavated steep-walled holes or trenches more than two feet deep will be covered at the end of each working day. Holes or trenches will be fitted with at least one escape ramp. Construction pipes, culverts, and similar structures will be inspected for CRLF before being buried, capped, moved, or otherwise used in any way.
- Following completion of the proposed project, all temporary roads, staging areas, and work areas will be removed and temporary impact areas restored to a natural condition to provide baseline habitat values. All construction-related equipment, including erosion control and ESA fencing, will be removed. At Wildcat Creek, the banks are steep and range from approximately 15 to 20 feet above the creekbed. The banks are dominated by English ivy (Hedera helix), a very invasive species. Within the State right-of-way, the ivy will be removed and restored with appropriate native riparian species.

**Invasive Species**
- The landscaping and erosion control included in the project will not use species listed as noxious weeds.
- The contractor will be required to use equipment that is cleaned and inspected for plant material prior to arrival and use at the project site.
F.2 Mitigation Measures

Community Impacts

Relocations and Environmental Justice

- Relocation assistance payments and counseling will be provided to persons and businesses in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act, as amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All benefits and services would be provided equitably without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S. Code 2000d, et seq.).

Threatened and Endangered Species

- Mitigation for impacts to upland CRLF habitat will be provided at a 1:1 ratio for temporary impacts and at a 3:1 ratio for permanent impacts (0.10 acre).
- Mitigation credits would be purchased for this species from a USFWS-approved mitigation bank. Alternatively, habitat enhancement could be performed at Wildcat Creek. Final mitigation plans will be defined during final design and permitting of the project.

F.3 Draft Form: Summary of Required Permits and Environmental Commitments—PS&E Phase

The form starts on the next page.
Below is a summary of the required permits, and environmental commitments that must be incorporated into the PS&E for this project. Please contact sheryl_m_garcia@dot.ca.gov for further information.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>NSSP Y/N</th>
<th>Responsible Staff</th>
<th>Timing</th>
<th>Action Taken</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDFG 1601/03 Streambed Alteration Agreement</td>
<td>1-35</td>
<td>CICTA</td>
<td>PS&amp;E</td>
<td>File permit application</td>
<td></td>
</tr>
<tr>
<td>BCDC: Bay Fill Permit</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>BCDC: Pub. Access Review</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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</tr>
<tr>
<td>Coastal Dev. Permit: County</td>
<td>NA</td>
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<td>NA</td>
<td>NA</td>
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<tr>
<td>Coastal Dev. Permit: State</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>State Lands Lease Agreement</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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</tr>
<tr>
<td>RWQCB: NPDES</td>
<td>1-35</td>
<td>CICTA</td>
<td>PS&amp;E</td>
<td>File permit application</td>
<td></td>
</tr>
<tr>
<td>RWQCB: Water Qual. Cert.</td>
<td>1-35</td>
<td>CICTA</td>
<td>PS&amp;E</td>
<td>File permit application</td>
<td></td>
</tr>
<tr>
<td>Endangered Species Act Consultation</td>
<td>1-35</td>
<td>CICTA</td>
<td>Design/Const.</td>
<td>Implement Biological Opinion recommendations</td>
<td></td>
</tr>
<tr>
<td>USACE 404: Nationwide</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>USACE 404: Individual</td>
<td>NA</td>
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<td>USACE 10 Permit</td>
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<tr>
<td>USCG Section 9 Permit</td>
<td>NA</td>
<td>NA</td>
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</tbody>
</table>

**Land Use**

- Time reconstruction of pedestrian overcrossing at Riverside Ave. to avoid school sessions. 2-10 CICTA Final design
- Give advance notice of construction to inform Riverside Elementary staff and parents about plans and timing. 2-10 CICTA Final design
- Design pedestrian overcrossing so school staff can lock the entrance to school property but still allow public access between overcrossing and Amador Street. 2-10 CICTA Final design
- Investigate and consider reconstructing pedestrian overcrossing before reconstruction of the I-80/San Pablo Dam Road interchange. 2-10 CICTA Final design

**Community Impacts**

- Determine impacts to parking areas at businesses along San Pablo Dam Road west of I-80, and either reconfigure layout of parking lot or compensate for loss of parking. 2-25 Caltrans ROW and CICTA Final design and ROW
- Provide persons and businesses with relocation assistance payments and counseling in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act and in compliance with Title VI of the Civil Rights Act. 2-30 Caltrans ROW and CICTA Final design and ROW
<table>
<thead>
<tr>
<th>Ref.</th>
<th>NSSP Y/N</th>
<th>Responsible Staff</th>
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<tr>
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<td>Utilities and Emergency Services</td>
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<td>Perform further utility investigation to verify all utility data during the final project design phase.</td>
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<td>2-32 Caltrans and CCTA</td>
<td>Final design</td>
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<td>Coordinate the project’s schedule and overall construction staging, detour, and traffic control plan with EBMUD to accommodate timing requirements for transmission main relocation.</td>
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<td>2-32 Caltrans, CCTA, and Construction Contractor</td>
<td>Final design/Const.</td>
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<td>Traffic and Transportation</td>
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<td>Develop a Traffic Management Plan to address traffic impacts from staged construction, detours, and specific traffic handling concerns such as emergency access during project construction.</td>
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<td>2-66 CCTA</td>
<td>Final design</td>
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<td>The contractor will be required to identify planned haul routes and estimated truck traffic on the routes. Pavement damage or degradation identified through pre- and post-surveys that can be associated with the project's truck trips will be a repair requirement of the contractors.</td>
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<td>2-67 CCTA</td>
<td>Final design</td>
</tr>
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<td>Visual/Aesthetics</td>
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<td>Match architectural treatment of soundwalls and retaining walls to other walls adjacent to the project. Give wall surfaces an aesthetic treatment to reduce glare and visual monotony.</td>
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<td>2-99 CCTA</td>
<td>Design/Const.</td>
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<td>Provide replacement planting to provide screening of highway features and permanent slope stabilization. Accommodate vine planting where possible to soften walls and control graffiti. Plant trees wherever possible. Consider tall evergreen trees for replacement planting in locations where existing large-scale trees are removed for the project.</td>
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<td>2-99 CCTA</td>
<td>Design/Const.</td>
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<td></td>
<td>Rollingwood Drive, Amador Street: Add trees or shrubs wherever possible to screen views of roadway and restore views of existing trees.</td>
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<td>2-99 CCTA</td>
<td>Design/Const.</td>
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<td></td>
<td>Humboldt Avenue: As replacement planting will not be possible along the side of the new soundwall facing the community, aesthetic wall treatments should be emphasized.</td>
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<td></td>
<td>2-99 CCTA</td>
<td>Design/Const.</td>
</tr>
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<tr>
<td>2-102</td>
<td>Y</td>
<td>CCTA</td>
<td>Design/Const.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-102</td>
<td>N</td>
<td>Construction Contractor</td>
<td>Const.</td>
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<tr>
<td>2-102</td>
<td>Y</td>
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<td>Const.</td>
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<tr>
<td>2-110</td>
<td>Y</td>
<td>CCTA and Construction Contractor</td>
<td>PS&amp;E</td>
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<tr>
<td>2-111</td>
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<td>Final design</td>
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<tr>
<td>2-112</td>
<td>N</td>
<td>CCTA and Construction Contractor</td>
<td>PS&amp;E</td>
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<tr>
<td>2-120</td>
<td>N</td>
<td>CCTA</td>
<td>Design</td>
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<tr>
<td>2-120</td>
<td>N</td>
<td>CCTA</td>
<td>Design/Const.</td>
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<tr>
<td>2-120</td>
<td>N</td>
<td>CCTA</td>
<td>Pre-const.</td>
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<tr>
<td>2-120</td>
<td>N</td>
<td>CCTA</td>
<td>Final design</td>
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<tr>
<td>2-120</td>
<td>N</td>
<td>CCTA and Construction Contractor</td>
<td>During and post-const.</td>
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<tr>
<td>2-123</td>
<td>N</td>
<td>CCTA and Construction Contractor</td>
<td>PS&amp;E, pre-constructio</td>
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</tbody>
</table>

**Cultural Resources**
- If project changes to include areas not yet surveyed, conduct surveys of these areas.
- If cultural materials are found during construction, divert all earth-moving activity in and around the discovery area until after an archaeologist assesses the find.
- Contact County Coroner if any human remains are found, and cease earth-moving in and around the discovery area. Follow CA Public Resources Code Section 5097.98 provisions as applicable.

**Water Quality and Stormwater Runoff**
- Include feasible temporary and permanent erosion control BMPs in PS&E.
- Coordinate with Contra Costa County and/or RWQCB during final design and permitting to meet the requirements for minimizing and treating runoff that may have the potential for hydromodification impacts.
- Include stormwater BMPs for temporary soil stabilization and sediment control in SWPPP.

**Geology, Soils, and Seismicity**
- Perform additional geotech design investigation in accordance with Caltrans seismic design criteria and Alquist-Priolo Earthquake Fault Zoning Act regulations.
- Design and construct project elements to meet seismic design requirements for ground shaking and ground motions.
- Perform additional geotech design investigation (use borings and evaluate soil samples); determine soil engineering properties and make recommendations for foundations and footings.
- Define measures to minimize landsliding and slope instability.
- Minimize potential soil erosion using vegetative seeding, soil covers, and drainage measures to collect and control runoff.

**Hazardous Waste and Materials**
- Perform testing for ADL, implement special handling measures for soil if ADL is found, and implement health and safety plan.
<table>
<thead>
<tr>
<th>Ref.</th>
<th>NSSP Y/N</th>
<th>Responsible Staff</th>
<th>Timing</th>
<th>Action Taken</th>
<th>Date</th>
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<tbody>
<tr>
<td>2-123</td>
<td></td>
<td>CCTA and Construction Contractor</td>
<td>Pre-const.</td>
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<td>2-123</td>
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<td>CCTA and Construction Contractor</td>
<td>Pre-const.</td>
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<tr>
<td>2-136</td>
<td></td>
<td>Caltrans Design/ Const.</td>
<td>Const.</td>
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<td>2-147</td>
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<td>Caltrans Design/ Const.</td>
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<td>2-149</td>
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<td>Caltrans Design/ Const.</td>
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<td>2-149</td>
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<td>Caltrans Design/ Const.</td>
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<td>2-151</td>
<td></td>
<td>Caltrans Design/ Const.</td>
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<td>2-152</td>
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<td>Construction Contractor</td>
<td>Const.</td>
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</table>

**ENVIRONMENTAL COMMITMENTS**

**Air Quality**

Ensure that construction contractor complies with Section 7-1.01F and Section 10 of Caltrans' Standard Specifications.

**Noise**

If necessary, abate noise by installing soundwall along westbound I-80 from just west of Wildcat Creek to San Pablo Dam Road (SW1).

If necessary, abate noise by installing soundwalls along segments between the existing I-80 westbound El Portal Drive on-ramp and the proposed relocated westbound El Portal Drive on-ramp (SW2, SW3, and SW5).

If necessary, abate noise by extending the 8-foot-high masonry soundwall that the City of San Pablo plans to construct along El Portal Drive (SW4).

Minimize increase in noise exposure from construction equipment by early construction of replacement soundwalls along westbound I-80 and San Pablo Dam Road.

Check condition of intake and exhaust mufflers on internal combustion engine-driven equipment.

Prohibit unnecessary idling of internal combustion engines within 100 feet of residences.

Avoid staging mobile construction equipment within 200 feet of residences and keep all stationary noisy construction equipment as far as practical from noise-sensitive residences.

Require construction equipment to conform to Caltrans Standard Specifications Section 7-1.01I, Sound Control Requirements.
Avoid nighttime construction work when feasible.  
Limit demolition and pile-driving activities to daytime hours. Implement noise-monitoring program and provide additional mitigation as necessary for affected receptors if nighttime work is required.

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<th>Ref.</th>
<th>NSSP Y/N</th>
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<td>2-152</td>
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<td>Construction Contractor</td>
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</table>

**Wetlands and Other Waters of the United States**

Designate the portion of Wildcat Creek below the existing wingwalls as an ESA in construction plans. Exclude construction workers and equipment during work at the top of the creek bank to install the frontage road bridge.

Implement BMPs during bridge construction to prevent stormwater runoff from the construction area from reaching Wildcat Creek.

Designate San Pablo Creek as an ESA in construction plans.

Implement erosion control measures to keep material and sediments from entering the creeks.

After construction, reseed existing cut slopes that have grassy habitat alongside I-80 and relandscape.

Avoid general nesting period for songbirds and other migratory birds (March 1 to Aug 1) when removing vegetation. If vegetation must be removed in this period, do preconstruction surveys to check for active nests, and establish perimeter to avoid construction near active nests.

**Animal Species**

Implement erosion control measures to keep material and sediments from entering the creeks.

After construction, reseed existing cut slopes that have grassy habitat alongside I-80 and relandscape.

Avoid general nesting period for songbirds and other migratory birds (March 1 to Aug 1) when removing vegetation. If vegetation must be removed in this period, do preconstruction surveys to check for active nests, and establish perimeter to avoid construction near active nests.

<table>
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<tr>
<th>Ref.</th>
<th>NSSP Y/N</th>
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<th>Timing</th>
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<td>2-152</td>
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<td>Construction Contractor</td>
<td>Const.</td>
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</table>

**Threatened and Endangered Species**

Outside of the steelhead migratory season (June 15 to Dec 15), delineate project area boundaries with ESA fencing and solid barriers before ground disturbance occurs. Construction work will be excluded from San Pablo Creek and its banks. At Wildcat Creek the work area will be only at and near the top of the bank.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>NSSP Y/N</th>
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<tbody>
<tr>
<td>2-163</td>
<td></td>
<td>CCTA</td>
<td>June 15 to Dec 15</td>
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<tr>
<td>Ref.</td>
<td>NSSP Y/N</td>
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<tr>
<td>Have biological monitor inspect and record placement of construction ESA fencing and barriers before construction begins, and then monitor during ground-disturbing activities and vegetation clearance at Wildcat Creek. After vegetation clearance, check periodically to ensure that exclusion fencing is maintained.</td>
<td>2-164</td>
<td>CCTA</td>
<td>Pre-const./Const.</td>
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<tr>
<td>Remove vegetation near Wildcat Creek without use of heavy machinery or herbicidal sprays.</td>
<td>2-164</td>
<td>Construction Contractor</td>
<td>Const.</td>
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</tr>
<tr>
<td>Implement erosion control measures to minimize sedimentation impacts to the creek. Use tightly woven netting or like materials so CRLF don't become entrapped. Comply with the Caltrans Statewide Stormwater Program.</td>
<td>2-164</td>
<td>Construction Contractor</td>
<td>Const.</td>
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<tr>
<td>Have USFWS-approved biologist conduct onsite CRLF-related training.</td>
<td>2-164</td>
<td>CCTA</td>
<td>Pre-const./Const.</td>
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<td>Implement and enforce spill avoidance and response plan.</td>
<td>2-164</td>
<td>Construction Contractor</td>
<td>Const.</td>
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<tr>
<td>Cover all excavated steep-walled holes or trenches more than 2 feet deep at the end of each working day. Fit holes and trenches with at least one escape ramp. Inspect pipes, culverts, and other such structures for CRLF before burying, capping, moving, or otherwise using them in any way.</td>
<td>2-164</td>
<td>Construction Contractor</td>
<td>Const.</td>
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<tr>
<td>After construction is complete, remove all temporary roads, staging areas, and work areas, and restore temporary impact areas to a natural condition. Remove all construction-related equipment including fencing of any kind. At Wildcat Creek, within the State right-of-way, remove English ivy and restore the area with appropriate native riparian species.</td>
<td>2-164</td>
<td>Construction Contractor</td>
<td>Post-const.</td>
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<td>Mitigate for impacts to upland CRLF habitat at a 1:1 ratio for temporary impacts and at a 3:1 ratio for permanent impacts (0.10 acre).</td>
<td>2-165</td>
<td>CCTA</td>
<td>Design/Const.</td>
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<tr>
<td>Purchase mitigation credits for CRLF from a USFWS-approved mitigation bank, or enhance habitat at Wildcat Creek. Define final mitigation plans during final design and permitting of the project.</td>
<td>2-165</td>
<td>CCTA</td>
<td>Design/Const.</td>
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<td>Ref.</td>
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<tr>
<td><strong>Invasive Species</strong></td>
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<tr>
<td>Use no noxious weed species for landscaping and erosion control.</td>
<td>2-168</td>
<td>Construction Contractor</td>
<td>Const.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require contractor to use clean equipment that is inspected for plant material before it arrives and is used at the project site.</td>
<td>2-168</td>
<td>Caltrans Design/Const.</td>
<td>Const.</td>
<td></td>
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</tbody>
</table>

c  Attachments

cc: Design, Senior Envir. Plan., File

OFFICE CHIEF OF ENVIRONMENTAL PLANNING  Apr-04
# Appendix G  List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AADT</td>
<td>Annual Average Daily Traffic</td>
</tr>
<tr>
<td>AB</td>
<td>Assembly Bill</td>
</tr>
<tr>
<td>ABAG</td>
<td>Association of Bay Area Governments</td>
</tr>
<tr>
<td>AC Transit</td>
<td>Alameda-Contra Costa Transit</td>
</tr>
<tr>
<td>APE</td>
<td>Area of Potential Effect</td>
</tr>
<tr>
<td>ASR</td>
<td>Archaeological Survey Report</td>
</tr>
<tr>
<td>BAAQMD</td>
<td>Bay Area Air Quality Management District</td>
</tr>
<tr>
<td>BART</td>
<td>Bay Area Rapid Transit</td>
</tr>
<tr>
<td>BMP</td>
<td>Best Management Practice</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
</tr>
<tr>
<td>CARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>CDFG</td>
<td>California Department of Fish and Game</td>
</tr>
<tr>
<td>CESA</td>
<td>California Endangered Species Act</td>
</tr>
<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CGS</td>
<td>California Geological Survey</td>
</tr>
<tr>
<td>CNDDDB</td>
<td>California Natural Diversity Data Base</td>
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<tr>
<td>CNPS</td>
<td>California Native Plant Society</td>
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<tr>
<td>CO</td>
<td>carbon monoxide</td>
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<tr>
<td>CO₂</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td>CRHR</td>
<td>California Register of Historic Resources</td>
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<tr>
<td>CHRIS/NWIC</td>
<td>California Historic Resources Inventory System, Northwest Information Center</td>
</tr>
<tr>
<td>CRMP</td>
<td>Construction Risk Management Plan</td>
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<tr>
<td>CWA</td>
<td>Clean Water Act</td>
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<tr>
<td>dBA</td>
<td>A-weighted decibel</td>
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<tr>
<td>Department</td>
<td>California Department of Transportation</td>
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<tr>
<td>EA</td>
<td>Environmental Assessment</td>
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<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
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<tr>
<td>FESA</td>
<td>Federal Endangered Species Act</td>
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<tr>
<td>FHPM</td>
<td>Federal-Aid Highway Program Manual</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
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<tr>
<td>GHG</td>
<td>greenhouse gas</td>
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<td>HOV</td>
<td>High-occupancy vehicle</td>
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<td>I</td>
<td>Interstate</td>
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<tr>
<td>IS</td>
<td>Initial Study</td>
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<tr>
<td>ISA</td>
<td>Initial Site Assessment</td>
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<tr>
<td>IST</td>
<td>Intelligent Transportation System</td>
</tr>
<tr>
<td>kV</td>
<td>kilovolt</td>
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<tr>
<td>L&lt;sub&gt;eq&lt;/sub&gt;</td>
<td>equivalent sound level</td>
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<tr>
<td>LOS</td>
<td>Level of service</td>
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<tr>
<td>M</td>
<td>moment magnitude, an earthquake intensity measure</td>
</tr>
<tr>
<td>µg/m³</td>
<td>microgram(s) per cubic meter</td>
</tr>
<tr>
<td>mg/m³</td>
<td>milligram(s) per cubic meter</td>
</tr>
<tr>
<td>mpg</td>
<td>miles per gallon</td>
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<td>mph</td>
<td>miles per hour</td>
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<tr>
<td>MSAT</td>
<td>Mobile Source Air Toxics</td>
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</table>
Appendix G List of Acronyms

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MTC Metropolitan Transportation Commission
NAAQS National Ambient Air Quality Standards
NAC Noise Abatement Criteria
ND Negative Declaration
NEPA National Environmental Policy Act
NO\textsubscript{2} nitrogen dioxide
NOAA Fisheries National Oceanic and Atmospheric Administration’s National Marine Fisheries Service
NO\textsubscript{X} nitrogen oxides
NPDES National Pollutant Discharge Elimination System
NRCS Natural Resources Conservation Service
NRHP National Register of Historic Places
O\textsubscript{3} Ozone
PM Post mile
PM\textsubscript{10} particulate matter less than 10 micrometers in diameter
PM\textsubscript{2.5} particulate matter less than 2.5 micrometers in diameter
ppm part(s) per million
PDT Project Development Team
PSR Project Study Report
ROGs Reactive organic gases
RTP Regional Transportation Plan
RWQCB Regional Water Quality Control Board
SHPO State Historic Preservation Office(r)
SIP State Implementation Plan
SO\textsubscript{2} sulfur dioxide
SO\textsubscript{X} sulfur oxides
SWPPP Storm Water Pollution Prevention Plan
SWRCB State Water Resources Control Board
TIP Transportation Improvement Program
USACE U.S. Army Corps of Engineers
USDOT U.S. Department of Transportation
USEPA U.S. Environmental Protection Agency
USFWS U.S. Fish and Wildlife Service
VMT vehicle miles traveled
vpd vehicles per day
Appendix H  List of Technical Studies

The following technical studies were prepared to support this environmental document:

- Air Quality Impact Assessment, January 2009
- Archaeological Survey Report, July 2008
- Biological Assessment, September 2008
- Community Impact Assessment, May 2008
- Fisheries Biological Assessment, September 2008
- Phase 1 Geologic Hazards Evaluation Report, October 2007
- Historic Property Survey Report, July 2008
- Historical Resources Evaluation Report, July 2008
- Location Hydraulic Study Report, October 2008
- Natural Environment Study, September 2008
- Noise Study Report, March 2009
- Storm Water Data Report, February 2009
- Visual Resources Impact Report, April 2009
- Water Quality Report, December 2008
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: 080717023302
Database Last Updated: January 31, 2008

Quad Lists

Listed Species

Invertebrates

• Branchinecta conservatio
  o Conservancy fairy shrimp (E)

• Branchinecta lynchi
  o vernal pool fairy shrimp (T)

• Haliotes sorenseni
  o white abalone (E) (NMFS)

• Icaricia icarioides missionensis
  o mission blue butterfly (E)

• Incisalia mossii bayensis
  o San Bruno elfin butterfly (E)

• Speyeria callippe callippe
  o callippe silverspot butterfly (E)

• Syncaris pacifica
  o California freshwater shrimp (E)

Fish

• Acipenser medirostris
  o green sturgeon (T) (NMFS)

• Eucyclogobius newberryi
  o tidewater goby (E)

• Hypomesus transpacificus
  o Critical habitat, delta smelt (X)
- delta smelt (T)

- Oncorhynchus kisutch
  - coho salmon - central CA coast (E) (NMFS)
  - Critical habitat, coho salmon - central CA coast (X) (NMFS)

- Oncorhynchus mykiss
  - Central California Coastal steelhead (T) (NMFS)
  - Central Valley steelhead (T) (NMFS)
  - Critical habitat, Central California coastal steelhead (X) (NMFS)
  - Critical habitat, Central Valley steelhead (X) (NMFS)

- Oncorhynchus tshawytscha
  - Central Valley spring-run chinook salmon (T) (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)

- Rana aurora draytonii
  - California red-legged frog (T)
  - Critical habitat, California red-legged frog (X)

**Reptiles**

- Masticophis lateralis euryxanthus
  - Alameda whipsnake [=striped racer] (T)
  - Critical habitat, Alameda whipsnake (X)

- Thamnophis gigas
  - Giant garter snake (T)

**Birds**

- Charadrius alexandrinus nivosus
  - Western snowy plover (T)

- Diomedea albatrus
  - Short-tailed albatross (E)

- Pelecanus occidentalis californicus
  - California brown pelican (E)

- Rallus longirostris obsoletus
• California clapper rail (E)
• Sternula antillarum (=Sterna, =albifrons) browni
  o California least tern (E)
• Strix occidentalis caurina
  o northern spotted owl (T)

Mammals

• Arctocephalus townsendi
  o Guadalupe fur seal (T) (NMFS)
• Balaenoptera borealis
  o sei whale (E) (NMFS)
• Balaenoptera musculus
  o blue whale (E) (NMFS)
• Balaenoptera physalus
  o finback (=fin) whale (E) (NMFS)
• Enhydra lutris nereis
  o southern sea otter (T)
• Eubalaena (=Balaena) glacialis
  o right whale (E) (NMFS)
• Eumetopias jubatus
  o Critical Habitat, Steller (=northern) sea-lion (X) (NMFS)
  o Steller (=northern) sea-lion (T) (NMFS)
• Physeter catodon (=macrocephalus)
  o sperm whale (E) (NMFS)
• Reithrodontomys raviventris
  o salt marsh harvest mouse (E)

Plants

• Arctostaphylos hookeri ssp. ravenii
  o Presidio (=Raven's) manzanita (E)
• Arctostaphylos pallida
  o pallid manzanita (=Alameda or Oakland Hills manzanita) (T)
• Calochortus tiburonensis
- Tiburon mariposa lily (T)
  - Castilleja affinis ssp. neglecta
    - Tiburon paintbrush (E)
  - Clarkia franciscana
    - Presidio clarkia (E)
  - Cordylanthus mollis ssp. mollis
    - Soft bird's-beak (E)
  - Hesperolinon congestum
    - Marin dwarf-flax (=western flax) (T)
  - Holocarpha macradenia
    - Critical habitat, Santa Cruz tarplant (X)
    - Santa Cruz tarplant (T)
  - Lasthenia conjugens
    - Contra Costa goldfields (E)
    - Critical habitat, Contra Costa goldfields (X)
  - Lessingia germanorum
    - San Francisco lessingia (E)
  - Streptanthus niger
    - Tiburon jewelflower (E)

**Proposed Species**

**Plants**

- Cordylanthus mollis ssp. mollis
  - Critical habitat, soft bird's-beak (PX)

**Candidate Species**

**Invertebrates**

- Haliotes cracherodii
  - Black abalone (C) (NMFS)
Quads Containing Listed, Proposed or Candidate Species:

BRIONES VALLEY (465B)
OAKLAND EAST (465C)
RICHMOND (466A)
SAN QUENTIN (466B)
SAN FRANCISCO NORTH (466C)
OAKLAND WEST (466D)
BENICIA (482C)
PETALUMA POINT (483C)
MARE ISLAND (483D)

County Lists

No county species lists requested.

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](https://www.calnatives.org/).

**Surveying**

Some of the species on your list may not be affected by your project. A trained biologist 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.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](https://www.calnatives.org/). 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 [critical habitat page](#) for maps.

**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) 414-6580.

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 October 15, 2008.
November 27, 2007

Mr. Chris Nagano  
Deputy Assistant Field Supervisor  
United States Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825-1846

Subject: Request for Comment on the California Red-Legged Frog Habitat Site Assessment for the Interstate 80/San Pablo Dam Road Interchange Project

Dear Mr. Nagano:

Under Section 7 of the Endangered Species Act (16 U.S.C.A. Sec. 1531 et seq.), the California Department of Transportation (Caltrans) has prepared the enclosed site assessment document for the California red-legged frog (CRLF, *Rana aurora draytonii*). We request your determination as to whether CRLF protocol level surveys will be required for the Interstate 80 (I-80)/San Pablo Dam Road Interchange Project.

Caltrans transmits this request as the NEPA lead agency under the provisions of the Memorandum of Understanding (MOU) between the Federal Highway Administration (FHWA) and the California Department of Transportation concerning the State of California’s Participation in the Surface Transportation Project Delivery Pilot Program, which became effective on July 1, 2007. The MOU was signed pursuant to Section 6005 of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which allows the Secretary of Transportation to assign, and the State of California to assume, responsibility for FHWA’s responsibilities under NEPA as well as consultation and coordination responsibilities under other Federal environmental laws. As this project is covered by the Pilot Program MOU, FHWA has assigned and Caltrans has assumed FHWA responsibility for environmental review, consultation, and coordination on this project.

Caltrans in cooperation with the FHWA, the Contra Costa Transportation Authority, and the City of San Pablo, proposes to reconstruct the I-80/San Pablo Dam Road Interchange, located in the City of San Pablo, Contra Costa County. The enclosed report has been prepared to evaluate the suitability of habitat for the CRLF within a 1-mile radius of the proposed project. The site review was carried out in accordance with the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (U.S. Fish and Wildlife Service, 2005). The report describes the vegetation and aquatic habitats associated with the hydrologic features within the 1-mile radius of the project.

The I-80/San Pablo Dam Road Interchange Project is needed to improve the traffic operations and bicycle/pedestrian access at the interchange. The project limits along I-80 extend from the El

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Portal Drive to McBryde Avenue interchanges, a distance of 1.5 miles. Within these limits, the following actions are being considered:

- Closure of the existing isolated El Portal on-ramp and construction of a new on-ramp further west at the El Portal Drive overcrossing, creating a full interchange at that location.
- The new El Portal on-ramp would connect to a new westbound auxiliary lane from El Portal Drive to the San Pablo Dam Road Interchange.
- Two alternatives are being considered to replace the existing San Pablo Dam Road Interchange at approximately the same location: a “Lanes Added” alternative, and a “Tight Diamond” alternative.
- The existing off-ramp at McBryde Avenue would be closed. A one-way frontage road would be constructed between the San Pablo Dam Road Interchange and McBryde Avenue, and westbound I-80 drivers seeking McBryde Avenue would take the frontage road from the San Pablo Dam Road exit ramp.
- Retaining walls would be constructed for the new I-80 westbound on-ramp at El Portal Drive, the westbound auxiliary lane, and the westbound frontage road to McBryde Avenue.
- The existing pedestrian overcrossing spanning I-80 at the terminus of Riverside Avenue would be reconstructed at approximately the same location to accommodate the widened freeway and frontage road.

Interstate-80 crosses two creeks within the project limits, Wildcat Creek between San Pablo Dam Road and McBryde Avenue and San Pablo Creek at the existing isolated El Portal Drive on-ramp. Both creeks are in culverts. No structures would be placed within the creeks. At San Pablo Creek, no work will be done within the creek banks, and the only work proposed is to remove the existing on-ramp pavement, which is located well away from the top of the creek bank. At Wildcat Creek, the one-way frontage road to McBryde Avenue and the auxiliary lane to the westbound I-80 on-ramp from San Pablo Dam Road would cross Wildcat Creek adjacent to the existing I-80 culvert. No bridge construction would take place within the creek or wingwalls.

As indicated in the site assessment report, the creeks in the study area may provide areas of suitable red-legged frog habitat east of I-80. However, no frogs are known to be in the areas to the east, as it is believed that they have been extirpated (Stephen Bobzien, East Bay Regional Park). Furthermore, there would be no construction work to the east of I-80. All of the upland areas to the west of the creek have been developed, and lack habitat connectivity to aquatic and natural upland habitats that might be utilized by California red-legged frog. All project construction in the vicinity of San Pablo and Wildcat Creeks would occur on the west of I-80, and as mentioned above, would avoid work within the creek areas.
Mr. Chris Nagano  
November 27, 2007  
Page 3

Caltrans kindly requests your review of the enclosed report and your input regarding the presence or absence of California red-legged frog in relation to the proposed interchange improvement project.

If you have any questions or need additional information, please feel free to contact Ahmad Hashemi, Senior Biologist, at 510.286.5961.

Sincerely,

JEFFREY G. JENSEN  
District Office Chief  
Office of Biological Sciences and Permits  
District 4, Oakland

cc: Adele Ho, City of San Pablo  
Suzan Miller, CCTA

"Caltrans improves mobility across California"
bc: Maximo Anasco, Design, Contra Costa Co
Howell Chan, Office of Environmental Planning
Jeffrey Jensen, Office of Biological Sciences and Permits
Ahmad Hashemi, Office of Biological Sciences and Permits
Mr. Jim Richards  
Office of Biological Sciences and Permits  
Attn: Ahmad Hashemi  
California Department of Transportation  
P. O. Box 23660  
Oakland, California 94623-0660

Subject: Request for Technical Assistance for the California Red-legged Frog (*Rana aurora draytonii*) for the Interstate 80 San Pablo Dam Road Interchange Project, Contra Costa County, California (Caltrans EA 04-0A0800)

Dear Mr. Richards:

This is in response to a letter from the California Department of Transportation (Caltrans), dated November 27, 2007, that requested technical assistance for the proposed Interstate 80 San Pablo Dam Road Interchange Project in Contra Costa County, California. Your letter was received by the U.S. Fish and Wildlife Service (Service) on November 28, 2007. At issue are the potential effects of the proposed project on the threatened California red-legged frog (*Rana aurora draytonii*). In the accompanying *California Red-Legged Frog Site Assessment* prepared by URS Corporation, URS concluded that “…habitat suitable for breeding, dispersal, and aestivation is present in the ‘Action Area,’” but the California red-legged frog is “…not known from the ‘Action Area’ and are believed to have been extirpated several decades ago.” This determination was made based on the following: (1) apparent absence of frogs within the Action Area; (2) nearest known breeding location situated more than 3 miles from the Action Area; and (3) presence of significant barriers to frog passage between the Action Area and the nearest known breeding location. Our comments and recommendations are made under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act).

The Service concurs with the conclusion that Wildcat Creek, San Pablo Creek and Garrity Creek provide suitable breeding, dispersal, and aestivation habitat for California red-legged frogs. However, the Service disagrees that this listed animal could not occur within the Action Area. Individuals of this threatened amphibian have been observed in Castro Creek, a tributary to San Pablo Creek with headwaters originating in the Sobrante Ridge Regional Preserve (EBRPD) just north of Kennedy Grove Regional Park (EBRPD) (Steve Bobzien, EBRPD, pers. Comm. with Jerry Roe). Adults and juveniles have been observed near Kennedy Grove and tadpoles have been observed in a few pools along the upper reaches of San Pablo Creek below the San Pablo Reservoir (Bert Mulchaey, EB MUD, pers. Comm. with Jerry Roe). Protocol surveys apparently have not been conducted within the lower reaches of San Pablo Creek outside of the East Bay Regional Park District and East Bay Municipal Utility District properties; however, private
citizens have stated they have observed California red-legged frogs in Appian and/or Wilkie creeks (Bert Mulchaey, EBMUD, pers. Comm. with Jerry Roe).

The report states that the closest breeding population of the California red-legged frog "...is separated from the 'Action Area' by significant barriers to frog passage." We do not concur with this conclusion for San Pablo and Wildcat creeks for the following reasons: (1) sufficient connectivity exists between the Action Area and the upper stream reaches where known and potential breeding sites exit; (2) there is minimal undergrounding of the stream channels within these stream reaches; and (3) and the creeks support fully developed and continuous riparian corridors. This statement is true for Garrity Creek, which originates within open space entirely surrounded by urban development and is largely undergrounded from its headwaters to Hilltop Lake. (4) the nearest reported occurrence (#124) is from Pinole Creek approximately 4.7 miles to the east; however, more recent survey data collected from EBRPD and EBMUD have identified California red-legged frogs within 3 miles of the Action Area in San Pablo Creek. In addition, the Service does not concur with the conclusion that the California red-legged frog has not historically occurred in the Action Area or that it has been extirpated from Action Area for the following reasons: (1) the apparent lack of data regarding populations in Wildcat Creek or downstream of Kennedy Grove in San Pablo Creek does not prove the absence of the California red-legged frog, but rather, the lack of the completion of protocol surveys; and (2) California red-legged frogs do not necessarily disperse from one breeding site towards another breeding site. Recently, a new California red-legged frog occurrence (number 896 in the California Department of Fish and Game’s California Natural Diversity Data Base) in American Canyon in Solano County was found approximately 1.25 miles from the nearest known breeding site to the southeast. State Route 29 (a four lane highway) is located immediately to the west of the occurrence and intensive residential and commercial development is immediately west of the highway. There are no known breeding sites or populations to the west that individual #896 would have been dispersing towards. It is likely that some individual California red-legged frogs move in apparent random directions, for dispersing, food, aestivation, escaping from predators, or other essential behaviors. Individuals like these may use upland areas or riparian areas that do not contain or are located near breeding habitat and, thus, if these areas are affected by the proposed project could result in adverse effects to the threatened animal.

Rheem Creek, which originates within the Action Area immediately east of Interstate 80 south of the Hilltop Drive interchange at the location of the Rolling Hills Memorial Park, indicated on Figure 1 was not included in the Site Assessment. Much of the upper reaches of Rheem Creek have been undergrounded and flow through dense urban landscapes with little to no riparian corridor. Rheem Creek does not provide suitable breeding, non-breeding aquatic, upland, or dispersal habitat for California red-legged frogs and is largely surrounded by urban development. Based on the information provided by Caltrans and otherwise available to us, the Service has concluded it is unlikely the California red-legged frog would be found within the portions of Rheem Creek located within the action area.

We recommend that Caltrans adequately analyze the potential adverse effects of this project on the California red-legged frog in San Palo Creek, Wildcat Creek, and Garrity Creek, given the known occurrence of the listed amphibian in the vicinity of the proposed project, the biology and ecology of this species, including its use of upland and riparian habitat, and the presence of suitable habitat for this threatened animal in the action area located within these three drainages.
As always, we are interested in working with Caltrans and the Local Agencies in conserving listed species while maintaining the safety and efficiency of the Federal, State, and Local Transportation System. Please contact Jerry Roe, Endangered Species Biologist, (Jerry_D_Roe@fws.gov) or me (Chris_Nagano@fws.gov) at the letterhead address or at telephone (916) 414-6600 if you have any questions regarding this letter on the Interstate 80/San Pablo Dam Road Interchange Project.

Sincerely,

Christopher D. Nagano
Deputy Assistant Field Supervisor

cc:
Adele Ho, City of San Pablo, San Pablo, California
Suzan Miller, Contra Costa Transportation Authority, Pleasant Hill, California
Marcia Gresfrud, California Department of Fish and Game, Yountville, California
Scott Wilson, California Department of Fish and Game, Yountville, California
Liam Davis, California Department of Fish and Game, Yountville, California
Melissa Escaron, California Department of Fish and Game, Yountville, California
Chris States, California Department of Transportation, District 4, Oakland, California
September 9, 2008

Mr. Gary Stern
San Francisco Bay Team Leader
United States Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Office
777 Sonoma Ave. Room 325
Santa Rosa, CA 95404

Subject: Biological Assessment for Central California Coast Steelhead,
Interstate 80/San Pablo Dam Road Interchange Project

Dear Mr. Stern:

In accordance with the Section 7 of the Endangered Species Act (16 U.S.C.A. Sec. 1531 et seq), the California Department of Transportation (Caltrans) has prepared the enclosed Biological Assessment (BA) for the Central California Coast Steelhead (*Oncorhynchus mykiss*). Caltrans requests your concurrence with the BA findings of “no effect” determination.

Caltrans submits this request as the NEPA lead agency under the provisions of the Memorandum of Understanding (MOU) between the Federal Highway Administration (FHWA) and the California Department of Transportation concerning the State of California’s participation in the Surface Transportation Project Delivery Pilot Program, which became effective on July 1, 2007. The MOU was signed pursuant to Section 6005 of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which allows the Secretary of Transportation to assign, and the State of California to assume, responsibility for FHWA’s responsibilities under NEPA as well as consultation and coordination responsibilities under other Federal environmental laws. This project is covered by the Pilot Program MOU, and FHWA has assigned and Caltrans has assumed FHWA responsibility for environmental review, consultation, and coordination on this project.

Caltrans in cooperation with the FHWA, the Contra Costa Transportation Authority, and the City of San Pablo, proposes to reconstruct the Interstate 80 (I-80)/San Pablo Dam Road Interchange, located in the City of San Pablo, Contra Costa County. The proposed project is needed to improve the traffic operations and bicycle/pedestrian access at this interchange. The project limits along I-80 extend from the El Portal Drive to McBryde

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Avenue interchanges, a distance of 1.5 miles. Within these limits, the following actions are being considered:

- Closure of the existing isolated El Portal on-ramp and construction of a new on-ramp further west at the El Portal Drive overcrossing, creating a full interchange at that location.
- The new El Portal on-ramp would connect to a new westbound auxiliary lane from El Portal Drive to the San Pablo Dam Road Interchange.
- The existing San Pablo Dam Road overcrossing of I-80 would be replaced.
- The existing off-ramp at McBryde Avenue would be closed. A one-way frontage road would be constructed between the San Pablo Dam Road interchange and McBryde Avenue, and westbound I-80 drivers seeking McBryde Avenue would take the frontage road from the San Pablo Dam Road exit ramp.
- Retaining walls would be constructed for the new I-80 westbound on-ramp at El Portal Drive, the westbound auxiliary lane, and the westbound frontage road to McBryde Avenue.
- The existing pedestrian overcrossing spanning I-80 at the terminus of Riverside Avenue would be reconstructed to accommodate the widened freeway, and the new frontage road to the west. An option to extend the pedestrian structure to cross over Amador Road on the east side of I-80 is also being considered.

Interstate 80 crosses two creeks within the project limits, Wildcat Creek between San Pablo Dam Road and McBryde Avenue and San Pablo Creek at the existing isolated El Portal Drive on-ramp. Both creeks are in culverts. No structures would be placed within the creeks. At San Pablo Creek, no work will be done within the creek or creek banks, and the only work proposed is to remove the existing on-ramp pavement, which is located well away from the top of the bank. At Wildcat Creek, the one-way frontage road to McBryde Avenue and the auxiliary lane to the westbound I-80 on-ramp from San Pablo Dam Road would cross Wildcat Creek adjacent to the existing I-80 culvert. However, no bridge construction would take place within the creek or wingwalls.

Caltrans has determined the project would have no effect on Central California Coast steelhead or its critical habitat. As indicated above, no project construction would occur within San Pablo Creek and Wildcat Creek. Downstream barriers obstruct fish passage to the project area, and therefore the likelihood for this species to be present within project limits is low. Impact avoidance and minimization measures are included in the BA to ensure that project construction would not affect this species.

The project will not adversely affect any Essential Fish Habitat (EFH). No EFH is identified within San Pablo or Wildcat creeks at the project location, and immediately downstream of I-80. Existing fish passage will not be affected by the project.
Mr. Gary Stern  
September 9, 2008  
Page 3

Caltrans kindly requests your concurrence with the findings of the enclosed BA and appreciates your timely response as this is a critical step in our environmental review and project delivery process. If you have any questions, please feel free to call me at 510-622-8729 or Ahmad Hashemi, Senior Biologist, at 510-286-5961.

Sincerely,

Jeffrey G. Jensen  
District Office Chief  
Office of Biological Sciences and Permits  
District 4, Oakland

"Caltrans improves mobility across California"
bc:  Bonnita Chow, CT
     Laura Hameister, CT
     Greg McConnell, CT
     Jeff Zimmerman, URS
     Ahmad Hashemi, CT
     Adele Ho, City of San Pablo
     Suzan Miller, CCTA

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September 10, 2008

Ms. Susan Moore, Field Supervisor
U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, Ca 95825-1846

Attention: Jerry Roe

Dear Ms. Moore:

California Department of Transportation (Caltrans) in cooperation with the Federal Highway Administration (FHWA), the Contra Costa Transportation Authority, and the City of San Pablo, proposes to reconstruct the I-80/San Pablo Dam Road Interchange, located in the City of San Pablo, Contra Costa County. Based on our site assessment study and our earlier coordination with the US Fish and Wildlife Service (USFWS, 11/27/2007), Caltrans concluded that there is sufficient connectivity between the threatened California red-legged frog (CRLF, Rana aurora draytonii) breeding sites and the proposed project area. Consequently, Caltrans has determined that the project is likely to affect, but not jeopardize, CRLF and requests initiation of formal consultation under Section 7 of the Endangered Species Act.

Caltrans transmits this request as the NEPA lead agency under the provisions of the Memorandum of Understanding (MOU) between the FHWA and Caltrans concerning the State of California’s Participation in the Surface Transportation Project Delivery Pilot Program, which became effective on July 1, 2007. The MOU was signed pursuant to Section 6005 of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which allows the Secretary of Transportation to assign, and the State of California to assume, responsibility for FHWA’s responsibilities under NEPA as well as consultation and coordination responsibilities under other Federal environmental laws. As this project is covered by the Pilot Program MOU, FHWA has assigned and Caltrans has assumed FHWA responsibility for environmental review, consultation, and coordination on this project.

The proposed project is needed to improve the traffic operations and bicycle/pedestrian access at the Pablo Dam Road Interchange. Because of the short weaving distances between the San Pablo Dam Road Interchange and the interchanges directly to the east and west, limiting improvements to the San Pablo Dam Road Interchange would not
substantially improve or change traffic operations. For this reason, the project limits along I-80 extend from the El Portal Drive to McBryde Avenue interchanges, a distance of 1.5 miles. Within these limits, the following actions are being considered:

- Closure of the existing isolated El Portal on-ramp and construction of a new on-ramp further west at the El Portal Drive overcrossing, creating a full interchange at that location.
- The new El Portal on-ramp would connect to a new westbound auxiliary lane from El Portal Drive to the San Pablo Dam Road Interchange.
- The existing San Pablo Dam Road overcrossing of I-80 would be replaced.
- The existing off-ramp at McBryde Avenue would be closed. A one-way frontage road would be constructed between the San Pablo Dam Road interchange and McBryde Avenue, and westbound I-80 drivers seeking McBryde Avenue would take the frontage road from the San Pablo Dam Road exit ramp.
- Retaining walls would be constructed for the new I-80 westbound on-ramp at El Portal Drive, the westbound auxiliary lane, and the westbound frontage road to McBryde Avenue.
- The existing pedestrian overcrossing spanning I-80 at the terminus of Riverside Avenue would be reconstructed to accommodate the widened freeway, and the new frontage road to the west. An option to extend the pedestrian structure to cross over Amador Road on the east side of I-80 is also being considered.

Interstate 80 crosses two creeks within the project limits, Wildcat Creek between San Pablo Dam Road and McBryde Avenue and San Pablo Creek at the existing isolated El Portal Drive on-ramp. Both creeks are in culverts. No structures would be placed within the creeks. At San Pablo Creek, no work will be done within the creek banks, and the only work proposed is to remove the existing on-ramp pavement, which is located well away from the top of the bank. At Wildcat Creek, the one-way frontage road to McBryde Avenue and the auxiliary lane to the westbound I-80 on-ramp from San Pablo Dam Road would cross Wildcat Creek adjacent to the existing I-80 culvert. No bridge construction would take place within the creek or wingwalls.

The enclosed BA describes the proposed project and identifies measures to avoid, minimize, and compensate for the effects to the threatened CRLF. In accordance with 50 CFR 401.12(j), any deficiencies in the enclosed BA or non-concurrence with our determinations should be provided to us in writing within 30 days of your receipt of this initiation letter.
Caltrans kindly requests your review of the enclosed BA and appreciates your timely response as this is a critical step in our environmental review and project delivery process. If you have any questions, please feel free to call me at 510-622-8729 or Ahmad Hashemi, Senior Biologist, at 510-286-5961.

Sincerely,

JEFFREY G. JENSEN
District Office Chief
Office of Biological Sciences and Permits
District 4, Oakland
Ms. Susan Moore
September 10, 2008
Page 4

bc: Bonnita Chow, CT
    Laura Hameister, CT
    Greg McConnell, CT
    Jeff Zimmerman, URS
    Jeffrey Jensen, CT
    Adele Ho, City of San Pablo
    Suzan Miller, CCTA

"Caltrans improves mobility across California"
October 1, 2008

Mr. Paul Maxwell
Chief Deputy Executive Director, Projects
Contra Costa Transportation Authority
3478 Buskirk Avenue, Suite 100
Pleasant Hill, CA 94523

Subject: I-80/San Pablo Dam Road Interchange Project - Relocation of the Pedestrian Overcrossing

Dear Mr. Maxwell:

This letter is in reference to the presentation made by Hisham Noeimi of the Contra Costa Transportation Authority (CCTA) on August 19, 2008, to the West Contra Costa Unified School District Board. CCTA, in cooperation with the California Department of Transportation and the City of San Pablo, is preparing an environmental document for the I-80/San Pablo Dam Road interchange reconstruction project. The project necessitates replacement of the Riverside Avenue pedestrian overcrossing which provides access over I-80 to the Riverside Elementary School.

At the public meeting held on December 3, 2007, students and parents from the school requested relocation of the pedestrian ramp to the east side of Amador Street where the school is located. The relocation will improve safety for students by eliminating the need to cross Amador Street. CCTA has requested input from the West Contra Costa Unified School District (District) on the use of potentially affected school property for purposes of the project’s environmental document. A portion of the existing school parking lot at the corner of Amador Street and Riverside Avenue has been identified by CCTA for the location of an eastside landing of the pedestrian structure. This area is currently used as parking for administration, staff, and parents or others who visit or work at the school.

Based on the conceptual plan presented to the District, we understand that Riverside School students will be able to use the relocated ramp to avoid possible traffic conflicts on Amador Street. The ramp will also be open to public use (as is the current overcrossing). The District requests a gate to be installed between the ramp and the school grounds to control access into the school grounds, while still allowing continued public access between the ramp and the public sidewalks on Riverside Avenue and Amador Street. The District also requests that CCTA work with district staff during the design phase of the project to minimize impact of the proposed overcrossing to the school including loss of parking and drop-off areas, aesthetics, landscape and other impacts.
The West Contra Costa Unified School District is in concurrence with the conceptual plan to relocate the pedestrian overcrossing ramp to the east side of Amador Street to the Riverside Elementary School parking lot area. The ramp relocation will provide a safer environment for students and the public alike.

Sincerely,

Bruce Harter  
Superintendent

BS:JE:aif  
Attachment: Exhibit
October 2, 2008

Jennifer Darcangelo
Chief, Office of Cultural Resource Studies
Caltrans District 4
PO Box 23660
Oakland, CA  94623-0660

Re: Determinations of Eligibility for the Proposed Interstate 80/San Pablo Dam Road Interchange Project, Contra Costa County, CA

Dear Ms. Darcangelo:

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 (NRHP):

- 3168 Rollingwood Drive, San Pablo, CA
- 3160 Rollingwood Drive, San Pablo, CA
- 3152 Rollingwood Drive, San Pablo, CA
- 3144 Rollingwood Drive, San Pablo, CA
- 3072 Judith Court, San Pablo, CA
- 3066 Judith Court, San Pablo, CA
- 3058 Judith Court, San Pablo, CA
- 3040 Avon Lane, San Pablo, CA
- 3036 Avon Lane, San Pablo, CA
- 3030 Avon Lane, San Pablo, CA
- 3024 Avon Lane, San Pablo, CA
- 1424 Humboldt Avenue, San Pablo, CA
- 5286-5290 Riverside Avenue, San Pablo, CA
- 5296-5300 Riverside Avenue, San Pablo, CA
- 1300 Amador Street, San Pablo, CA
- 1175 Joel Court, Richmond, CA
- 1180 Joel Court, Richmond, CA
Based on my review of the submitted documentation, I concur with the foregoing determinations.

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.

Sincerely,

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
Bijan Sartipi, District Director  
California Department of Transportation  
111 Grand Avenue  
P.O. Box 23360  
Oakland, CA 94612

Attention: Allen Baradar

Dear Ms. Baradar:

SUBJECT: FHWA Project Level Conformity Determination for the I-80/San Pablo Dam Road Interchange Project

On November 2, 2009, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a request for a project level conformity determination for the I-80/San Pablo Dam Road Interchange Project in the City of San Pablo, Contra Costa County. The project is in an area that is designated Nonattainment for Ozone and Maintenance for Carbon Monoxide (CO).

The project level conformity analysis submitted by Caltrans indicates that the transportation conformity requirements of 40 C.F.R. Part 93 have been met. The project is included in the Metropolitan Transportation Commission’s (MTC) currently conforming Transportation 2035 Plan (RTP) and the 2009 Regional Transportation Improvement Program (RTIP). The current conformity determinations for the RTP and RTIP were approved by FHWA and the Federal Transit Administration (FTA) on May 29, 2009. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

As required by 40 C.F.R. 93.116 and 93.123, the localized CO analyses are included in the documentation. The CO hotspot analysis was conducted using the Transportation Project-Level Carbon Monoxide Protocol. The analyses demonstrate that the project will not create any new violation of the standards or increase the severity or number of existing violations.

Based on the information provided, FHWA finds that the Conformity Determination for the I-80/San Pablo Dam Road Interchange Project in the City of San Pablo conforms to the State Implementation Plan (SIP) in accordance with 40 C.F.R. Part 93.
If you have any questions pertaining to this conformity finding, please contact Stew Sonnenberg, FHWA Air Quality Specialist, at (916) 498-5889.

Sincerely,

[Signature]

For
Walter C. Waidelich, Jr.
Division Administrator
cc: (email)
Glenn Kinoshita, Caltrans D-4
Mike Brady, Caltrans HQ
Aimee Kratovil, FHWA

SSonnenberg/ac
Appendix J  Comments on the Initial Study/Environmental Assessment

Introduction
In August 2009, the California Department of Transportation (Department), in cooperation with the Contra Costa Transportation Authority (CCTA), circulated the Interstate-80/San Pablo Dam Road Interchange Project Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment (IS/EA) for public review. This appendix presents a description of the public review process and a summary of prevalent comment topics; the public comments received on the IS/EA from emails, letters, comment cards, and testimony received during the public meeting; and the responses to those comments.

Public Review Period and Public Meeting
The IS/EA was circulated for public review beginning on August 5, 2009, and ending on September 8, 2009. Copies of the document, CDs containing an electronic file of the document, and/or notices of availability of the document were sent to the distribution list included in Section 5 of this IS/EA.

A public meeting on the IS/EA was held on August 19, 2009, at Maple Hall in the City of San Pablo’s City Hall complex. Notification of the meeting and of the availability of the IS/EA was provided through several methods. In addition to the distribution list in Section 5, bilingual public mailers were sent to more than 5,600 property owners, residents, and stakeholders in the vicinity of the proposed project. Notices were posted on the Web sites for the Department (www.dot.ca.gov/dist4/envdocs.htm), the City of San Pablo (http://www.ci.san-pablo.ca.us/main/I-80Interchange.htm) and CCTA (http://www.ccta.net/EN/main/state/162/166/sanpablointerchange.html). Display advertisements were placed in the City of San Pablo’s bimonthly newsletter and three local newspapers prior to the public meeting:

- Contra Costa County Times – August 5, 7, 8 and 9, 2009
- West County Times – August 5, 7, 8, and 9, 2009
- Fronteras (a Spanish-language weekly) – August 15, 2009
The purpose of the meeting was to provide an update on the project, summarize the proposed design alternatives, and receive public comments and testimony on the IS/EA. A summary of the environmental document was presented at the meeting, including a slideshow overview and display boards. The proposed soundwall locations were shown in the slideshow, and on the displays of the project design/layout. Meeting attendees had an opportunity before and after the presentation to ask individual questions of the project team, and the attendees were encouraged to submit comments in writing. Materials available at the meeting included copies of the meeting presentation, a project fact sheet, comment forms, speaker request cards (for recorded public testimony), and meeting agenda. A total of 48 attendees signed in and seven attendees provided public testimony, which was recorded by a court reporter. Comment forms were received during and after the meeting, and comment letters and e-mails were submitted to the Department throughout the public review period.

Comments and Responses
State, regional, and local agencies and representatives, private organizations, and individuals submitted comments in the form of letters, e-mails, comment forms, or public meeting testimony. The table of comments and responses that begins on the next page lists each entity and individual that submitted comments. The comments and responses are presented in the following order:

- Section A – State, Regional and Local Agencies
- Section B – Organizations and Municipalities
- Section C – Individuals
- Section D – Public Hearing Transcript

Any text changes resulting from the comments are summarized in the responses and have been incorporated into the text of the IS/EA. Revisions made after the public review period are indicated by a vertical line in the margin of the IS/EA text, similar to the one shown to the left of this paragraph.
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Summary of Issues Raised in Public Comments
Table J-1 provides an overview of the most prevalent issues that emerged from the body of comments received on the IS/EA. These issues were identified in multiple comments and are briefly summarized below by topic. All comments and responses are presented after this summary.

Table J-1 Summary of Prevalent Issues Among Public Comments

<table>
<thead>
<tr>
<th>Comment Topic</th>
<th>Comments in Which Topic Was Raised</th>
<th>Summary of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>McBryde Avenue Off-ramp Closure</td>
<td>C-06-B, C-07-A, C-09-A, C-10-A, C-15-A, C-16-A, C-18-A, C-22-A, D-01-C, D-06-A</td>
<td>The proposed changes would not improve traffic flow and would cause congestion on the new frontage road between San Pablo Dam Road and McBryde Avenue. The project would increase delays and travel time for vehicles using the San Pablo Dam Road exit to reach McBryde Avenue, due to the longer distance and time needed to travel through a signalized intersection.</td>
</tr>
<tr>
<td>Preference for Alternative 2 (the redesign of Amador Street/San Pablo Dam Road Intersection)</td>
<td>C-01-B, C-02-B, C-09-B, C-11-A, C-20-A, C-21-A</td>
<td>The changes at the San Pablo Dam Road interchange at Amador Street with the preferred alternative would improve conditions at that location. The preferred alternative separates the Amador Street/San Pablo Dam Road intersection away from the eastbound off- and on-ramps at San Pablo Dam Road and eliminates the confusion and delays that currently occur with the 5-legged intersection.</td>
</tr>
<tr>
<td>Bicycle Facilities on Amador Street</td>
<td>B-01-A, C-17-A, C-19-A, D-05-A</td>
<td>Amador Street should be widened to more safely accommodate bicyclists. The preferred alternative increases Amador Street traffic, which may further affect bicycle safety particularly in the westbound direction.</td>
</tr>
<tr>
<td>Traffic on Amador Street</td>
<td>B-01-B, C-01-A, C-04-A</td>
<td>Changes to the San Pablo Dam Road/Amador Street intersection with the preferred alternative would increase traffic volumes and speeds on Amador Street. The IS/EA identifies that the proposed improvements will increase intersection capacity.</td>
</tr>
<tr>
<td>Changes to Interstate 80 (I-80)/El Portal Drive Westbound Ramps</td>
<td>C-09-C, C-10-B, D-07-A</td>
<td>Improvements could be made to avoid the proposed relocation of the westbound ramps, such as extending the ramp lengths. El Portal Drive between the old and new interchanges should be widened to accommodate the greater volume of traffic that would use that roadway segment.</td>
</tr>
<tr>
<td>Landscaping</td>
<td>C-02-C, C-08-A, C-12-A</td>
<td>The project should improve the landscaping in the area and provide large trees that are in scale with the project, including trees along the frontage road and I-80 between Glenn Avenue and McBryde Avenue. Native plants should be used.</td>
</tr>
<tr>
<td>Comment Topic</td>
<td>Comments in Which Topic Was Raised</td>
<td>Summary of Comments</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Noise and Soundwalls</td>
<td>C-12-A, D-01-B, D-06-B</td>
<td>Soundwalls reflect sound and make noise travel farther. The noise level is already high on Ventura Street and east of I-80.</td>
</tr>
<tr>
<td>IS/EA Figure Issues</td>
<td>A-03-D, C-19-A</td>
<td>Figure 1-6 shows only six lanes on the San Pablo Dam Road overcrossing but the text says it will have seven; also, it shows no offset between the I-80 on-ramp and off-ramp.</td>
</tr>
<tr>
<td>Project Cost and Availability of Funding</td>
<td>C-13-A, C-14-A</td>
<td>The project would cost millions at a time when cities and individuals are financially constrained, and still not resolve traffic issues.</td>
</tr>
<tr>
<td>East bound on-ramp Bike Lane</td>
<td>B-01-C, D-05-B</td>
<td>The right-turn lanes on westbound San Pablo Dam Road to the eastbound I-80 on-ramp compromise bicyclist safety.</td>
</tr>
<tr>
<td>Public Notification</td>
<td>C-03-A, C-18-A</td>
<td>Inadequate public notice was given for both the August 19, 2009, meeting and the project itself, particularly in regard to the McBryde Avenue off-ramp closure.</td>
</tr>
</tbody>
</table>
Appendix J  Comments on the Initial Study/Environmental Assessment

Section A - State, Regional and Local Agencies

Comment A-01, California Regional Water Quality Control Board

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 654-2100 • Fax (510) 654-2150
http://www.waterboards.ca.gov/sanfranciscobay

September 4, 2009
CIWQS Place No.: 744278

Sent via electronic mail: No hard copy to follow

California Department of Transportation
Attn: Sheryl Garcia
Sheryl_M_Garcia@dot.ca.gov
P.O. Box 23660
Oakland, CA. 94623-0660

SUBJECT: Initial Study and Mitigated Negative Declaration for the Interstate 80/San Pablo Dam Road Interchange Project (SCH No. 2009/082009)

Dear Ms. Garcia:

Thank you for giving San Francisco Bay Regional Water Quality Control Board (Water Board) staff the opportunity to review the Initial Study and Mitigated Negative Declaration (Study) for the Interstate 80/San Pablo Dam Road Interchange (Project). The Project proposed by the California Department of Transportation (Department) involves increasing traffic capacity at the Interstate 80 (I-80) and San Pablo Dam Road interchange in Contra Costa County. The Project also includes other traffic capacity improvements along an approximately 1.5 mile length of the I-80.

We are providing the following comments to advise the Department of our concerns so they may be incorporated into the planning and design process at an early date.

Creek Improvement and Mitigation Opportunity
The Study notes the Department intends to abandon the existing El Portal Drive westbound on-ramp to I-80. San Pablo Creek currently crosses beneath the El Portal Drive on-ramp via a culvert. The Study indicates that the only plan for the abandoned on-ramp is pavement removal.

The Water Board recommends investigating opportunities to remove the culvert and restore San Pablo Creek at this location. Riparian restoration opportunities are difficult to locate in the Bay Area. The Water Board typically requires riparian mitigation for riparian impacts, and will not accept wetland mitigation for such impacts. As such, the Department should investigate and consider the daylighting and restoration of this creek stretch as a mitigation opportunity for another Department project.

California Environmental Protection Agency
Recycled Paper
We recommend contacting the Wildcat-San Pedro Creeks Watershed Council (copied on this letter) to determine the feasibility and benefit of restoring this segment of San Pablo Creek. An appropriate contact at the Council is Tim Jensen; his e-mail is tiens@pw.cccounty.us and phone is (925) 313-2390.

**Possible Post-Construction Stormwater Runoff Impacts**

Project implementation may result in a net increase of approximately 3.8 acres of impervious area.

Added impervious areas may result in alterations to existing hydrologic regimes, resulting in erosion and/or changes of sediment transport in receiving waters (hydromodification). The Water Board finds that this Project has a significant likelihood of causing hydromodification impacts to receiving waters. Therefore, the Department must characterize the extent Project implementation may result in such impacts, and propose mitigation for any significant impacts. Failure to properly characterize and mitigate potential hydromodification impacts may result in the Water Board issuing Waste Discharge Requirements (WDRs) for the Project (see “Waste Discharge Requirements,” below).

Additionally, should the Project require 401 water quality certification or WDRs from the Water Board, we will require the Department provide treatment of stormwater runoff from the Project’s impervious areas. Specifically, if the Project’s cumulative area of new and reconstructed impervious surfaces exceed one acre, the Department shall be required to treat stormwater runoff from a portion of impervious surface equivalent to the area of all new and redeveloped impervious surfaces. Should it prove infeasible to treat runoff within the Project limits, the Department shall identify alternate treatment in the same watershed(s) that will provide a water quality benefit equivalent to the foregone treatment.

**Waste Discharge Requirements**

The Study notes 404 and 401 permits will not be required because waters and wetlands of the United States will not be impacted. However, the Water Board may issue WDRs for the Project as a result of potential impacts to State jurisdictional waters at Station 40+70 and Wildcat Creek. If the Department incorporates mitigation measures for impacts to State waters into the Project design, the Water Board may not require issuance of WDRs. Contact Board staff in advance to determine if the Department’s proposed mitigation measures are sufficient to preclude the need for WDRs.

---

1 The Study notes a section of this unnamed drainage will be placed in a 36-inch culvert. Although this drainage is not a waters of the United States, it may be state waters and subject to regulation by the Water Board.
2 The Department is proposing a free-span bridge across Wildcat Creek with abutments above top-of-bank. The Water Board may take jurisdiction over the activity if the abutments are placed within the riparian zone of the creek.
If you have any questions, comments, or concerns, please contact me at (510) 622-2506, or via e-mail to BThompson@waterboards.ca.gov.

Sincerely,

Brendan Thompson
Environmental Specialist

cc (via e-mail): State Clearinghouse
Hardeep Takhar, Caltrans
Chris States, Caltrans
A.L. Riley, Water Board
Dale Bowyer, Water Board
Tim Jensen, Wildcat-San Pablo Creeks Watershed Council
Melissa Escaron, CDFG
Responses to Comment A-01

A - The San Pablo Creek culvert beneath Interstate 80 (I-80) will not be affected by the project. The pavement removal will take place on the ramp and no construction activity or impacts will extend into the creek or its banks. Because the project would have no impacts to San Pablo Creek, no mitigation is necessary.

To remove the culvert and restore the creek beneath the El Portal Drive on-ramp would require excavation of approximately 40 to 50 linear feet of existing culvert and the overlying soils. The width of the excavation would have to be wider than the existing culvert and match the width of the existing downstream creek, and creek banks would have to be excavated to match the existing slopes. Work would be required within the existing creek bed for equipment access. Excavation and construction access would affect existing riparian vegetation and require mitigation.

The USFWS has determined that creek embankment vegetation at Wildcat Creek is potential upland red-legged frog habitat, for which this project is providing mitigation. The vegetated banks of San Pablo Creek may also be potential red-legged frog upland habitat (see Section 2.18.2.2). Therefore, the net gain in creek restoration at San Pablo Creek would have to more than offset the additional effects to riparian vegetation from excavation and construction access.

The Department appreciates mitigation opportunities for other projects, however, our assessment at this location with regard to removal of the ramp embankment does not appear to provide a clear net benefit. To daylight the entire length of San Pablo Creek would require replacement of the culvert with a new bridge for both eastbound and westbound I-80, which is not considered practicable as part of this project.

B - The IS/EA acknowledges the potential need for a 401 Water Quality Certification and NPDES approval in Sections 1.6 and 2.9.4.2. These permits were identified based on potential water quality impacts from construction and addition of paved/impervious surfaces. Long-term and short-term best management practices, including conceptual BMPs, are identified in Section 2.9.4. The specific BMPs will be developed in final design and will include (as feasible) treatment BMPs categories such as biofiltration swales and strips, Austin vault sand filters, and detention devices.

C – As discussed in Section 2.15.3, the project design would avoid impacts to jurisdictional waters regulated by the U.S. Army Corps of Engineers under Section 404. This does not preclude the Section 401 compliance that is discussed in the previous response and identified in Section 2.9.4.2.

The project was modified to incorporate a measure to avoid or minimize impacts to Wildcat Creek. The proposed bridge was added following a presentation of the project to the Wildcat-San Pablo Creeks Council (August 2, 2007), when members of the council expressed a preference to avoid extension of the Wildcat Creek culvert.
The bridge structure adds considerable cost and other complications to the design of the project, and is considered a significant design measure incorporated into the project. Final design will define the limits of excavation and work at the top of the bank at Wildcat Creek, and riparian vegetation (if present within the work area) will be restored or replaced. The Wildcat Creek banks are dominated by non-native invasive species in this area, and in addition to the avoidance measures already included in the project, the creek banks within the State right-of-way will be restored with appropriate native riparian species. This requirement has been added to the other biology-related mitigation in Section 2.18.4. The Department will ultimately apply to Contra Costa County and/or the RWQCB for a permit for the project following completion of the NEPA and CEQA review phase. The measures outlined above and in Section 2.9.4 will be developed in detail during final design and pre-permit consultation in coordination with Contra Costa County and RWQCB.
Comment A-02, Contra Costa County Department of Conservation & Development

CONTRA COSTA COUNTY
DEPARTMENT OF CONSERVATION & DEVELOPMENT
651 Pine Street, N. Wing - 4th Floor
Martinez, CA 94553
Telephone: 335-1220 Fax: 335-1300

TO: Sheryl M. Garcia, Associate Environmental Planner
Department of Transportation

FROM: By: Jamar Stamps, Planner

DATE: September 1, 2009

SUBJECT: Comments on Draft IS/EA for I-80/San Pablo Dam Road Interchange Project.

Thank you for providing the Department of Conservation and Development, Contra Costa County an opportunity to comment on the above captioned project. After reviewing the environmental document, the Department would like to provide the following comments.

Section 2.5 Traffic and Transportation: The current City limit boundaries follow the road right-of-way for El Portal Road up to the Caltrans right-of-way at the El Portal interchange. All land west of El Portal is unincorporated. If the proposed project will realign El Portal Road to the west, the City boundaries will need to be changed to accommodate the new location of the road right-of-way. The lead agency should determine if a boundary adjustment for the City will be needed and notify the City accordingly.

Please also indicate any effect on the level of service (LOS) ratings for the I-80 segments that may occur if any changes to the traffic counts are necessary.

Section 2.6 Visual/Aesthetics: Please indicate how bicycle and pedestrian facilities would be impacted and/or improved along the El Portal Dr. under crossing and other effected segments of El Portal Dr. Figure 2.6-6 seems to suggest that Rollingwood Drive would have pedestrian/bike access to El Portal Dr. blocked by a fence. A pedestrian path exists at this location. The City of San Pablo proposes to implement streetscape improvements along this section of El Portal that will include features for pedestrian and bicycle travel. How will pedestrian/bike movements be accommodated through the El Portal interchange area?
Appendix J  Comments on the Initial Study/Environmental Assessment

If you have any questions or concerns regarding the above comments, please do not hesitate to contact me at the above telephone number, or e-mail me at jstam@cd.cccounty.us. Again, thank you for the opportunity to comment on the Draft IS/EA. The County looks forward to being involved in the review of final documents.

cc:  S. Goetz, DCD
    P. Roche, DCD
    M. Carlson, PWD

Responses to Comment A-02

A - This project does not propose to change the city boundaries. The Department has proposed to realign El Portal Drive, which will involve the acquisition of some private parcels and portions of parcels. The new El Portal Drive right-of-way would be turned over to the appropriate entity in which its jurisdiction currently resides. Contra Costa Transportation Authority (CCTA) will coordinate this effort with the City of San Pablo and the County during the design and right-of-way phase of the project.

B – Some of the ramps within the study area show a decrease in future peak hour traffic volumes compared to existing conditions, including the San Pablo Dam Road off-ramp, as noted in this comment. Under Future Year Conditions, traffic along the study corridor is projected to increase, which will increase congestion and travel times along the study corridor. As a result, not all drivers who want to travel during the peak hour will be able to reach their destination during the same hour. When traffic demand exceeds the capacity of the freeway, the duration of the peak congested conditions will typically extend to additional hours. Relatively long peak period conditions are common on Interstate-80 corridor. Based on the projected peak period traffic demands under future conditions, the traffic study projected that the demand will exceed the available capacity by 16 percent (approximately 1,500 vehicles per hour). The study area beginning at El Portal Drive is projected to be a bottleneck segment and will not serve all of the traffic demand. Consequently, a projected 1,500 vehicles per hour during the peak hour will not be able to enter into the study area and will be delayed in a queue. The queue results in approximately a 16 percent reduction in the traffic volume during the peak hour at some of the off-ramps due to the capacity constraints. For this reason, some ramps show a volume reduction, as noted in this comment.

C - The Rollingwood Drive path referred to in this comment is on the east side of one of the two homes on Rollingwood Drive that will be acquired for the project (the two homes have backyards along El Portal Drive). The realignment of El Portal Drive will affect one end of this path, but the affected portion will be replaced with the project. The project will maintain the existing access provided by the path. Connecting the pedestrian/bicycle facilities through the El Portal Drive Interchange is not part of the project scope.
Comment A-03, Contra Costa County Public Works Department

September 2, 2009

Sheryl M. Garcia
Associate Environmental Planner
California Department of Transportation
Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94623-0660

RE: Comments on IS/EA (MND) SCH #2009082009

Dear Ms. Garcia:

Thank you for the opportunity to comment on the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment (IS/EA) for the Interstate 80 (I-80)/San Pablo Dam Road Interchange Project (SCH #2009082009).

The Contra Costa County Flood Control and Water Conservation District has the following comments on this project:

A 1. Caltrans must obtain a Drainage Permit from Contra Costa County for construction activities that involve drainage facilities and watercourses located in the unincorporated County areas. The County’s authority to require the Drainage Permit is stated in Section 1010-2.006 of the County’s Title 10 Ordinance. A copy of page 479 of Title 10 is attached.

B 2. San Pablo Creek on the west side of I-80, between El Portal Drive and Saint Joseph Cemetery, may not be adequate to accept additional runoff coming from the roadway improvements in this area. We recommend that Caltrans consult with the City of San Pablo to verify the adequacy of San Pablo Creek and to propose mitigation measures for any adverse drainage impacts of the project to the watercourse.

C 3. Any proposed bridge structures at Wildcat and San Pablo Creeks should provide a minimum of 2 ft. of freeboard above the water surface elevation for the 100-yr design storm. The runoff calculations should be based on the Contra Costa County’s hydrology method.

The Traffic Engineering Section of the Contra Costa County Public Works Department has the following comments on this project:

D 1. On page 1-18, Section 1.3.1 “Project Alternatives” it states that the Lanes Added Alternative will provide for a new seven-lane bridge as shown in Figure 1-6. Figure 1-6 shows only six lanes.

2. On page 1-20, “Ramp Metering Systems,” the ramp metering system being proposed for
Sheryl M. Garcia, Associate Environmental Planner  
September 2, 2009

Page 2 of 3

EB and WB San Pablo Dam Road and WB El Portal on-ramps should be compatible and integrated with the adaptive ramp metering system proposed for the I-80 Integrated Corridor Mobility (ICM) Project. The adaptive ramps meters are expected to be fully integrated with I-80 and local arterials by year 2012.

3. On page 2-35, the last paragraph in Section 2.5.2.1, Traffic Operations Analysis Study Area and Years” has existing conditions for year 2005 and future projections “normally” for a 20-year horizon. But it goes on to state that future conditions for this study is year 2035. Are they projecting to a 20-year or 30-year horizon?

4. Section 2.20.2.1, “Private Development and Nontransportation Projects” did not include the Scotts Valley Casino Project at Richmond Parkway and Parr Blvd.

5. Section 2.20.2.2, “Transportation Projects” did not include the North Richmond Truck Route Project. Specific information on this project can be obtained from the County’s Redevelopment Agency.

The Transportation Engineering Division of the Contra Costa County Public Works Department has the following comments on this project:

On page vi, Contra Costa County should be listed as one of the agencies requiring authorization/notification for temporary and/or permanent encroachment during final project design because of the realignment of a segment of El Portal Road that is within unincorporated County road right-of-way.

On page 2-65, Section 2.5.3.5, “Construction Impacts” should address the mitigation of potential damage to roads along construction haul routes. A pre-construction survey of pavement condition along haul routes shall be performed, and damaged pavement along haul routes shall be repaired and restored to pre-construction conditions at the project sponsor’s cost at the end of construction activities.

Layout L-6 indicates the relocation of an 8 ft masonry wall that was owned and maintained by the City of San Pablo. Who will own and maintain the relocated wall (SW4) along the realigned segment of El Portal Drive?

Section F.3, “Draft Form: Summary of Required Permits and Environmental Commitments—PS&E Phase,” should address the mitigation of potential damage to roads along construction haul routes. A pre-construction survey of pavement condition along haul routes shall be performed, and damaged pavement along haul routes shall be repaired and restored to pre-construction conditions at the project sponsor’s cost at the end of construction activities.

Sincerely,

Mary Hall

Rich Shimano
Civil Engineer
Transportation Engineering Division

RS:
G:\transeng\EIR\Caltrans\I-80 - SPDR Interchange\tr-2009-09-02 - Caltrans-I-80-SPDR - IS-EA comments.doc
Responses to Comment A-03

A – Final determination of the need for a drainage permit will be made during the final design phase of the project. Table 1-5 and the Summary have been revised to include this permit.

B – Because I-80 is banked in this area (e.g., the freeway cross section inclines towards the centerline, referred to sometimes as “superelevation”), the additional impervious area from the proposed auxiliary lane will not increase runoff to San Pablo Creek; rather, the runoff will flow into a Caltrans storm drain system on the east side of I-80. In addition, the pavement of the existing I-80 westbound on-ramp from El Portal Drive will be removed, which will decrease the impervious area near the creek. The project is not expected to increase runoff to San Pablo Creek.

C – The bridge structure at Wildcat Creek was designed with at least 10 feet of freeboard above the projected 100-year flood elevation. Calculations were done based on Contra Costa County’s hydrology method.

D – Figures 1-6 and 1-7 have been updated in the IS/EA.

E – Final design of this project will comply with Caltrans requirements, including integration with all Integrated Corridor Mobility features in the project area.

F - Traffic planning was performed for a 30-year horizon, with projections to the year 2035. The text of Section 2.5.2.1 has been revised accordingly. 20 year design life for the project is projected from the anticipated completion of construction in year 2015.

G – This project was added to the list of projects in Section 2.20.2.1.

H - This project was added to the list of projects in Section 2.20.2.1.

I – Table 1-5 and the Summary have been revised to include the potential need for an encroachment permit from Contra Costa County for work on El Portal Drive.

J – Contractor haul routes have not been identified at this stage of project development. It is anticipated that I-80 will be one of the primary haul routes. Maintenance of the freeway and ramps is the Department’s responsibility. For local roads, this request will be addressed through a construction contractor requirement, or specification, for pre- and post-construction evaluations of the haul routes. This has been added to Section 2.5.3.5 and Appendix F.3.

K – The City of San Pablo will own and maintain the relocated soundwall (SW4) along the north side of El Portal Drive.

L - See response to Comment “J” above.
Comment A-04, East Bay Regional Park District

September 3, 2009

Sheryl M. Garcia
Department of Transportation
Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94623-0660

RE: Wildcat Creek Regional Trail
I-80/San Pablo Dam Road Interchange Project

Dear Ms. Garcia:

East Bay Regional Park District “EBRPD” appreciates the opportunity to provide comments on the Initial Study and Proposed Mitigated Negative Declaration Environmental Assessment for the Interstate 80/San Pablo Dam Road Interchange Project.

EBRPD operates the Wildcat Creek Regional Trail, which is proposed to extend from Wildcat Marsh on the bay shoreline through Wildcat Canyon Regional Park. Currently, 6.64 miles of the trail have been completed. The trail is included in a number of adopted planning documents, including EBRPD’s 2007 update to its Master Plan Map, the Contra Costa Countywide Bicycle and Pedestrian Plan and the MTC’s Regional Bicycle Plan for the San Francisco Bay Area, 2009 Update. The existing pedestrian overcrossing of I-80 located between San Pablo Dam Road and McBryde Avenue is a critical link in the Wildcat Creek Regional Trail.

Therefore, on page 2-9, paragraph 2.1.3.2, “Parks and Recreational Facilities,” the statement that there are no formal trails or recreational facilities within or near the project is incorrect. On page 2-169, reference is also made to the Wildcat Creek Trail / Davis Park to 23rd St. project. The IS/MND and EIS should include a section 4(f) analysis of the impacts of the project on the Wildcat Creek Regional Trail. EBRPD should be consulted in the design of the replacement pedestrian overcrossing, and it should be designed to accommodate bicycle traffic as well. As mitigation for the loss of use of the overcrossing during construction of the project, the project should also include the extension of the trail from the overcrossing to the nearby open space east of Riverside School.

Thank you for considering our comments on this project. Please feel free to call if you have any questions.

Yours truly,

Jim Townsend
Trails Development Program Manager

cc: Brad Olson, EBRPD Environmental Programs Manager
Adele Ho, City of San Pablo
Response to Comment A-04

A - This comment refers to Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) requires all Federal Department of Transportation agencies to not approve any project that requires the use of publicly owned land from a public park, recreation area, or historic site of national, state, or local significance unless there is no feasible or prudent alternative to avoid the use, and the project includes all possible measures to minimize harm to the resource. Incidental, secondary, occasional or dispersed park, recreational or refuge activities do not constitute a major purpose with regard to determining that a resource is protected by Section 4(f). Officials having jurisdiction of the lands for purposes of 4(f) are the officials of the agency owning or administering the land.

Caltrans did not evaluate the existing pedestrian overcrossing as a Section 4(f) property because it did not meet the criteria or definition based on its ownership and primary use. The pedestrian overcrossing was constructed by Caltrans as Bridge No. 28-159 when the freeway was widened in 1994. It replaced an undercrossing that was constructed in the 1950s. Caltrans has had a maintenance agreement for the overcrossing with the City of San Pablo since 1957. The facility is owned by Caltrans, and maintained by the City (although major structural maintenance issues are handled by Caltrans).

The primary use of the facility is a freeway overcrossing serving pedestrians and bicyclists. A primary user group is students from the Riverside Elementary School, as described in Section 1.3.1.1. Approximately half of the students use the overcrossing, according to school officials. The overcrossing aligns with one of the school’s entrances/parking lots, and a crosswalk provides a direct connection across Amador Street from the overcrossing to the school. The reason for complete reconstruction of the overcrossing is to extend the facility across Amador Street so children do not have to cross this sometimes busy road. Neither the overcrossing nor its approaches have been signed as a trail. While users of the Wildcat Canyon Regional Park can utilize this crossing, and it is a logical link over the freeway between the San Pablo Dam Road Interchange and the McBryde Avenue Interchange, the original purpose of the existing overcrossing and its current primary use is not recreational, but as a transportation facility.

The proposed replacement pedestrian overcrossing at Riverside Elementary School will be located north of the existing structure. It is anticipated that the new overcrossing will be built and opened to use before demolition of the existing structure, thereby providing uninterrupted access across the freeway for pedestrians and bicyclists. This avoids the temporary loss of pedestrian and bicycle access, and avoids the need for the mitigation requested in this comment. This information has been added to the IS/EA in Section 1.3.1.1 (Construction Staging).
Comment A-05, U.S. Army Corps of Engineers

"Meier, Andrea J
SPN"
<Andrea.J.Meier@usace.army.mil> To
<sheryl_m_garcia@dot.ca.gov> cc

10/14/2009 09:00 AM
Subject
I-80/San Pablo Road Interchange Project

Dear Ms. Garcia -

I had an opportunity to review the I-80/San Pablo Dam Road Interchange Project Initial Study/EA and I had comments about the projects impacts to waters of the U.S. As it is designed, the project would avoid impacts to San Pablo Creek and Wildcat Creek. However, the document later discloses that there is a third drainage (a potentially jurisdictional feature) in the project area that may be impacted at Station 40+70 (see page 2-155). The culvert on the drainage at Sta. 40+70 would need to be extended to accommodate the freeway widening. I was unable to locate the drainage or culvert at Station 40+70 on the layout drawings and I wanted to know if you had more information on the work proposed at the unnamed drainage.

I left a voicemail for Allyn Amek earlier and then realized you were the FOC I should contact for the project. He can ignore that voicemail.

Thank you for the opportunity to comment.

Sincerely,

Andrea Meier, Sr. Regulatory Project Manager
San Francisco District, U.S. Army Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, California 94103-1398
F (415) 503-6798
F (415) 503-6690
andrea.j.meier@usace.army.mil
Response to Comment A-05

A – This comment refers to an existing 36-inch diameter storm drain culvert that will be extended approximately 15 feet to accommodate the proposed improvements to the eastbound I-80 on-ramp at approximately Station 40+70. This culvert is a reinforced concrete pipe (RCP) that conveys storm drainage from the east side of the freeway to the west. On the east side of the freeway, the 36-inch culvert receives drainage from several other subsurface RCP drainages. This 36-inch subsurface drainage will be extended to the east, and an existing concrete headwall will be reconstructed, to accommodate widening at the eastbound I-80/San Pablo Dam Road Interchange on-ramp. An 18 inch subsurface RCP that drains into the 36-inch pipe and headwall will also be shifted to accommodate the extension of the 36-inch culvert and reconstruction of the headwall. The project is essentially moving the concrete headwall outward to allow for widening at the edge of the eastbound on-ramp, and extension of the 36 inch culvert to correspond with the new headwall location. The existing drainages are subsurface, in RCP, and will remain in RCP after completion of the project.
Section B - Organizations and Municipalities

Comment B-01, East Bay Bicycle Coalition

EAST BAY BICYCLE COALITION
POST OFFICE BOX 1736 OAKLAND, CALIFORNIA 94604
FRUITVALE VILLAGE, 3301 EAST 12th ST, SUITE 143
www.ebbc.org (510) 533-RIDE

September 8, 2009

Sheryl M. Garcia, Associate Environmental Planner
Department of Transportation
Office of Environmental Analysis
PO Box 23660
Oakland, CA 94623-0660

Re: Comments on I-80/San Pablo Dam Road Interchange Project Initial Study/Environmental Assessment (IS/EA)

Dear Ms Garcia:

We appreciate the opportunity to comment on the I-80/San Pablo Dam Road Interchange Project IS/EAP. Since 1972 the East Bay Bicycle Coalition has worked to improve access and safety for bicyclists throughout the 33 cities in both Alameda and Contra Costa Counties. Access to transit (currently our Safe Routes to Transit Program) and planning for bikeways in each jurisdiction have been among our primary accomplishments.

The established I-80 Bikeway follows San Pablo Dam Rd and Amador St within the project limits. As well, this route is included in the Countywide Bicycle Pedestrian Plan (CBPP 2003 & 2009 Administrative Final Draft).

Also within or immediately adjacent to the project limits, the CBPP includes El Portal Dr as an unbuilt, yet important bikeway that serves Contra Costa College. San Pablo Avenue is also in the CBPP and has bikelanes as well as unbuilt bikeway segments.

Overall, EBBC supports Alternative-2 with our suggested modifications. The existing narrow overcrossing fails to offer sufficient room for bicyclists to safely share the road with motorists when crossing I-80. An even greater concern is the lack of access to Amador St from southbound (SB) San Pablo Dam Road. This situation encourages bicyclists to make a dangerous “advance cross-over maneuver” in order to turn left on Amador St and continue on the I-80 bikeway toward El Cerrito del Norte BART. We have long promoted improving these conditions.

We suggest a few design modifications to the project to overcome significant hazards to bicyclists in the existing project design and to mitigate the significant traffic volume increase caused by the project on Amador St:

1) The current cross-section configuration of the Amador St bikeway has not been studied. Amador St does not allow for bicyclists traveling SB to safely share the road with motorists as the travel lane is too narrow. This has not presented a problem for bicyclists in the past because motorists could not turn left onto Amador St from San Pablo Dam

TO PROMOTE BICYCLING AS AN EVERYDAY MEANS OF TRANSPORTATION AND RECREATION
Appendix J  Comments on the Initial Study/Environmental Assessment

Road. A significant increase in traffic will accompany the preferred Alternative-2. The road lane configuration must be changed to provide bicyclists with either a full Class II bike lane or a wide shoulder to safely share the road with the augmented traffic. The current Class III designation will not offer adequate safety with the increased traffic volume.

2) Speeding traffic on SB Amador St will also be an issue calling for design mitigation to protect bicyclists and children from Riverside Elementary school. The lack of side streets between San Pablo Dam Rd and McBryde Ave encourages speeding on this frontage road.

3) Bikeway design on SB San Pablo Dam Rd through the NB I-80 on-ramp needs careful consideration. The proposed dual right-turn lanes currently proposed in the preferred Alternative-2 would compromise the safety of bicyclists traveling through this intersection. A continuous bikeway needs to be included in the final design.

A finally, the proposed Riverside Ave bicycle/pedestrian overcrossing must include safety/security lighting.

Again, we appreciate the opportunity to comment on this project during the Initial Study phase. Please feel free to contact us for clarifications. We look forward to reviewing the suggested design changes and working together to promote this project.

Sincerely,

Robert Raburn, PhD
Executive Director
Responses to Comment B-01

A - The project will provide Class II bicycle facilities on the portions of Amador Street that will be realigned as part of the San Pablo Dam Road Interchange replacement. These areas are shown on Layout Sheets L-3 for Preferred Alternative (IS/EA Appendix A). The rest of Amador Street within the project limits (from approximately north Alpine Road to McBryde Avenue) is not wide enough to restripe for standard 4-foot-wide bike lanes. On the west side of Amador Street, there is a soundwall, with landscaping, underground utilities, and informal footpaths between the curb and the soundwall. On the east side of Amador Street, there are utility poles adjacent to the curb, and a sidewalk. On-street parking is allowed in the eastbound direction of Amador Street, which is residential (and the Riverside Elementary School). Providing full bike lanes would require some combination of either moving the utilities, landscaping, on-street parking, or potentially relocating the soundwall on the west side of Amador Street or acquisition of portions of parcels on the east side of Amador Street. Widening for improved bike passage for less than the standard bike lane width (4 feet) may be achievable, but is not standard practice, and would require at a minimum reconstruction of drainage facilities and utility relocations. These changes have not been proposed as part of this project along the portion of Amador Street between Alpine Road and McBryde Avenue. Adding “sharrow” pavement markings is possible, which are “Shared Roadway Markings” for shared use of the lanes. The markings are intended to alert motorists of the shared use of the roadway by bicyclists. (Sharrow bike routes refer to a chevron-like design painted on top of a bicycle marking on the side of a roadway to mark a bicycle route, where there is inadequate room to stripe a full bike lane). To further improve bicyclist safety, the project will consider installing a “Radar Speed Display Sign” to encourage vehicles to slow down. Local road improvements such as these would be the responsibility of the City of San Pablo, and would require their approval and their funding.

B - Additional traffic controls on Amador Street are not within the Department’s jurisdiction but can be considered independent of this project by the City of San Pablo. Design measures to control or reduce speeds on Amador Street could include stop or yield signs, radar speed display signs or traffic calming measures. These measures would require additional consideration by the City of San Pablo, with local and neighborhood input and support. Amador Street is a designated emergency response route, which limits the application of certain traffic calming measures.

C - The project design will be revised to provide a bike lane on the inside of the right-turn lane to the eastbound I-80 on-ramp from San Pablo Dam Road. This change was incorporated into the IS/EA in Section 1.3.1.1.

D – Lighting will be included on the pedestrian/bicycle overcrossing structure. The type of lighting will be determined during final design.
Comment B-02, East Bay Municipal Utility District

September 4, 2009

Sheryl M. Garcia, Associate Environmental Planner
Department of Transportation
Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94623-0660

Re: Mitigated Negative Declaration/Environmental Assessment – Interstate 80/San Pablo Dam Road Interchange Project, Richmond

Dear Ms. Garcia:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Mitigated Negative Declaration/Environmental Assessment for Interstate 80/San Pablo Dam Road Interchange Project located in the City of Richmond. EBMUD has the following comments:

GENERAL

EBMUD owns and operates numerous underground water mains located within the boundaries of the proposed project. These pipelines provide continuous service to EBMUD customers in the area and the integrity of these pipelines needs to be maintained at all times. Copies of EBMUD’s water distribution maps showing EBMUD’s water facilities near the project area are enclosed to this response for Caltrans reference.

Any proposed construction activity in the street and/or EBMUD right-of-ways would be subject to the terms and conditions determined by EBMUD including relocation of the water mains and/or right-of-ways, at the project sponsor’s expense. A copy of EBMUD’s Engineering Standard Practice relating to water main design criteria is also enclosed to this response for reference.

Water Lines

On page 1-25 of the Initial Study/Environmental Assessment, under Drainage/Utilities, it states that to meet freeway standards, some existing utilities within the project’s proposed right-of-way would need to be relocated, including a 36-inch water line. In
Sheryl M. Garcia, Associate Environmental Planner
September 4, 2009
Page 2

addition to this pipeline, a 12-inch water main that parallels the 36-inch water line near
the intersection of Riverside Avenue and Amador Street, and a 54-inch transmission
main along El Portal Drive may also need to be relocated.

Under Section 2.4, Utilities and Emergency Services and Section 3.2, Consultation
and Coordination with Public Agencies, a more detailed discussion should be
included on the impacts of the proposed project to EBMUD’s existing 54-inch
transmission main in El Portal Drive and the need for coordination with EBMUD
during design and construction. The existing 54-inch transmission main is the
primary connection between the Sobrante Water Treatment Plant and customers in
the Central Pressure Zone. Removing it from service for any length of time will
cause vast regions of Richmond, San Pablo, Albany, and Berkeley to lose water
service.

The following statement should be added to page 2-31 of the Mitigated Negative
Declaration to define the preliminary scope of water main relocation:

“Depending on the selected alternative reconfiguration, the project may require
relocation of an EBMUD 54-inch transmission main along El Portal Drive (on the
order of 1,000 lineal feet). The relocation of this large diameter pipeline will require
close coordination with the project’s overall construction staging, detours, and traffic
control plan.”

The statement below should be added to page 2-32 of the Mitigated Negative
Declaration:

“The schedule for the Interstate 80/San Pablo Dam Road Interchange Improvements
Project should allow sufficient time for the relocation of all utilities. In particular, the
relocation of EBMUD’s 54-inch transmission main would take approximately 18
months or longer to complete (exact schedule to be determined) after final
improvement plans for the project is completed. EBMUD requires this period of time
to prepare an outage plan, detailed design drawings and specifications, as well as to
complete the actual relocation work prior to start of the project. Due to outage
restrictions, the relocated pipeline must be in-service prior to taking the existing 54-
inch transmission main out of service. The crossover from the existing 54-inch
transmission main to the relocated pipeline may only take place during the winter
months. Caltrans’ overall project schedule should accommodate the outage
restrictions.”

EBMUD suggests adding the following statement to page 3-2 of the Mitigated Negative
Declaration:
Response to Comment B-02

A - The requested changes were incorporated into Sections 1.3.1.1 (under Drainage/Utilities), 2.4.2, 2.4.3, and 3.2 of the IS/EA.
Section C - Individuals

Comment C-01 - Agawa, Elizabeth

Ms. Garcia:

Regarding proposed 2012 changes to San Pablo Dam Road area of Hwy 80, wouldn't a more prudent and effective method of change be for the use of traffic signals at Solano Ave exit and at intersection of Amador and Solano? Currently there are stop signs, which effectively backs up the traffic rather than facilitating it. Also, there is a daycare and a school on Amador between Solano and McBryde ramps that snarls traffic even more.

A re-organization of San Pablo Dam Road to Amador intersection would help traffic flow more smoothly. As vehicles head into the McBryde onramp to 80 from Amador, the traffic signal wait is FOUR minutes. I have seen many many many near-misses and a few crashes in that intersection as impatient drivers run the lights in all directions or become confused by the oddness of the signal locations relative to the intersection.

Since there is likely no funding for such projects as proposed for a freeway overcrossing, etc. why not look at more simple methods as I have suggested? I have lived in the Richmond Heights area since 1999 and commute on 80 to Hilltop area for work every day. I know the streets well and the traffic patterns. We don't necessarily need something as grand as a 7 lane overcrossing - just some smarter traffic planning.

Thanks!

Elizabeth Agawa
Appendix J  Comments on the Initial Study/Environmental Assessment

Responses to Comment C-01

A - This project is focused specifically on improving the I-80/San Pablo Dam Road Interchange. Section 1.2 of the IS/EA describes the purpose and need of the project and how the project limits were determined. Amador Street between McBryde Avenue and Solano Avenue is outside of the project limits, so no improvements are planned in that area. The need for traffic signals on Solano Avenue and Amador Street would be determined by the City of Richmond independent of this project. Traffic signals at those locations might improve traffic at Solano Avenue and Amador Street, but would not meet the project’s purpose of addressing congestion at the I-80/San Pablo Dam Road interchange, or the need to improve weaving conflicts for cars entering or exiting I-80.

B – This comment refers to the existing 5-leg intersection between San Pablo Dam Road, Amador Street, and the eastbound I-80 ramps. The preferred alternative, the Tight Diamond Alternative, will relocate the intersections of Amador Street and San Pablo Dam Road with the I-80 ramps and create over 400 feet of space between them, which will reduce or remove the current congestion, safety, and driver confusion issues.

C – Thank you for your comment.
Comment C-02 - Bittner, Liz

Liz Bittner
<clizbittner@gmail.com>  To
09/08/2009 09:26 AM  Sheryl_m_garcia@dot.ca.gov  cc

Comment Re I-80/San Pablo Dam Road Interchange Project

I attended a portion of the Public Meeting that was held on Wednesday, August 19, for the I-80/San Pablo Dam Road Interchange Project. I am looking forward to seeing the interchange improved, not only because the traffic congestion at the interchange is horrible, but I am truly looking forward to the improvements in regards to pedestrian and bicycle travel. As traffic increases and air quality worsens, it is becoming very important to provide people with options for travel alternatives to the car, and if people feel safe and comfortable, they will walk and bike the area. I feel that any new road construction or reconstruction should include options for biking and walking. Each time I drive through the intersection of Amador and San Pablo Dam Road, I see at least one person biking or walking. Recently, I saw a woman walking with her children from Riverside School along the China Slides area, as well as two people biking through the area. I can only imagine that with the area becoming more comfortable and safe for walking and biking, we will see more people doing just that.

The area of the project that I am primarily interested in is the I-80 overpass, the Amador St./San Pablo Dam Road intersection, and associated freeway on-ramps and off-ramps. I favor Alternative 2, the "Tight Diamond" which allows a left turn on Amador Street. Also, I strongly favor the bike lane. I currently travel that overpass on my bike, and it is a frightening endeavor! San Pablo Dam Road is a popular route for bicyclists heading to scenic areas such as Nicasio Creek Road, Bear Creek Road, and other routes in the area. It seems significant to develop that bike route that will allow people to travel from more densely populated areas to those popular bicycling routes.

I also see the project as an opportunity to improve the aesthetics of the area through landscaping. During the meeting, I heard at least one other person comment that he would like to see more trees. I would love to see trees that are in scale with the project, which means large trees! I realize that growing a large tree is a time investment, but I feel that small trees, such as the evergreen pear, has such a small effect on the overall landscape. It is important to provide a canopy over the roadway to reduce radiant heat from the asphalt paving, and to have a true aesthetic impact.

Thank you for considering my comments, and I look forward to the improvements for pedestrian and bicycle travel, as well as improvements to the landscape, along the I-80/San Pablo Dam Road Corridor.

Sincerely,
Liz Bittner
3215 Nectarine Avenue
Richmond, Ca 94804
Responses to Comment C-02

A - All newly constructed facilities will meet current standards for bicycle and pedestrian use. The project will replace and lengthen the pedestrian overcrossing over I-80, provide wider sidewalks and 5-foot-wide shoulders on the San Pablo Dam Road overcrossing, and include striped shoulders and bike lanes. Bike and pedestrian facilities that will be constructed with the project are described in Section 1.3.1.1 of the IS/EA.

B - The commenter’s preference for Alternative 2 is noted. The project will provide Class II (striped) bicycle lanes on both sides of San Pablo Dam Road. See Section 1.3.1.1 of the IS/EA for more information.

C - Landscaping will be installed after project construction is completed. Native plants will be considered, as feasible. Section 2.6.4 of the IS/EA describes some of the landscaping measures that will be further developed during final project design. Tree planting will be accommodated where possible, and tall trees will be considered as space permits.
Comment C-03 - Brandau, Albert

I-80/San Pablo Dam Road Interchange Project
Draft Initial Study/Environmental Assessment (Draft IS/EA)
Public Meeting
Wednesday, August 19, 2009

COMMENT FORM

Comments must be received no later than 5:00 p.m. September 8, 2009.
Comment forms may be deposited in the comment box tonight or mailed/forwarded to:

California Department of Transportation
Attention: Sheryl M. Garcia, Associate Environmental Planner
P.O. Box 23660
Oakland, CA 94623-0660
Email: Sheryl.m.garcia@dot.ca.gov

Name: Albert W. Brandau  Date: 9-3-09

Affiliation (if applicable): ____________________________________________

Address: 5854 Calavera Dr, Richmond, CA 94805

Comment/Question: Attended meeting on 8-19-09 and heard 20 min presentation + comments that followed. First time I had any information on what was being considered. I ask us to respond as quickly (4-8-09) is unreasonable. More info with questions + answers is needed to inform the public about alternative 3) + 4). We who live in east Richmond Heights (1/2 mile from the interchange) will be adversely affected as we use.

Please continue on back if necessary.

For more information, contact Chris Colwick, Public Outreach Liaison, at (415) 227-1100 x131; Allyn Amsk, Caltrans Public Information Officer, at (510) 286-5445; or Adele Ho, City of San Pablo Public Works Director, at (510) 215-3068; or visit www.ccta.net/EN/main/state/162/166/sanpablointerchange.html.
Appendix J Comments on the Initial Study/Environmental Assessment

- (continued) -

the current on & off ramps on a daily basis for all neutrals. Why the rush for approval? With all our budget problems in our state now, why do we need to spend money we don't have. Casino San Pablo is in the worst location possible. Everyone knew from the beginning this would happen & now our neighbors are asked to step aside while $114,000,000 be spent to reduce traffic in our area that they helped create. We have lived here for decades in peace & harmony with everyone. Perhaps we would be better served if they relocated the Casino to a better location. It would cost us tax payers a lot less than the above cost improvements? I don't think so. Needed clarity. Please don't rush to judgement.

Please read enclosed article in latimes 9/3/09.
Casino's fighting over their turf.

Respectfully,

[Signature]

Thank you for your participation.
Casino would devastate city, official says

A building resort at Point Molate would foster urban decay across San Pablo, city manager asserts.

"Building a casino-resort at Point Molate would be a disaster," San Pablo City Manager Ellen Martis said in an interview. "It would lead to a decline in the city's economic prospects and cause long-term damage to our quality of life."
Responses to Comment C-03

A – As described in detail in Chapter 3, public coordination for the proposed project began in 2003. In addition to the August 19, 2009, public meeting cited in the comment, public meetings on the project were held in July 2003, November and December 2007, July 2008 (at a Richmond City Council meeting), and October 2008. All were announced using a variety of methods, including direct mailing of notices to the surrounding neighborhoods, advertisements in newspapers, and announcements on agency websites. Alternatives 1 and 2 were presented in the 2007, 2008, and 2009 meetings. The planning for this project was advanced throughout this time period to allow opportunity to address and resolve engineering, environmental, and community issues. The IS/EA was issued for public review on August 5, 2009, and public comments were accepted through September 8, 2009. This public review period, which was more than 30 days, complies with state and federal requirements for an IS/EA.

B - Casino San Pablo is only one of the many land uses that generate traffic within and near the project area. The I-80/San Pablo Dam Road Interchange is affected by local and regional traffic, and the existing design will be increasingly unable to accommodate future growth in traffic regardless of plans for the casino. Future expansion, if any, of the casino will require separate review by the City of San Pablo. The newspaper article referred to in this comment describes the City of San Pablo’s City Council reaction to the proposed Pt. Molate Casino, partially in the context of the existing San Pablo Casino.
Comment C-04 - Chavez, Michael

I-80/San Pablo Dam Road Interchange Project
Draft Initial Study/Environmental Assessment (Draft IS/EA)
Public Meeting
Wednesday, August 19, 2009

COMMENT FORM

Comments must be received no later than 5:00 p.m. September 8, 2009.

Comment forms may be deposited in the comment box tonight or mailed/mailed to:

California Department of Transportation
Attention: Sheryl M. Garcia, Associate Environmental Planner
P.O. Box 23660
Oakland, CA 94623-0660
Email: Sheryl_m_garcia@dot.ca.gov

Name: MICHAEL A. CHAVEZ                Date: 09/03/09

Affiliation (if applicable):

Address: 52904#7 SAN PABLO DAM ROAD, R坎TEXTE, CA 94803

Comment/Question: I ATTENDED THE PUBLIC MEETING ON 08/19/09 WITH
A OPEN MIND BECAUSE I'VE LIVED HERE ALL OF MY LIFE. MY PARENTS
LIVE IN THE IMMEDIATE AREA TO BE AFFECTED BY THIS PROJECT. SAD
INTERCHANGE IMPROVEMENTS ARE NOT IMPROVEMENTS TO THE PEOPLE WHO LIVE
ON THE EAST SIDE OF AMADOR. THESE IMPROVEMENTS ONLY ADD MORE
TRAFFIC DRAWDOWN TO THEIR EVERYDAY LIFE. THE MEETING I FEEL, LACKLUSTER IN ITS
CONTENT. NOT ONLY IS THERE ANY INFORMATION SHOWN ON THE PART OF TRAFFIC SURVEYS
CONDUCTED, NO INFO ON THE AFFECT SAID IMPROVEMENTS WILL CREATE.

For more information, contact Chris Colwick, Public Outreach Liaison, at (415) 227-1100
x131; Allyn Amsk, Caltrans Public Information Officer, at (510) 286-5445; or Adele Ho, City
of San Pablo Public Works Director, at (510) 215-3068;
or visit www.octa.net/EN/main/state/162/166/5anpablointerchange.html.

Please continue on back if necessary.
Appendix J Comments on the Initial Study/Environmental Assessment

- (continued) -

RIGHT NOW IT'S A CHORE FOR ME TO DRIVE TO MY PARENT'S HOME ON RALSTON AVE. PROPOSED IMPROVEMENTS ARE NOT IMPROVING TRAFFIC CONDITIONS. HOW CAN THE CLOSURE OF TWO RAMPS (EL PORTEÑO & BREARLY) IMPROVE THINK ABOUT IT!! IT WILL ONLY ADD CHAOS! HOW WILL CALTRANS BE ABLE TO HANDLE CLOSURES THAT WILL BE NECESSARY DURING SAIMD IMPROVEMENTS.

Also, I'd like to know if locals will be employed by these improvements I've always felt that CASINO SAN RAFAEL WAS THE SMOKE GUN!! WHEN IT COMES TO TRAFFIC CONDITIONS THAT AFFECT ITS PLAYERS!! YOU KNOW THAT THE PUBLIC WHO KNOWS THAT THIS PROJECT IS BEING FED TO THE LOCALS WHO IT WILL AFFECT.

We need more time to digest the jargon we've been FED. THANKS BUT NO THANKS.

(Michael Almada)

P.S. ANY RESPONSE WOULD BE GREATLY APPRECIATED

Thank you for your participation.
Response to Comment C-04

A – The formal presentation made at the August 19, 2009, public meeting was an overview of the improvements and the findings of the traffic and environmental studies. Before and after the presentation, the traffic specialists who prepared the traffic study for the project were available and addressed specific questions that many participants had, especially regarding changes that would occur at McBryde Avenue, Amador Street, and El Portal Drive. The traffic studies are described in the IS/EA in Section 2.5.

Traffic surveys were conducted in 2006 and 2007, and the IS/EA includes existing traffic data, future projections, and projected levels-of-service and delays at the major intersections within the study area. To accommodate both existing and future traffic, the westbound I-80 off-ramp to San Pablo Dam Road will be expanded to two lanes from the freeway and will widen to four lanes at the intersection with San Pablo Dam Road. This will provide adequate space for cars to exit the freeway and either turn on San Pablo Dam Road or continue straight on the frontage road to McBryde Avenue. This change allows vehicles to continue to access McBryde Avenue. The El Portal Drive on-ramp to westbound I-80 will be closed at its existing location and relocated further east to provide a much longer weaving area between the on-ramp and the San Pablo Dam Road off-ramp. Therefore, the project does include closure of the McBryde Avenue and El Portal Drive ramps as they are currently configured, but both streets will remain accessible from the freeway: McBryde Avenue from the San Pablo Dam Road off-ramp to the proposed frontage road paralleling the freeway, and El Portal Drive from the proposed relocated off-ramp location.

Under Future Conditions, it is projected that the freeway segment between San Pablo Dam Road and McBryde Avenue in the westbound direction will operate at unacceptable levels under no-build (year 2035) conditions, similar to existing conditions. Under existing conditions, the traffic exiting to McBryde Avenue and entering from San Pablo Dam Road during the peak hour has to slow down to merge and diverge from and into the mainline. Slowing of the traffic results in reduction of capacity of the mainline segment, causing the upstream segment of the freeway to slow down more; this breaking effect is observed during peak hour up to El Portal Drive interchange and to the east. Removal of the McBryde Avenue off-ramp, as proposed with the project, is projected to improve future traffic operations along the mainline. The density of traffic on the freeway segment between San Pablo Dam Road and El Portal Drive in the westbound direction during the future peak hour is projected to be 100 or more passenger cars per mile per lane with the no-build conditions compared to 65 or more passenger cars per mile per lane with the future project conditions. A higher density of vehicles on I-80 results in reduced speeds and increases the average travel time and delay. Therefore, the project is projected to improve traffic flow.
Ralston Avenue (located east of I-80, roughly parallel to Arlington Boulevard; connects to McBryde Avenue) will remain accessible from Amador Street. From San Pablo Dam Road in El Sobrante, access will remain from San Pablo Dam Road to Amador Street or from San Pablo Dam Road to the proposed frontage road and then left on McBryde Avenue.

Access to and from local streets and I-80 will be maintained during peak periods during construction. Preliminary, feasible stage construction plans have been developed for the project. For example, during construction, there will be lane shifts as portions of the San Pablo Dam Road overcrossing are completed, and one direction of travel can be shifted to the new bridge while the remainder of construction is completed.

Hiring of construction workers for the project will be up to the construction contractor(s). Construction contracts are awarded to qualified contractors through a highly competitive process that is subject to strict State requirements. The construction contractor(s) can be encouraged but not required to hire local workers.

B – Thank you for your comment.
Comment C-05 - Cuevas, Steven

spcuenas@aol.com
09/09/2009 01:57
PM

To
sheryl_m_garcia@dot.ca.gov

Subject
McBryde Exit closure

Sheryl M. Garcia  
Associate Environmental Planner

I am in favor of the closure of the McBryde Ave Exit of the I-80 interchange project. I live on Humboldt Street, which is across from the McBryde Exit. Closing the McBryde Exit would reduce traffic, not only from commute hour traffic but regular daily traffic in this area. Many cars and trucks speed from the McBryde Exit thru Humboldt St. to the Solano St on ramp. For the safety of the people, that live on the three blocks between McBryde and Solano, and their property, I feel the McBryde Exit should be closed to meet the needs of the I-80 interchange project.

Steven Cuevas  
937 Humboldt St  
Richmond

Response to Comment C-05

A – The commenter’s opinion that the McBryde Avenue exit should be closed is noted. A design concept was evaluated (see Section 1.5 and Table 1-4 in the IS/EA) that would close the McBryde Avenue off-ramp and provide a replacement I-80 exit at Solano Avenue, which does not have a westbound off-ramp. This concept could improve the distance between interchange ramps on westbound I-80, thereby helping to achieve the project purpose of reducing weaving conflicts. However, a new off-ramp at Solano Avenue would require removal of a neighborhood basketball court and playground. In addition, Solano Avenue is only two lanes wide, which was determined to have inadequate capacity to meet the forecasted travel volume at this exit. The design concept was not considered further because of the impacts to the recreational facilities and the limited capacity of Solano Avenue.

Please note that with the project, the westbound McBryde Avenue off-ramp will be closed, but McBryde Avenue will still be accessible via the proposed frontage road from San Pablo Dam Road. Measures to control existing traffic on a local street such as Humboldt Avenue are not within the jurisdiction of the Department.
Comment C-06 - Felix, Raymond

rfelix@sbcglobal.net
08/26/2009 04:37
To
Sheryl_m_garcia@dot.ca.gov
cc
Subject
Dam road onramp/ McBryde off ramp
Please respond to
rfelix@sbcglobal.net

A
The dam road over 80 needs some work. The traffic over it is often quite slow. Coming from the west side the traffic can back up through several intersections. This is a reasonable project.

B
I believe that the changing of the on ramp from the dam road and the off ramp to McBryde is a waste of taxpayer money. I have used that connector between the dam road and McBryde for 25 years. It is just fine the way it is. I have had no problems getting off the freeway or simply using it as a connector from the dam road to McBryde. It is of sufficient length for the traffic to blend in a reasonable manner. The cost of taking the land next to that road and building a new road is just NOT justified.

Please use a little reason.

Thank You
Raymond Felix Ph.D.

Response to Comment C-06

A - The commenter's opinion is noted regarding the proposed improvements at San Pablo Dam Road.

B - This and a number of other comments questioned the need and reasons for the closure of the McBryde Avenue off-ramp, and the adequacy of the proposed frontage road.

The project will close the McBryde Avenue off-ramp as a direct exit from I-80. One of the primary reasons for this closure is the short distance between the interchanges in the westbound direction within the project limits. The close spacing of interchanges limits the distance in which traffic entering and exiting a freeway has time to safely merge, requiring drivers to substantially reduce speed as they enter the interchange area or significantly speed up as they attempt to enter the freeway. A
longer distance between interchanges allows drivers more opportunities to merge or exit through potentially conflicting traffic.

The potential for increasing conflicts and congestion between the San Pablo Dam on-ramp and the McBryde Avenue on-ramp will increase with future growth in regional traffic. This conclusion is based on traffic studies prepared for the project, which were projected to the year 2035. (See Section 2.5.2.2 of the IS/EA for existing and future traffic conditions.) Traffic volumes in these studies were based on regional land use plans and growth projections. Those volumes reflect traffic generated throughout Contra Costa County that might use I-80 and adjacent local roads, and not just within the immediate project area.

The traffic studies estimated all volumes that would use the McBryde Avenue off-ramp under the No Build Alternative, and the total traffic that would use the San Pablo Dam Road westbound off-ramp and the proposed frontage road. Traffic counts were conducted to identify current use of the roadways, including counts at all of the freeway on- and off-ramps, such as McBryde Avenue and Humboldt Avenue, and the existing McBryde Avenue off-ramp. Traffic projections for the year 2035 without the proposed project showed that the McBryde Avenue off-ramp intersection would operate at LOS F, an unacceptable level of service (see Table 2.5-7A in the IS/EA ).

Because of the concern that closure of the McBryde Avenue off-ramp would limit drivers’ options, the frontage road was included in the project to allow continued access to McBryde Avenue, and to specifically help offset the closure of the off-ramp. The project changes do require a driver to exit westbound I-80 at San Pablo Dam Road to reach McBryde Avenue, but the delay at the San Pablo Dam Road/frontage road intersection will be minimal, and the McBryde Avenue/frontage road intersection will operate at better levels of service (LOS C to D). Both build alternatives were designed to handle the projected traffic volumes with less delay than the existing configuration.
Comment C-07 - Kipnis, Allen

"Al Kipnis"
<al@gonskal.com> To
08/31/2009 12:28 PM <Sheryl_m_garcia@dot.ca.gov> cc
Subject

Has a resident of Richmond, CA for over 25 years, I know about traffic on
the San Pablo Dam Road and the McBryde interchanges. I am opposed to any
plan that closes the McBryde off ramp. It is unreasonable to force those
who use the McBryde off ramp to endure a substantial increase in travel
time just so those who use the San Pablo Dam Road exit might see a slight
reduction in their travel times. My needs, and those of others who use
this ramp, should not be ignored in any effort to serve the needs of those
who use other ramps.

Thank you,

Allen S. Kipnis
945 31st Street
Richmond, CA 94804
510/237-7748

Response to Comment C-07

A - The purpose of closing the McBryde Avenue off-ramp is not only to benefit those
who currently exit westbound I-80 to San Pablo Dam Road; it is to reduce the risk of
accidents and to meet current Caltrans standards for weaving distance, the distance
over which an off-ramp and an on-ramp overlap. The design of the proposed off-
ramp to San Pablo Dam Road will accommodate projected future traffic at acceptable
levels of service, including for vehicles turning on San Pablo Dam Road and vehicles
continuing on the new frontage road to McBryde Avenue. There will be some delay
associated with passing through the signalized intersection of the westbound I-80
ramps and San Pablo Dam Road, but the design is expected to provide a minimum
level of service D for this intersection through 2035, which means that average delays
are not expected to exceed 55 seconds per vehicle (see Tables 2.5-10A and 13A in the
IS/EA). Please also refer to the response to Comment C-06-B.
Comment C-08 - Kramer, Kathy

Dear Ms. Garcia,

We are looking forward to an improvement in the I-80 San Pablo Dam Rd. off-ramp, as we live just a couple of blocks away. Unfortunately, we are not able to attend the public meeting. We would like to request that any plantings in this project be California natives. California native plants are hardy; they do not require the use of pesticides or herbicides; they are drought-tolerant; and they provide the best habitat for local wildlife.

Should CalTrans staff require assistance in compiling a native plant list from which to choose, I would be happy to work with them to generate one. Will you please confirm that this e-mail will be considered a written comment?

Sincerely,

Kathy Kramer
Bringing Back the Natives Garden Tour Coordinator
(510) 236-9559
kathy@kathykramerconsulting.net
www.bringingbackthenatives.net

Response to Comment C-08

A – The use of native plants will be considered in the landscaping plan for this area. Landscaping at this preliminary design level is conceptual and specific species and type selection is not made until the final design, after environmental review is completed. See Section 2.6.4 for conceptual landscaping measures.

B – Thank you for your offer.
Comment C-09 - Krishpinovich, Tatiana

Tati
Krishpinovich
<tatikrishpinovich
h@yahoo.com>

08/26/2009 03:37
PM

To
Sheryl_m_garcia@dot.ca.gov

cc

Subject
just an observation about the West County I-80 interchanges

Dear Ms. Garcia,
I live in this area and my children go to day care off of McBryde on Arlington and there is A LOT of congestion there all of the time.

These are some observations:

1) The McBryde overpass has the room to create an extra lane for left turn only people heading East which would allow the people who want to either turn right or to go straight speedier routes.

2) A left turn lane coming West on San Pablo Dam Road onto Amador would also help the congestion of the traffic light on the West side of that overpass instead of everyone HAVING to get on the freeway on-ramp and getting off on McBryde.

3) A new on ramp from El Portal is not necessary if you put in a left turn lane heading west for the already existing freeway on ramp and MAYBE a stop sign so that on-coming traffic on El Portal heading east would slow down a bit.

Sincerely,
Tatiana Sepulveda Krishpinovich
Appendix J  Comments on the Initial Study/Environmental Assessment

Response to Comment C-09

A - The commenter’s recommendation for improving traffic flow on McBryde Avenue is noted. The focus of this project is the I-80/San Pablo Dam Road Interchange and the westbound roadways that connect to that interchange. Improvements to the McBryde Avenue overcrossing can be considered by the City of Richmond, in coordination with the Department.

B – The preferred alternative includes a left-turn lane from westbound San Pablo Dam Road to Amador Street for the reasons stated in this comment. The preferred alternative helps to achieve the improvements identified in the comment.

C - The measures suggested in the comment would improve access to the existing westbound El Portal Drive on-ramp. However, as traffic increases in the future, vehicles using this ramp combined with traffic attempting to merge onto westbound I-80 will be delayed by backups from vehicles that have to significantly slow and merge into the short weaving area between the existing El Portal Road on-ramp and the existing San Pablo Dam Road westbound off-ramp. The future constraint at peak periods will not necessarily be at El Portal Drive, as suggested by the improvements noted in this comment, but at the freeway on- and off-ramps where the cars must quickly merge within a very short distance. The purpose of closing the existing El Portal Drive on-ramp and relocating it further east is to increase the weaving/merging distance between El Portal Drive and San Pablo Dam Road.
Comment C-10 - Luna, Lizzie

lizzieluna@aol.com

To
09/08/2009 07:28 AM
Sheryl_m_garcia@dot.ca.gov
cc
Subject
I-80 San Pablo Interchange

I recently read the article on the proposed improvements planned for the San Pablo Dam Road over-crossing on I-80. I'd like to express my dismay at the proposed closure of the McBryde exit. This exit is used by many people wanting to avoid the crush of traffic when exiting I-80 West at San Pablo Dam Rd and would easily add 10 minutes to my getting home from the westbound direction. We've already lost the next exit that used to take us to San Pablo Ave.

Additionally, the proposed changes for moving the on ramp from El Portal further north, seems unnecessary. Extending the length of the west bound off/on-ramp leading to the San Pablo Dam Rd exit would be more beneficial allowing drivers sufficient time to merge with freeway traffic. The log jam on the over-crossing starts with the narrow four-lane structure. Widening to 6 lanes and allowing left turns onto the freeway from both the left and center lanes onto both the west and east bound direction of 80 would alleviate much of the congestion (the on-ramps would need to be widened to accommodate better merging of two lanes of traffic).

Extending a right hand turning lane on the Dam road onto east bound 80 would further reduce the backup from that direction.

Improving the flow into and out of the San Pablo Towne Centre shopping Plaza would be helpful as the two main entry points are on San Pablo Dam Road near the immediate vicinity of the interchange and contribute to much of the traffic congestion. Improving access to the Plaza from the south bound direction of San Pablo Ave just north of San Pablo Dam Road would divert additional vehicles that currently add to much of the traffic congestion.

Thank you for the opportunity to express my concerns.
Response to Comment C-10

A – A traffic analysis was completed for this project, as summarized in Section 2.5 of the IS/EA, from the project’s Traffic Operations Report (URS 2008). There will be some delay associated with passing through the signalized intersection of the westbound I-80 ramps and San Pablo Dam Road, but the design is expected to provide a minimum level of service D for this intersection through 2035, which means that average delays are not expected to exceed 55 seconds per vehicle (see Tables 2.5-10A and 13A in the IS/EA). If this project is not built, the conditions in 2035 at the San Pablo Dam Road off-ramp as well as the McBryde Avenue off-ramp are expected to be much worse. Delay at the westbound off-ramp to San Pablo Dam Road would exceed 80 seconds (Level of Service F for a signalized intersection). Please also refer to the response to Comment C-06-B.

B - The new on-ramp to westbound I-80 at El Portal Drive is designed to do what the commenter describes: lengthen the distance available to merge on/off the freeway between El Portal Drive and San Pablo Dam Road. Additionally, both alternatives include a widening of the San Pablo Dam Road overcrossing.

C - The preferred alternative includes a right-turn lane from San Pablo Dam Road to eastbound I-80. The recommendations regarding the entrances to the San Pablo Towne Centre are noted. Local street and private development access improvements are not within the Department’s jurisdiction but can be considered independent of this project by the City of San Pablo or the shopping center.
Comment C-11 - Martin, Owen

A – The commenter’s preference for Alternative 2 is noted. Alternative 2 has been identified as the preferred alternative.
Comment C-12 - Mills, Jennifer and Larry

Jennifer Mills
<millsje09876@yahoo.com>
08/23/2009 10:08 AM
To
Sheryl_m_garcia@dot.ca.gov
cc
millsje09876@yahoo.com
Subject
I-80/San Pablo Dam Road Interchange Project

Name: Jennifer and Larry Mills
Date: August 23, 2009
Address: 1034 Ventura St, Richmond, Ca. 94805
Comment:
We live behind the McBryde exit ramp off I-80. The area that I am discussing is between Glenn Avenue, San Pablo and McBryde Avenue in Richmond.

We moved into our home prior to the lane addition that was done on Interstate 80 about 8 years ago. At the time we moved in, there was no freeway noise and the view from the rear of the house was filled with tall trees. After the major freeway construction that was done, the noise level increased significantly. The noise level begins about 4:30 A.M. when the truck traffic picks up. They downshift in our area. I contacted Caltrans at the time and was told that the noise did not increase (incorrect). The trees however were still in place and provided some noise mitigation as well as some beauty.

Recently, the trees were cut down. I don't know why. The noise of course is louder now and the view from the back of my house is solid concrete jungle.

I would like trees to be re-planted along the freeway/proposed bypass road between Glenn Avenue and McBryde Avenue and please also provide some means to water them to get them to grow back quickly. I don't believe the cost would be excessive and it would give our area back some noise mitigation and beauty that was taken away. I am NOT requesting more sound walls. Please advise your decision.

Response to Comment C-12

A – This location on Ventura Street is separated from the existing McBryde Avenue westbound off-ramp by the San Pablo Sportsman Club. The rear yard abuts the undeveloped portion of the Sportsman Club property, which separates the off-ramp from this rear yard. Vegetation does not normally provide a measurable reduction in noise, because it is typically not dense enough to create effective shielding the same way a solid barrier does. However, it can provide a desirable visual screen, as
requested in this comment. Landscaping will be included with this project, where space allows. The appropriate landscaping that can be installed between the frontage road and the Sportsman Club property near McBryde Avenue will be defined in the landscaping plans. See Section 2.6.4 for more information on conceptual landscaping measures.
Comment C-13 - Monson, Richard

I-80/San Pablo Dam Road Interchange Project Draft Initial Study/Environmental Assessment (Draft IS/EA) Public Meeting Wednesday, August 19, 2009

COMMENT FORM

Comments must be received no later than 5:00 p.m. September 8, 2009. Comment forms may be deposited in the comment box tonight or mailed/ emailed to:

California Department of Transportation
Attention: Sheryl M. Garcia, Associate Environmental Planner
P.O. Box 23660
Oakland, CA 94623-0660
Email: Sheryl_m_garcia@dot.ca.gov

Name: Richard Monson
Affiliation (if applicable): Caltrans
Address: 3845 Bristol Ave, Richmond, CA 94805
Date: 8/26/09

Comment/Question:

Re: Proposed solutions to freeway and road congestion.

Ask yourselves “Do we REALLY need to do anything? No, but it would be nice. Can we AFFORD to do anything? NO.

Here we go again - planning to spend millions of dollars to solve a problem that cannot REALLY be solved to everyone’s satisfaction. There is still going to be congestion, delays and all the things that annoy (to say the least) us now and will still not eliminate the traffic situations that occur.

I must admit, I don’t like the congestion at the Dam Road and other places, but I can’t agree that tearing everything apart, trying to eliminate all our problems makes sense. If you don’t like the congestion now, think of a 4 year (estimated) period of more delays, confusion, noise, dirt, dust confusion, etc. during construction.

Then, that happy day, when everything is finished and we can look forward to the time when it will all have to be modified somehow, when the roads and intersections become congested again - just like these “good old days” we are enjoying right now.

I say NO - we don’t need it that badly and we can’t afford it! Please continue on back if necessary.
Response to Comment C-13

A – The commenter’s opinion that the project is not necessary and cannot be afforded is noted. The project is proposed to improve future traffic conditions at the I-80/San Pablo Dam Road Interchange, but will not solve all congestion problems. However, the project will provide measurable improvements to traffic flow and conditions, which are listed in the IS/EA in Section 2.5.3.4. The project will improve efficiency within the project limits, which will allow a greater number of vehicles to pass through the constrained San Pablo Dam Road Interchange. With the preferred alternative, total travel time (the comparative time to travel an established distance within the study area) will decrease, average speeds will increase, and total delays will decrease. For example, intersections at the westbound and eastbound ramps at San Pablo Dam Road and at El Portal Drive will operate at an acceptable level of service (LOS) of D or better with the build alternatives, but will continue to function at LOS E or F (considered unacceptable for the purposes of this study) with the No Build Alternative. Delays at the I-80 eastbound San Pablo Dam Road off-ramp/Amador Street intersection will significantly decrease with the preferred alternative.
Comment C-14 - Monson, Sue

I-80/San Pablo Dam Road Interchange Project
Draft Initial Study/Environmental Assessment (Draft IS/EA)
Public Meeting
Wednesday, August 19, 2009

COMMENT FORM

Comments must be received no later than 5:00 p.m. September 8, 2009.
Comment forms may be deposited in the comment box tonight or mailed/mailed to:
California Department of Transportation
Attention: Sheryl M. Garcia, Associate Environmental Planner
P.O. Box 23660
Oakland, CA 94623-0660
Email: Sheryl_m_garcia@dot.ca.gov

Name: Sue C. Monson        Date: Aug. 29, 2009

Affiliation (if applicable):

Address: 5848 Ralston Ave, Richmond CA 94805-1104

Comment/Question: NO! see below

August 29, 2009
ABOUT THE I-80/SAN PABLO DAM ROAD INTERCHANGE PROJECT:
1. We cannot afford it right now.
2. I sense that you are flaunting your funds when everyone else is tightening their belts.
3. Cities are losing their rightful tax money to the State. How come you have some to spend?
4. How many houses are you going to have to buy and displace people?
5. I really don’t understand how the changes will be better anyway.
So I say NO. Sue Monson, 5848 Ralston Ave, Richmond CA 94805 (just off of McBryde)

Please continue on back if necessary.

For more information, contact Chris Colwick, Public Outreach Liaison, at (415) 227-1100 x131; Allyn Amsk, Caltrans Public Information Officer, at (510) 286-5445; or Adele Ho, City of San Pablo Public Works Director, at (510) 215-3068; or visit www.ccta.net/EN/main/state/162/166/sanpablointerchange.html.
Response to Comment C-14

A - The commenter's opinion that the project should not be constructed is noted.

This project is programmed for transportation funding, as described in Section 1.3.3 of the IS/EA. Transportation funding in Contra Costa County is partially supported by the voter-approved Measure C and Measure J programs, which authorize collection of a one-half cent sales tax to advance specific planned and needed transportation improvements, including the proposed project. Other sources of funding include state gas taxes (collected as a portion of the cost of a gallon of gas) and federal matching funds. Monies collected as gas taxes and funds designated for transportation projects cannot be spent on non-transportation uses. Transportation projects take years to develop and fund through the federal, state and regional transportation plans and programs, and that planning process allows time for designation of the necessary monies for the proposed project.

The specific properties that would be acquired for the project are identified in Table 2.3-1 and shown on Figure 2.3-2. The properties that must be acquired and relocated are estimated at one commercial property, one multifamily residence, six single-family homes, and one triplex.
Comment C-15 - Newton, Patricia

I live 4-5 blocks east of the McBryde off ramp and I would like it known that I oppose any changes to that off ramp. The changes proposed amount to a closure of said off ramp. To my knowledge, no study has been done to determine the number of cars that use it daily. To the east, the hills are covered with houses - some of them over the peak of the hills and not visible. Many people to the west also use that off ramp. Closure would significantly and adversely impact this area and the people who use the ramp. I feel any change to the McBryde off ramp will make traffic worse. To add more cars to the San Pablo Dam road is just not an option in my mind. That area is already far beyond capacity and a nightmare to navigate.

Patricia Newton
5841 Ralston Ave.,
Richmond 94805

Response to Comment C-15

A – The commenter’s opinion is noted regarding the McBryde Avenue off-ramp. A comprehensive traffic study was completed for this project and included the ramps at McBryde Avenue as well as the San Pablo Dam Road overcrossing. The preferred alternative will improve future levels of service at the study intersections compared to their expected conditions if no changes are made. See Section 2.5 of the IS/EA for more information. Please also refer to the response to Comment C-06-B.
Comment C-16 – Pretto, Truse

Truse Pretto  
<tpretto@mhhcp.com>  

08/27/2009 10:03 AM

To  
"Sheryl_m_garcia@dot.ca.gov"  
<Sheryl_m_garcia@dot.ca.gov>  

cc

Subject  
McBryde, San Pablo Dam road changes

Dear Ms. Garcia,

I live on Amador between McBryde and Solano so I use all the on and off ramps in the area frequently. Although I agree that the Dam Road interchange needs improvement, I don’t see how eliminating the McBryde off ramp will help traffic. Traffic will just back up onto the freeway at the Dam Road off ramp as it does now at the Central off ramp. The whole freeway backs up because of people getting off at Central. If eliminated I would be forced to travel further West on 80 and back track to my house. That will mean changing lanes and then back again in a short amount of time to avoid the inevitable back up at the Dam Road; not a safe scenario. I hope you are considering the local residents and their safety and not just those traveling through on 80.

Regards,

Truse Pretto  
Amador Street  
Richmond, CA

Response to Comment C-16

A - The proposed two-lane off-ramp at San Pablo Dam Road will be longer and wider than the existing off-ramp to prevent backups from stretching onto the freeway. Also, the new intersections at the San Pablo Dam Road ramps will operate more efficiently than the existing intersections. Once the project is complete, drivers will be able to exit at San Pablo Dam Road and continue straight onto the frontage road to reach McBryde Avenue. Please also refer to the response to Comment C-06-B.
Comment C-17 - Rasmussen, Gerald

I-80/San Pablo Dam Road Interchange Project
Draft Initial Study/Environmental Assessment (Draft IS/EA)
Public Meeting
Wednesday, August 19, 2009

COMMENT FORM

Comments must be received no later than 5:00 p.m. September 8, 2009.
Comment forms may be deposited in the comment box tonight or mailed/ Lauated to:

California Department of Transportation
Attention: Sheryl M. Garcia, Associate Environmental Planner
P.O. Box 23660
Oakland, CA 94623-0660
Email: Sheryl_m_garcia@dot.ca.gov

Name: Gerald Rasmussen Date: 3 Sept 09

Affiliation (if applicable): TRAC; EBBC; CCCBPP Advising Comm.
Address: 857 34th St, Richmond, CA 94805

Comment/Question: Amador St b/cion A-P Dam Rd b/cion. McBryde-Bolano Aces is currently quite heavily used by bicyclists, despite the problematic transition from west-bound Dam Rd to south-bound Amador. Once onto Amador, sharing the single lane with motorists is quite uncomfortable. Would it be feasible to move the curb 3-4 ft.

For more information, contact Chris Colwick, Public Outreach Liaison, at (415) 227-1100 x131; Allyn Amsk, Caltrans Public Information Officer, at (510) 286-5445; or Adele Ho, City of San Pablo Public Works Director, at (510) 215-3068; or visit www.ccta.net/EN/main/state/162/166/sanpablointersection.html.
- (continued) -

or so toward the sound wall, pre-empting some of
the fairly generous landscaping? Also, how about
shifting the center-line a foot or two to the east?

Ultimately, if there is not enough R/W to
add a proper south bound bike lane, "Sharrow"
pavement markings would be helpful to
repeatedly remind motorists to "play nice"
with us vulnerable cyclists.

Thanks for your consideration.

Thank you for your participation.
Response to Comment C-17

A – Please see the response to Comment B-01. Bike lanes will be included in the project on Amador Street in the vicinity of San Pablo Dam Road. Bike paths and lanes are desirable on the remaining portion of Amador Street (approximately north of Alpine Road to McBryde Avenue), but the roadway is inadequate to include the improvements suggested in this comment without additional changes to existing roadside utilities, soundwall, landscaping, parking, and/or sidewalk facilities. The option for adding “sharrow” pavement marking can be considered by the City with minimal funding.
Comment C-18 - Serb, Doreen

Doreen Serb
5844 Ralston Ave.
(East Richmond Heights) Richmond, CA 94805

Sept. 1, 2009

Re: I-80/San Pablo Dam Road Interchange Project

Dear Ms. Garcia and Cal Trans:

A The proposed remodel of Highway 80 and San Pablo Dam Road has numerous flaws. The most serious is the closing of the McBryde Avenue exit. The reason given for its closure is that the McBryde exit, in conjunction with the San Pablo Dam Rd entrance, is a safety hazard. There are no accident statistics supporting this view. The shared lane between McBryde Ave. and San Pablo Dam is replicated in many other places on I-80, including the Appian Way entrance/Pinole Valley exit just a few miles east on I-80.

B The residents who live here and pay property taxes here have not had sufficient warning or time to address this issue. The reason for this is most residents were told that the McBryde exit is being modified when, in fact, it is being closed. This incorrect information given to the citizenry led us to believe that all was well with our off ramp of McBryde Ave. Now that the truth of the McBryde Ave. off ramp closure has been exposed as a closure, and not a modification, the residents are extremely upset and want this closure to be stopped from happening.

C What the closure of McBryde Ave. exit will do to our region is force us to exit at San Pablo Dam Road, stop at the street lights of the Dam Rd, drive across the Dam Rd on to a new junction road and then finally connect to McBryde Ave. Hisham Noeimi of the City of San Pablo insults our intelligence in the August 22, 2009 edition of West County Times newspaper by saying this will only add “a minute or two” to our exit home. Cal Trans told me at the August meeting they held in San Pablo that, on average, they expect it to add 8 minutes to each trip those of us who use McBryde exit take. Mr. Noeimi further insults our intelligence, in the same article, by saying our other choice is “to be stuck in traffic on the freeway.” In the last six years there was only one time I was stuck in traffic trying to get to the McBryde off ramp and it had nothing to do with the off ramp. It was because of a late night accident further west on Highway 80.

D No matter what improvement may be made with this plan at Highway 80 and San Pablo Dam Road a new traffic jam will result. By closing the McBryde exit and adding those cars into the already crowded area of the Dam Rd you are going to have a 114 million dollar job that only creates new problems and new crowding. Additionally, the added closure of the west bound on ramp from Road 20 in San Pablo with this project is expected to add at least half of their cars to the Dam Rd. to enter I-80.

We strongly urge the whole project to be further post phoned until this issue can be resolved. There are other ways to better improve the project, such as, an overpass of McBryde traffic from I-80 to the proposed junction road bypassing the San Pablo Dam Rd completely to McBryde, or we are content simply leaving our off ramp open as is.

Sincerely,

Doreen Serb 510-237-2310
Response to Comment C-18

A - The reason for closing the existing McBryde Avenue exit and providing a frontage road from San Pablo Dam Road is to remove the short weaving distance between the San Pablo Dam Road westbound on-ramp and the McBryde Avenue off-ramp. The existing separation distance does not meet current State Highway Design standards. Uniform design standards maximize traffic efficiency by providing consistent driver expectations and allowing for minimum distances within which a driver can make common maneuvers, such as entering and exiting a freeway. A short distance between an on- and off-ramp limits the time that a driver has to reach freeway speed and merge with oncoming traffic, which can result in slow maneuvers getting on or off the freeway contributing to slowing of freeway traffic. Congestion results when traffic backs up behind the relatively slower vehicles entering and exiting the right-hand lanes. This congestion effect will increase in the future as traffic volumes continue to increase. This project is proposed to increase the distance between the existing interchanges within the project limits to meet current highway standards, as an element of the overall I-80/San Pablo Dam Road Interchange improvements. Please also refer to the response to Comment C-06-B.

Congested conditions can also increase the risks of accidents. Accident data is presented in Table 1-2 of the IS/EA, comparing recorded “actual number” of accidents in the project vicinity to average rates typical of similar interchange designs and freeway segments. Segments of the I-80 freeway and the on- and off-ramps show below average accident rates, with the exception of the eastbound and westbound off-ramps to San Pablo Dam Road and the westbound off-ramp to El Portal Drive, which are above State averages. Accidents occurring due to the short weave and merge would be included in the mainline accident data. There were a total of 331 accidents on the I-80 mainline (186 accidents in the eastbound and 145 in the westbound direction). The project improvements will help further improve safety within the project limits.

B - The proposed frontage road design, including closure of the McBryde Avenue off-ramp, was presented at the public meetings held in December 2007, October 2008, and August 2009. The design was also presented to the Richmond City Council in July 2008. The design has not changed since 2007.

There will be some delay associated with passing through the signalized intersection of the westbound I-80 ramps and San Pablo Dam Road, but the design is expected to provide a minimum level of service D for this intersection through 2035, which means that average delays are not expected to exceed 55 seconds per vehicle (see Tables 2.5-10A and 13A in the IS/EA). If no improvements are made, the San Pablo Dam Road off-ramp and McBryde Avenue off-ramp will operate at level of service F, with average delays greater than 80 seconds, in 2035 (see Table 2.5-7A).

C – Thank you for your comments.
Comment C-19 - Turk, John

To Sheryl Garcia-

You are a contact person listed on a mailing I received regarding this project. I reside at 1524 Amador Street, very close to its intersection with San Pablo Dam Road. I have been aware of this project for some time, and I have followed its progress. Having reviewed documents, including the Draft IS/EA, I wish to make some comments for the record. These comments, rather randomly written, follow:

The Draft IS/EA includes a picture after page 1-20, entitled "Lanes Added Alternative" which is in clear contrast to any other version of this alternative that has been published, in that it appears to have no offset between the I-80 Eastbound off-ramp and the Eastbound on-ramp. The "Alternative #1-Lanes Added" has always had such an offset at this intersection, in contrast to "Alternative #2-Tight Diamond". See, for example:

http://www.ccta.net/assets/documents/I-80-San-Pablo-Dam-Rd-Interchange/i80-sanPabloWritzup.pdf
Appendix J Comments on the Initial Study/Environmental Assessment

The Draft IS/EA version clearly shows the I-80 Eastbound off-ramps being relocated eastward to enable a straight crossing of San Pablo Dam Road onto existing I-80 Eastbound on-ramps, which is the current location of Amador Street/San Pablo Dam Road intersection. This version would make it impossible for an exit from I-80 Eastbound onto Amador Street. More important, it is abundantly clear that Amador Street is functionally a frontage road and would have no access directly onto I-80 Eastbound. This version is clearly incorrect and/or unworkable. A correction is warranted.

I can attest to the many backups on Amador Street during the several afternoon rush hour periods, with motorists lined up to access I-80 Eastbound. In fact, during afternoon rush hour (5 PM-6PM), motorists use Amador Street to access I-80 Eastbound, avoiding San Pablo Dam Road and San Pablo Avenue. They also use Amador Street as access to San Pablo Dam Road Eastbound, having exited I-80. Eastbound at Solano Avenue exit when I-80 Eastbound is "crawling". This traffic also avoids the backup at the I-80 San Pablo Dam Road Eastbound exit. If the morning rush on Amador Street deserves an "F" (see 2-11, etc.), then the afternoon rush deserves a "G"!

This backup can be 10 minutes just to get to the front of the queue at San Pablo Dam Road. If "Alternative 2" were adopted, I suggest to make the separate left turn and straight lanes at the new Amador/San Pablo Dam Road junction as long as possible, to allow afternoon traffic to be stored more effectively. One of the current quasi-solutions used by afternoon rush hour motorists is to effectively create two separate lanes far down Amador Street from the junction, even to knocking over garbage cans in front of my and my neighbors' houses.

The proposed replacement of the pedestrian overpass to more safely serve the needs of students at Riverside Elementary School is most admirable. The conditions of traffic on Amador Street have led to many accidents due to high speed and lack of forward view (a rise in the street limits it). Also, the street is very long between traffic signals or signs, encouraging speeding. (At my personal suggestion, the City of San Pablo installed a continuous white to delineate the northbound driving lane from the parking lane, which has increased safety of travel and reducing the incidence of accidents.) A traffic warden is present, morning and afternoon, at the existing location of the overpass, to protect children crossing Amador Street to attend school.

Living at my location for 10 years, I have become aware of large quantities of seasonal storm water runoff onto Amador Street from the hillside above. In fact, the current collection basin at the bottom of Alpine Street has often been overwhelmed, causing large amounts of rainwater to run south on Amador Street, past my house. While stormwater runoff is referred to at 2.9.4, it is not in regard to long-term response to natural acts, nor, importantly, is it discussed within the parameter of the raised elevation (due to a higher bridge over-crossing) of San Pablo Dam Road under Alternative #2, which will exacerbate the runoff onto and down Amador Street. The runoff concerns of this design must be evaluated, especially under the Alternative #2 (See Fig. 2.6-11).

I was taken aback by the absurd comment in this document that bicyclists would actually make a left turn onto Amador Street from San Pablo Dam Road! (See p. 1-15.) That is a crazy notion, and I assure you that nobody does it. In fact, nobody bicycles westward on San Pablo Dam Road and seldom southward on Amador Street (except on the sidewalk). I have bicycled from my house to Orinda and returned via BART and riding northward on Key Route Blvd. and Amador Street, so I can attest to the great danger of riding on San Pablo Dam Road. It is a vague dream of the City of San Pablo to
incorporate this route into its Bicycle Road. San Pablo is simply not a bicycle-friendly city. Its automobile drivers have no tolerance for bicyclists. No bicycle lanes exist on major streets. (But also see p. 2-179). I have ridden all over the Bay Area, and I speak the truth. Amador Street is also unique in that it has no parking or bicycle lane and a very narrow auto lane on the southbound side, making bicycle usage particularly dangerous. In conclusion, this project will not address bicycle usage on San Pablo Dam Road or Amador Street.

Pedestrian travel in the project area is very limited, for several reasons. One important reason is the lack of continuity of sidewalks and pedestrian road crossings. This has been somewhat addressed in the recent past, but still falls short. The bridge over-corsing has not been protected by the protective barriers installed and the crosswalk at the Amador/San Pablo Dam Road junction has been more clearly defined. Sidewalk has also recently been installed at Amador/Alpine Street. Another reason is the low level of night lighting (But see p. 2-179). I would suggest the sidewalk/lighting to be installed on the south side of San Pablo Dam Road east of the Amador junction should be continued to Alhambra Road. Then a pedestrian would have a continuous sidewalk to Princeton Shops. However, the concept of continuing the sidewalk on the north side of San Pablo Dam Road east of I-80 is not useful. (See p. 1-16, 19.) Nobody walks on that side, and it goes nowhere that a pedestrian could desire.

Why is the "Phase 1 Geologic Hazards Evaluation Report", p. 2-113 not included and available for review? When the document refers to a "filled drainage channel at the northern end of the project" (p. 2-114), I suspect that this is the natural drainage valley of San Pablo Creek, and I question whether damage to San Pablo Dam, five miles upstream due to a seismic event could impact the project area. In fact BERMS, the local treated drinking water supplier has examined the possibility of damage to this dam and has taken action to mitigate the consequences of a breach (p. 2-168). However, potential damage within the project should be addressed in this document.

In a voluminous section regarding traffic volume (pp.2-34 to 2-64), the document argues that basically neither of the alternative designs will improve traffic at many intersections in any meaningful way! In fact, some intersections will see increase in traffic tieups! Also, the document argues that in the future the average trip will increase measurably, as well as will traffic volume. With all due respect, the time has come to call the Caltrans' raison d'être for its continued expansion--increased traffic volume and increased travel distances. As of September, 2008 and even earlier, one could argue, the world has irrevocably changed. (As a relevant aside, I note that the document at p. 2-5 states that the median home value in San Pablo in Spring, 2008 was $486,200. Well, that number has drastically reduced, about 50% less, I can attest.) The age of the private automobile is ending. As a consequence, we no longer can expect such increases. Indeed, we are planning for LESS of all these--travel time, car sales, fossil fuel and other energy consumption. And we are planning for increases in the speed and efficiency of mass public transit, locating population centers and transportation hubs in concert. We must calculate the carbon footprint for all human activity, minimize the creation of greenhouse gases, walk more, eat more wisely, cherish our Earth and all who inhabit it. Where does Caltrans fit into this brave new world? They have yet to re-define themselves. The rationale of building a new interchange in order to give greater clearance (the only unconvertible result) above a freeway fails all new-world tests!

I hope that my questions will be addressed, and that certain corrections to the document would be completed. I will always be available for discussion of this letter.

Sincerely yours,

John L. (Jack) Turk
Response to Comment C-19

A - Figures 1-6 and 1-7 in the IS/EA have been updated to include the changes noted. The reader is also referred to the Project Plans in Appendix A, which show the correct ramp configurations for both of the build alternatives.

B – The additional lanes on northbound Amador Street approaching San Pablo Dam Road are already designed to be as long as possible. Further lengthening would require encroaching on additional private property or grading into the China Slide, which could increase slope instability. This option was not considered practicable or desirable as part of the proposed project. With the preferred alternative (Alternative 2), the Amador Street/San Pablo Dam Road will operate at LOS C in both AM and PM peak period, as compared to an unacceptable LOS for both current and future No Build condition.

C - The commenter’s support for the extension of the pedestrian overcrossing over Amador Street is noted.

D - Drainage inlets will be installed along San Pablo Dam Road and Amador Street. The specific design of these drainage facilities will be part of the proposed project’s final design phase for stormwater design.

E - The project will provide improvements for bicycles and pedestrians, including Class II bicycle facilities. Improving bike and pedestrian access is a goal of the City of San Pablo General Plan. San Pablo Dam Road will have a 4-foot shoulder on each side that will be striped as a bike lane. The portion of Amador Street between Alpine Road and San Pablo Dam Road will have a 4-foot shoulder on each side that can be used by bicyclists. Additional bike facilities on Amador Street were not considered practicable as part of this project, as described in the response to Comment C-17-A.

F - The sidewalk on the north side of San Pablo Dam Road is provided for continuity between the sidewalk on the overcrossing and the nearest crosswalk on San Pablo Dam Road at Morrow Drive. Street lighting will be considered in the final design to address pedestrian safety along the sidewalks within the limits of project construction and in accordance with City lighting standards.

G - The Phase I Geologic Hazards Evaluation Report is one of the many technical studies that were completed for the IS/EA. The technical reports are not circulated for review or attached to the IS/EA because the findings are summarized in the IS/EA, including the Geology, Soils, and Seismicity section that is referred to in this comment (see Section 2.10 of the IS/EA). All of the technical reports were made available for public review at Caltrans and the City of San Pablo Library, as described at the beginning of this appendix.

The potential for inundation damage within the project area from a breach of the San Pablo Dam would not be changed by the proposed project. That is, any risk of
occurrence and consequences from a breach would remain the same with either of the proposed build alternatives or the No Build Alternative. The major drainage passages under I-80 within the project limits, at San Pablo and Wildcat creeks, will not be changed by the project. Any water that may have once flowed within the “old drainage channel” prior to the original construction of I-80 (referred to in this comment, and on page 2-114 of the Draft IS/EA) now drains under the freeway at San Pablo Creek, and will continue to do so with or without the proposed project.

H – Traffic conditions will improve with either of the proposed build alternatives, as summarized in Section 2.5.3.2 for Alternative 1 and Section 2.5.3.3 for Alternative 2. Note that the traffic study evaluated a broad study area that included intersections both within and outside of the project limits. Roads and intersections that are within the project limits that will operate at unacceptable conditions (level of service of E or F) in the future will all improve, with one exception (Amador Street/Alpine Road). Either of the build alternatives eliminates the majority of the predicted future bottlenecks and unacceptable operating conditions that will occur with the No Build Alternative, and reduces delay times. The I-80 eastbound off-ramp/Amador Street and Amador Street/San Pablo Dam Road intersections can be improved with the preferred alternative, but not Alternative 1. The Amador Street/Alpine Road unsignalized intersection is on the east side of the freeway and outside of the Department’s jurisdiction; it would experience a slight, but not significant, increase in future delays with the proposed project as addressed in Section 2.5.4.

The reference to building the project to gain greater clearance is assumed to refer to the proposed increase in height of the overcrossing of the San Pablo Dam Road structure at I-80. When a structure such as this overcrossing is planned for replacement, the Department will build it to current height standards, but this is not the purpose of the project.

I – The project proposes to address traffic congestion along this segment of the I-80 corridor (El Portal Drive to McBryde Avenue). A project investment of this type involves years of planning and design, and is proposed to address current congested conditions as well as projected long-term increases in traffic (in this case to the year 2035). Long-range forecasts used for transportation planning are averages, and are based on regional land use plans that are compiled not by the Department, but by the Association of Bay Area Governments and Metropolitan Transportation Commission, with input from cities and counties. The current recession, where economic growth is below average, is certainly affecting the San Francisco Bay Area, but previous recessions have also occurred over the last few decades in 1975, 1981, and 2001 (although not as severe as the current recession). Traffic demand generally decreases with the loss of jobs and reduced economic conditions, but traffic volumes also increase once these recessory periods are over and the long-term average growth in travel demand has steadily increased. Use of mass transit has also increased, including on the Bay Area Rapid Transit (BART) system servicing the Richmond line (located about 1.5 miles west of the project area). Regional bus transit lines use I-80 and local roads, and ferry service is being considered again at locations along the East
Bay shoreline. The I-80 freeway is one element of this regional transportation system. The freeway cannot provide the capacity now or in the future to meet all travel demand, but improvements at local points of congestion or constraint, as within the project limits, provide improved flow and efficiency along an existing corridor that serves as one of several mobility options for the region.

Caltrans’ “raison d’etre” (or “reason for being”) has evolved and continues to evolve since the creation of our first predecessor the Bureau of Highways in 1895. Caltrans manages more than 50,000 miles of highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans carries out its mission of improving mobility across California with six primary programs: Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration and the Equipment Service Center. The Department has been active in moving the people and commerce of California for more than a century from a loosely connected web of footpaths and rutted wagon routes to the sophisticated system that today serves the transportation needs of more than 36 million residents. From the purchase of the Lake Tahoe Wagon Toll Road as the first state highway (now Highway 50) to the "freeway era" of the 1950s and 1960s, the Department has been at the forefront of transportation. In the 1970s, a broader interpretation of transportation arose which led to a new name for the Department, Caltrans, short for the California Department of Transportation. The name change was emblematic of new thinking and a rise in the concept that while highways have long been vital to the state, other forms of transportation were emerging to complement roadways.

The 1990s saw fruition of ideas that had been conceived 15 to 20 years earlier. In recognition that California could not merely build its way out of traffic congestion and air pollution, Caltrans began to emphasize the more-efficient use of highways and their integration with other "modes" of transportation. Public sentiment became more receptive to rail and transit, car pooling, ramp metering, telecommuting flexible work hours, and research into intelligent vehicle and highway systems. Caltrans' development has reflected the changes in American society for more than a century. From a rural society dominated by Euro-American pioneers who exploited the state's vast natural resources to a technologically, global- and service-oriented economy, California has evolved and the raison d’etre for the department continues to evolve with it.

As noted in Section 2.21 of the IS/EA, Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing Green House Gas (GHG) emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans, which was published in December 2006. This document can be found at: http://www.dot.ca.gov/docs/ClimateReport.pdf.
The Department continues to evolve to “fit(s) into this brave new world.” So in answer to the assertion that we have yet to redefine ourselves, we confidently say, “au contraire!” and look forward to another century of evolution and service to the people of the state of California.

The reference to building the project to gain greater clearance is assumed to refer to the proposed increase in height of the overcrossing of the San Pablo Dam Road structure at I-80. When a structure such as this overcrossing is planned for replacement, the Department will build it to current height standards, but this is not the purpose of the project; please see Section 1.2 of the IS/EA for a description of the project Purpose and Need.
Comment C-20 - Williams, David

I-80/San Pablo Dam Road Interchange Project
Draft Initial Study/Environmental Assessment (Draft IS/EA)
Public Meeting
Wednesday, August 19, 2009

COMMENT FORM

Comments must be received no later than 5:00 p.m. September 8, 2009. Comment forms may be deposited in the comment box tonight or mailed/ emailed to:

California Department of Transportation
Attention: Sheryl M. Garcia, Associate Environmental Planner
P.O. Box 23660
Oakland, CA 94623-0660
Email: Sheryl_m_garcia@dot.ca.gov

Name: **David Williams**  Date: **8/19/09**

Affiliation (if applicable):

Address: 4101 MELVIN AVE., EI SORANTE, CA 94803

Comment/Question: I WOULD FAVOR THE OPTION THAT RELOCATES THE AMADOR AVE. INTERSECTION since I HAVE PROPERTY ON HILLCREST RD. AND MANY PEOPLE USE IT TO GET TO GO SOUTH ON AMADOR AND WE GET LOTS OF FACT "SHORTCUT" TRAFFIC. IF THEY COULD TURN LEFT AT AMADOR, I THINK IT WOULD MAKE HILLCREST SAFER.

If El Portal could be widened from church lane to San Pablo Dam Road, that would improve things there too. I would let more lanes on El Portal also would help.

Please continue on back if necessary.

For more information, contact Chris Colwick, Public Outreach Liaison, at (415) 227-1100 x131; Allyn Amsk, Caltrans Public Information Officer, at (510) 286-5445; or Adele Ho, City of San Pablo Public Works Director, at (510) 215-3068; or visit www.ccta.net/EN/main/state/162/166/sanpabloninterchange.html.
The concerns about having the McBayne traffic cross through the Dam Road intersection could, but more expensively, be solved by having the westbound on ramp at Dam Road bridge over the McBayne off ramp lane type arrangement.

Do it right - do it once!

Thank you for your participation.
Response to Comment C-20

A – The commenter indicates a preference for Alternative 2.

B – The commenter’s recommendation is noted, although El Portal Drive to Church Lane extends well outside of the limits for this project. Widening El Portal Drive would require extensive acquisition of homes and other properties that abut the roadway. However, the project will add a lane to El Portal Drive between the eastbound I-80 on-ramp and the westbound I-80 off-ramp, and provide additional lanes at the new intersection of El Portal Drive and the westbound I-80 on-ramp.

C - The ramp configuration suggested in this comment would reconstruct the San Pablo Dam Road westbound on-ramp to bridge over the westbound off-ramp, at approximately the same location as the current at-grade ramp. This is also known as a “braided ramp” design. This design was evaluated but eliminated from further consideration early in the development of the project alternatives due to the high cost of building a new bridge structure for the on-ramp, in comparison to the proposed project where the on- and off-ramps can be constructed on-grade. Alternative design concepts that were evaluated but eliminated from further consideration, including the suggested braided ramp design, are summarized in Section 1.5 of the IS/EA.
Comment C-21 - Wittenbrock, Sandra

Hello Sheryl,

I live in San Pablo, and want to comment on the proposed changes. Either alternative will be an improvement over the current situation, however I have a strong preference for alternative 2, as it will allow the left hand turn from San Pablo Dam Road onto Amador. This would create a much more direct route to get from San Pablo Dam Road to my home.

Thank you,
Sandra Wittenbrock
1243 Marin Ave
San Pablo, CA 94806

Response to Comment C-21

A – The commenter’s preference for Alternative 2 is noted.
Appendix J  Comments on the Initial Study/Environmental Assessment

Comment C-22 - Wolf, Kristina

Shannon Griffin
<my3fellas@hotmail.com>
08/28/2009 10:36 AM

To <sheryl_m_garcia@dot.ca.gov>
cc
Subject mcbryde off ramp closing

dear sheryl,

i am writing to say that i am totally against closing the mcbryde off ramp. i live on mcbryde & i can tell you that things are already a nightmare as regards getting on the freeway going north. that "frontage road" situation is TERRIBLE. surely there is another way to handle this that will not create more crowded, time-consuming traffic snarls. are you aware of just how many people come up and down the arlington to use the off and on ramps at mcbryde?!!! i hope you all will reconsider this "solution."

thank you.

kristina wolf
6044 mcbryde ave.
richmond, ca 94805

Response to Comment C-22

A – The commenter’s opinion about the proposed closure of the McBryde Avenue off-ramp is noted.

The traffic studies included local and regional roads that connect to the project study area, including traffic to and from Arlington Boulevard, which connects to McBryde Avenue in the hills just east of the study area. Both build alternatives have the capacity to accommodate the projected traffic volumes on the proposed frontage road with less delay than the existing configuration.
Section D - Public Hearing Transcript
(Note: responses to public testimony comments follow each comment)

Comment D-01 - DeOrian, Michael

1 The next speaker is Owen Martin. Did I skip a
2 card? All right. Oh, yes, I did. I apologize.
3 Any more speakers before we --
4 MR. DEORIAN: My name is Michael DeOrian. I've
5 lived in this area my entire life. I attended some of
6 these meetings the last time the state made some changes
7 to the freeway. We were lied to then, and I think that
8 we're in for a good for boondoggle now that's going to
9 result in higher taxes.
10 I've got to agree that the Dam Road
11 overcrossing, the interchange there is a mess.
12 I have a couple of questions. How can you
13 justify relocating the pedestrian bridge in front of
14 Riverside School when all that is required of somebody
15 is to cross a 40-foot wide street? That is a ridiculous
16 waste of money.
17 I'd also like to know how you justify that for
18 pedestrian safety. I would like to see the numbers of
19 auto-versus-pedestrian accidents there. You will find
20 none.

A The noise level for the sound walls. We had
21 some educated individual, again from the state, saying
22 that they did studies and they found that sound walls
23 just don't deaden the sound; they reflect the sound and
24 the sound travels farther out.
1. There are some nights you can go outside in our neighborhood and it sounds like you are standing in the middle of the freeway.

2. They cut down all the trees. And we got overgrown weeds now. And one of the reasons why they cut down the trees, they told us that the Monterey Pines that are there are not native to this area. That is garbage. Trees are nice. Monterey Pines are nice.

3. If you put up sound walls, how are you going to take care of the graffiti removal? And the prosecution of the people that you do not go after, how are you going to justify that? That's got to run in the millions of dollars for the graffiti removal alone. We are subject to running the gauntlet of graffiti tax for a very long way.

4. Let's see here. I'm not done yet.

5. Closure of the McBryde offramp. If you're going to have an overcrossing where you're going to open up southbound traffic on Amador Avenue from westbound traffic on the Dam Road, you're going to relieve the people that use the westbound onramp at Dam Road exiting San Pablo. You're going to cut that down by probably more than half. So there is no need to close the McBryde offramp.

6. And I'd also like to know the number of traffic
accidents that have taken place, specifically with the entrance and onramps between, let's see, El Portal, Dam Road and McEryde. I don't think that there's an awful lot. I don't think that there's enough accidents at those points of entrance or exit from the freeway to justify closing any of those onramps/offramps. This, what do you call it, I forget what the term was, this weaving. That's a bunch of hogwash. You're justifying ways to spend money to line your own pockets.

And the funding to be determined I think is going to translates for anybody here in higher property taxes. I think that's just code word for higher property taxes.

And you know what? You guys haven't served us very well with this thing. You just kind of come in here and did a shotgun approach to this thing. I don't appreciate it. And you have a mess there at the overcrossing, I got to agree, but I don't think you thought it out very well.

You can't -- I'd also like to know the height of the overcrossing of the Dam Road. Can you tell me how many -- you say it's too short for the trucks. It is not too short for the trucks. I cannot think of a single truck that has hit the top of the vans that they
hail on the bottom of the overcrossing. It hasn't
happened. I'd like to see the numbers of accident
reports generated by the highway patrol that indicate
that. And that way there we would have a better idea
and maybe you would have some justification in raising
the overcrossing there at the Dam Road. Widening it,
that might be one thing, but raising it and spending
all this money, I'm not for it.

If you do this stuff -- I think we're being
told here that this is just proposed, but I kind of
think it's in the bag. I think it's all a dog-and-pony
show.

I haven't seen any one of guys out there with a
clicker counting cars or out there with the pneumatic
tube across the onramps or the offramps seeing who's
coming and going. It hasn't happened.

And in this area here, I think because of the
fuss that was stirred up the last time you guys went and
tore up that place, I think that area there has been
neglected terribly, and I think it's a payback. And
that's evidenced by the graffiti there. And that's also
evidenced by the lack of vegetation.

That's it. Thank you very much for your
patience.

MR. COLWICK: Thank you for your comments.
Response to Comment D-01

A - The pedestrian overcrossing at Riverside Avenue must be rebuilt to accommodate the proposed frontage road to McBryde Avenue on the west side of I-80. The West Contra Costa Unified School District stated a preference that the reconstructed overcrossing should also extend across Amador Street. Their input was provided as a preventative measure. They have frequently observed, and received feedback from parents, about fast vehicles traveling through the school pedestrian traffic zone on Amador Street. School crossing guards are necessary, but they cannot enforce traffic laws and cannot be present during all hours that children are present, such as after school hours. The project is predicted to increase traffic slightly on Amador Street and therefore the overcrossing is proposed to substantially reduce the risk of pedestrian-vehicle conflicts at this location. The extension of the overcrossing was considered a cost-effective addition to the project since the structure required reconstruction to accommodate the proposed frontage road.

B - Soundwalls can reflect some vehicle noise under certain circumstances, but the effect is rare and not substantial. At night, when other community (non-freeway) noise levels are very low, freeway noise may not be any louder but may be more perceptible. With the proposed project, noise levels were studied and will be very similar to current existing conditions and future no-project levels, since the freeway and the soundwalls already exist. The minor changes in location of the soundwalls would not substantially change long-term noise levels, as documented in Section 2.13.3 of the IS/EA. Trees and vegetation that are removed because of the project will be replaced wherever feasible. See Section 2.6.4 for more information. Landscaping such as vines planted along soundwalls can reduce graffiti. Planting to screen the walls is recommended in Section 2.6.4 and will be included if and where it can be safely accessed for maintenance.

C - The main reason for removing the McBryde Avenue off-ramp is that it does not meet current design standards, specifically the standard relating to spacing between interchanges. Please also refer to the response to comment C-06-B.

D – As described in Section 1.2, the purpose of the project is to reduce traffic congestion, reduce weaving conflicts, and provide efficient and safe bicycle and pedestrian access. Accidents are not the primary reason or justification for building this project. For reference, accident statistics are listed in Table 1-2 of the IS/EA.

E - Complete reconstruction of the existing San Pablo Dam Road Interchange is required to widen the overpass. The existing clearance height of the overcrossing is approximately 14.4 feet in the I-80 westbound direction while the current height clearance standard is 16.5 feet. When reconstructing any portion of a highway or roadway, current highway design standards, including vertical clearance, must be met. When driving west on I-80 under the San Pablo Dam Road overcrossing, exposed rebar and broken concrete can be observed where the structure has been hit by overheight vehicles. Although these incidents have occurred and are undesirable, substandard height is not the purpose of reconstructing the interchange.
F - Traffic studies were performed in 2006 and 2007. Vehicle counts were taken to help calibrate the traffic modeling. Caltrans also performs annual counts on the freeway sections and ramps within the project area, which are accessible on the Internet (http://traffic-counts.dot.ca.gov/). People are not always present during traffic counts, and may only be on-site to set up or retrieve the equipment. The traffic count equipment may also be hidden to prevent theft.
Comment D-02 - Harris, Adrienne

of. You don't want to say, oh, here's the bike lane out on the bridge and yet it's an oasis that you can't get to.
I'll leave it at that. And I'm interested in any additional comments people would like to share with us.
Thank you.
MR. COLWICK: Thank you. I think we have one more comment.
Adrienne Harris.
MS. HARRIS: Yes. I'm Adrienne Harris. I live a block south -- well, a block and half south of the San Pablo Dam Road, the San Pablo Avenue interchange. And I'm also here on behalf the Richmond Bicycle/Pedestrian Advisory Committee.
I'm sure that the members will want to examine this and submit comments. I'm a little bit confused about the project scope with respect to the interchanges of San Pablo Avenue and San Pablo Dam Road going up there to the freeway onramp. I think Robert addressed coming west on San Pablo Dam Road, and the concern about also going east on San Pablo Dam Road, and crossing left onto San Pablo Avenue after crossing the bridge.
And I just need to look at this. I'm sure our members will want to have a study session, but please
Response to Comment D-02

A – The IS/EA document referred to will remain available at the following website, as included in the original announcements:

http://ccta.net/EN/main/state/162/166/sanpablointerchange.html

The City of San Pablo’s website also includes information on the project at:

http://www.ci.san-pablo.ca.us/main/I-80Interchange.htm
Comment D-03 - Luong, Huu

11 MR. LUONG: My name is Huu Luong. Sorry. I
12 just want to share my experience about the sound wall.
13 I just heard from two speaker it’s just totally
14 different from my experience. I live in one of those
15 house that my master bedroom is ten feet away from the
16 sound wall. And since they build it up, my wife can
17 sleep through the daytime so she can go and work at
18 night.
19 Thank you very much.
20 Unless you have a collision of car accident,
21 yes, you can hear it. But as far as the sound wall, we
22 didn't have a problem ever since.
23 Thank you.
24 MR. COLWICK: Thank you for your comment.

Response to Comment D-03

A – The comment refers to a soundwall constructed as a result of a previous (separate) project. The commenter’s opinion is noted.
Appendix J  Comments on the Initial Study/Environmental Assessment

Comment D-04 - Martin, Owen

1  Owen Martin and then Robert Raburn.
2    MR. MARTIN: I’m hoping that they put more
3   plants on the sound wall that maybe grow faster or they
4   find a way to water them more frequently to grow to keep
5   off the graffiti.
6    But I especially like the way they worked the
7   Amador option, too, so the traffic doesn’t get off on
8   Amador, run up the Amador and get back on the freeway at
9   San Pablo Dam Road.
10    So I was hoping that they find the funding.
11    MR. COLWICK: Thank you for your comments.

Response to Comment D-04

A - Graffiti can be reduced with vegetation at or on the soundwalls. This project will
include revegetation, including vines on soundwalls, where it is practicable and can be
maintained.
Comment D-05 - Raburn, Robert

12 Robert Raburn.
13 And are there any additional folks who wish to
14 speak at the microphone?
15 MR. RABURN: Good evening. I'm Robert Raburn.
16 I'm the director of the East Bay Bicycle Coalition.
17 I'm really here tonight to learn more about
18 this project here from the neighbors, find out about the
19 two project proposals. We will submit written comments
20 on the EIR. We've been involved with this project since
21 before it was really a project.
22 Many of you know that if you're travelling on a
23 bicycle down San Pablo Dam Road and wanted to turn left
24 onto Amador to go to the El Cerrito del Norte Bart
25 station, you can't do that legally. We took videos back
Appendix J  Comments on the Initial Study/Environmental Assessment

1 in 1998 showing illegal crossover there.
2 So part of our goal out of any project in this
3 area would be to create a connection.
4 I'd like to make just a couple of preliminary
5 comments that I see. The Amador is a part of the I-80
6 bikeway. It's an assigned regionwide bikeway that goes
7 from Rodeo all the way down essentially to El Cerrito to
8 Bart.
9 Again, there is no way to make that left turn
10 from San Pablo Dam Road onto Amador today. I'm
11 concerned, however, that directing additional left turn
12 traffic onto Amador, particularly in that stretch up to
13 McBryde in front of Riverside Elementary, there's not
14 enough room for a bicyclist and a motorist to share the
15 road in the southbound direction. It's a fairly narrow
16 lane.
17 And so I would want to see a cross section with
18 -- including enough room for the bicyclist to share the
19 road up to McBryde in this project so that that could
20 work for cyclists.
21 As well, heading down or westbound on San Pablo
22 Dam Road over the I-80 overcrossing, in alternative two,
23 it looks like there would be a major conflict between
24 bicycle travel and free right turn lane onto the freeway
25 onramp. And that would definitely need to be taken care
A - The project will provide Class II bicycle facilities on the portion of Amador Street that is within the project limits. Additional widening of Amador Street would require acquisition of right-of-way, elimination of existing landscaping, on-street parking, or and was considered impracticable as part of this project. Please refer to the responses to Comments B-01 and C-17 for more detail.

B - The design will be revised to provide a bike lane on the inside of the right turn lane to the eastbound I-80 on-ramp from San Pablo Dam Road. Also refer to the response to Comment B-01.
Comment D-06 - Serb, Doreen

4 MS. SERB: My name is Doreen Serb. And I've
5 lived in this area for my entire life, and I just want
6 to predicate it with that, and so do quite a number of
7 people here.
8 I have to say I'm even more disappointed from
9 what I've heard, the lack of foresight about closing the
10 McBryde exit. I've been talking to lots of people about
11 the closure of that.
12 And to present it as I've heard said this
13 evening, they are avoiding the word "closure" of McBryde
14 because of this proposed frontage road, which is going
15 to cause a big difference in those of us who use that
16 exit.
17 Right now, if I get off at McBryde, I would say
18 on average I spend 15 seconds there before I can pull on
19 to McBryde. You're saying that we will stop at a stop
20 -- at a stoplight and then cross over the Dam Road and
21 to get on the frontage road -- huge difference.
22 And I don't think that you've properly done
23 studies because it is not just us that live up in East
24 Richmond Heights who use that exit. It is the homes
25 that are around Riverside, it is the people that live
down Rehm and live down McBryde on the other side of San Pablo Avenue. They no longer take the Dam Road exit.

So what you're proposing is to take all those cars -- go count them that get off of McBryde -- and all of those cars that get off at the Dam Road, and you're going to combine them to all come off at the Dam Road.

And most of us, frankly, saw this coming when the casino was built. Because one of the major discussions was that the Dam Road could not sustain the amount of traffic that would be created from that building being built there. Most of the casinos are built out in nowhere, if you go visit them. They are not in heavily populated residential and business areas.

And I just think you have to do a numbers study of who is using McBryde. You're -- you're going to have such a tremendous pile-up at the Dam Road. I don't think that -- and you're talking about the population in 2015. I can't even imagine 2025.

I just think that it's a very misguided project as far as McBryde is concerned. And I don't see how you can allow it to go through without doing those studies about who is using it.

I have a friend who lives as far away as, let's see, 23rd, so she is down on 18th and Lincoln who uses McBryde.
1 I -- I think that your study needs to be redone
2 as far as that project goes.
3 Thank you.
4 MR. COLWICK: Thank you for your comment.

11 MS. SERB: Can we ask questions?
12 MR. COLWICK: We're going to break once the
13 public comment period is completed and resume the open
14 house and that's your opportunity to ask the project
15 team for more details.
16 MS. SERB: Then I would like to -- I can talk
17 loud enough from here. Doreen Serb.

18 About the noise factor, ever since they had
19 that slide where you get on the freeway from the Dam
20 Road or Amador heading east, northeast onto I-80, and
21 they did sort of a quick repair, they didn't do anything
22 near what they did when Pinole had the same thing
23 happen. They cut down the foliage and the trees that
24 were there.
25 And I think all of us that live in the same
1 East Richmond Heights, as Mike DeOrian, can attest to
2 the noise level abhorrent. All the walls do -- I mean,
3 anybody who knows anything about sound or physics knows
4 it blocks it for the houses directly behind them, but
5 the sound must go somewhere. They are waves and they go
6 up and they come up the hill.
7 And I -- from my understanding, there's a
8 decibel of sound that is illegal to have, and I believe
9 we've breached that threshold. And it's also contingent
10 on the atmospheric pressure, not to get technical, but
11 the more condensation there is that effects the level of
12 the noise.
13 And as Michael says, I can stand in my backyard
14 many nights and it sounds like exactly what Mike said,
15 you're standing next to the freeway. And we supposedly
16 have some of the nicest homes in the area. And it's
17 just -- it's almost contradictory.
18 And I would like to add one more addendum about
19 the McBryde exit, which is when you're doing your study
20 not only should you consider the homes that are to the
21 west and to the east of the McBryde exit, but people
22 also use the McBryde exit as a connect to the Arlington
23 to get into the homes that are all up in that area.
24 So as Michael said, I haven't seen a counter
25 there on the exits, I haven't seen an accident, I
Response to Comment D-06

A – Please refer to the response to comment C-06-B.

B - Noise levels were considered for existing and future conditions, with and without the project, to determine whether (1) the project would increase noise and (2) the maximum future traffic noise could exceed an “abatement” level or a locally established threshold. These criteria and how they are applied are explained in detail in Section 2.13 of the IS/EA. Existing noise levels in the proposed project area were determined to approach or exceed the level at which noise abatement measures must be considered, and therefore soundwalls were evaluated. If a soundwall is already present, it was re-evaluated.

Soundwalls are considered effective if they can reduce traffic noise levels by at least 5 dBA or more near the freeway. Soundwalls cannot eliminate all freeway noise. Soundwalls are most effective at properties nearest the freeway, where the walls can best shield or block the line-of-sight between the subject property and the traffic. In contrast, traffic noise may remain perceptible farther from the freeway, but at lower levels than those near the freeway, which do not exceed a threshold and cannot be effectively reduced by a soundwall.

The noise study evaluated all representative properties that could be adversely affected by freeway noise, and effective noise reduction abatement is proposed wherever feasible. With the proposed abatement measures (soundwalls), no properties would experience substantial adverse impacts related to increased noise from the project.

C - Traffic studies were performed in November 2006 and April 2007. Accident data is compiled by Caltrans based on reported incidents, and is presented in Table 1-2 of this report; over 400 accidents have been reported over a three year period (2004 to 2007) within the project limits (freeway and local roads). The overpass has been previously damaged by tall trucks; chipped concrete is visible from the westbound I-80 lanes. Please refer to the response to Comment C-04-A.
Comment D-07 - Williams, David

5    David Williams. And the next speaker is
6    Michael DeOrian.
7    MR. WILLIAMS: Yes. I am David Williams, and
8    I've also lived here my entire 62 years in a house just
9    above the intersection on Hillcrest is where I grew up.
10    Now I live just down between El Portal Drive and the
11    entrance of the freeway just off the Dam Road. One side
12    of my property is on the Dam Road.
13    And people don't just take a U-turn around
14    McBryde to come back to get up on the -- on the hill.
15    They also come up Morrow Drive or the beginning of
16    Hillcrest off of San Pablo Dam Road and come up
17    Hillcrest so that you can see a lot of traffic on
18    Hillcrest Road.
19    And I really like the idea of putting the new
20    lanes so there is a left turn off of the Dam Road onto
21    El Portal. I'm sure it will make Hillcrest a much safer
22    street.
23    But I use personally the El Portal Drive
24    interchange most. And I'm a little concerned if you
25    currently close it off where you're going to close it
off and then have only a 2-lane road from where --
there's a 4-lane road there, two lanes each way, so one
lane goes onto the freeway and one goes on up to San
Pablo Dam Road there. And if you close there and then
you only have a 1-lane road all the way up, it's going
to double the traffic that needs to use that portion of
El Portal Drive.

As it is, it's pretty crowded there and
sometimes you got to go through three -- three rotations
of the light to get off of westbound 80 to get off to El
Portal Drive going towards San Pablo Dam Road.

It would be most useful if you could plan to
widen El Portal Drive from the Shell station up to San
Pablo Dam Road at that point and make it a 4-lane road
so that there would be more capacity. I know that would
be more expensive, because you would have to buy more
houses, and I understand that.

My suggestion there on the McBryde is again a
more expensive one, but if you had the onramp from San
Pablo Dam Road bridging over the offramp to McBryde,
that would -- you'd still have to use the frontage road
space, but it wouldn't be quite so conflicted as far as
people having to go through the San Pablo Dam Road
intersection to go onto McBryde.

MR. COLWICK: Thank you for your comment.
Response to Comment D-07

A - The traffic will increase on El Portal Drive because of the closure of the existing westbound I-80 on-ramp, as noted in this comment. This is an unavoidable effect of consolidating the interchange, as proposed in the project, to eliminate the nonstandard distance between the existing westbound El Portal Drive on-ramp and San Pablo Dam Road off-ramp. With the project, the constraint on this road will be at the modified intersection of El Portal Drive and the existing freeway on-ramp and proposed relocated off-ramp. Traffic at this intersection will operate during the peak period at LOS B and C for the through/straight movements, and LOS D for the left turn onto the westbound ramp. Maximum (peak period) delays at the intersection will be 35 seconds or less. These are considered acceptable operating conditions.

Widening El Portal Drive in this area would require significant additional right-of-way and would significantly increase the project cost, for the reasons identified in the comment (additional acquisition of homes). The predicted operating conditions of the roadway and intersection were not sufficiently affected to justify additional acquisition of homes and property.

B – This comment recommends a “braided ramp” design, where the on-ramp would be constructed on a bridge that passes over the off-ramp. This design was evaluated but withdrawn from further consideration because of the cost of building an additional bridge structure. Please refer to the response to Comment C-20-C.