Interstate 5 North Stockton Corridor Improvements

On Interstate 5
between 0.2 mile south of Charter Way/Martin Luther King Jr. Boulevard
and 1.8 miles north of Eight Mile Road in northwest Stockton, California

10-SJ-5- PM 25.0/37.1
10-0G4700
SCH No. 2008102101

Final Environmental Impact Report/ Environmental Assessment With Finding of No Significant Impact

Prepared by the
State of California Department of Transportation

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

March 2010

Caltrans

General Information About This Document

What's in this document?

This document contains a Final Environmental Impact Report and Finding of No Significant Impact, which examine the environmental effects of a proposed project on Interstate 5 in San Joaquin County.

The Draft Environmental Impact Report/Environmental Assessment was circulated for public review and comment from December 23, 2009 to February 6, 2010. Responses to the circulated document are shown in the Comments and Responses section of this document. Throughout this document, a line in the margin indicates changes from the draft document.

What happens after this?

The proposed project has completed environmental compliance after the circulation of this document. When funding is approved, the California Department of Transportation, as assigned by the Federal Highway Administration, can design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Gail Miller, Senior Environmental Planner, Central Sierra Environmental Analysis Branch, 2015 East Shields Avenue, Suite 100, Fresno, CA 93726; (559) 243-8405 Voice, or use the California Relay Service TTY number, 711

SCH Number: 2008102101
10-SJ-5- PM 25.0/37.1
10-0G4700

Interstate 5 North Stockton Corridor Improvements

FINAL ENVIRONMENTAL IMPACT REPORT/ FINDING OF NO SIGNIFICANT IMPACT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 United States Code 4332(2)(C) and 23 United States Code 327

THE STATE OF CALIFORNIA
Department of Transportation

March 22, 2010
Date of Approval

Ross Chittenden
District 10 Director
California Department of Transportation

CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT

FOR

Interstate 5 North Stockton Corridor Improvements

The California Department of Transportation (Caltrans) has determined that the alternative (the High Occupancy Vehicle/Carpool Lanes Alternative) will have no significant impact on the environment. This Finding of No Significant Impact is based on the attached Environmental Assessment which has 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 Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment.

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.

March 22, 2010
Date

for
Ross Chittenden
District 10 Director
California Department of Transportation

Summary

Overview of Project Area

The California Department of Transportation (Caltrans), in cooperation with the City of Stockton and the San Joaquin Council of Governments, proposes to build freeway and interchange improvements on Interstate 5 between 0.2 mile south of Charter Way/Martin Luther King Jr. Boulevard and 1.8 miles north of Eight Mile Road in northwest Stockton in San Joaquin County.

Interstate 5 within the project limits is an eight-lane freeway (four mixed-flow lanes in each direction) from south of Charter Way/Martin Luther King Jr. Boulevard to Country Club Boulevard, where it transitions to a six-lane freeway (three mixed-flow lanes in each direction) from Country Club Boulevard to Highway 12 in Lodi. Interstate 5 was funded as part of the Federal Highway Aid Act of 1956, also known as the National Interstate and Defense Highways Act, which appropriated $25 billion for the construction of 40,000 miles of interstate highways over a 10-year period. Before the creation of Interstate 5, the segment of Interstate 5 through Stockton was part of the State Highway System as Legislative Route 5.

Purpose and Need

The purpose of the project is to:

- Reduce traffic congestion and delay on Interstate 5
- Encourage High-Occupancy Vehicle use in the Interstate 5 corridor within the project area
- Improve regional mobility
- Provide a balanced circulation system and reduce out-of-direction travel

The project is needed because northwest Stockton has been and is expected to continue experiencing substantial traffic growth, both locally from new area development and regionally from nearby communities such as Sacramento, Lodi, Lathrop, Manteca, and Tracy. In addition, Interstate 5 is a major intercity and

interstate trucking route for goods movement along the West Coast. This growth, along with high truck volumes and substantial through traffic on Interstate 5, has not only increased traffic congestion and delay, but also caused indirect consequences such as inefficient energy use and deteriorating air quality.

Proposed Action

Caltrans, in cooperation with the City of Stockton and the San Joaquin Council of Governments, proposes to build freeway and interchange improvements on Interstate 5 to:

- Add lanes in the median to Interstate 5 between Country Club Boulevard and Eight Mile Road
- Build auxiliary lanes between interchanges within the project limits north of March Lane
- Change two existing interchanges (at Hammer Lane and Eight Mile Road)
- Build two new interchanges (at Otto Drive and North Gateway Boulevard)

In addition, one alternative would operate the additional lanes as high-occupancy vehicle/carpool lanes during peak periods and would re-stripe the existing inside lanes between Charter Way/Martin Luther King Jr. Boulevard and Country Club Boulevard to high-occupancy vehicle use, also during peak periods.

Three alternatives are being considered: two build alternatives and a no-build alternative.

Alternative 1 Mainline/Interchanges – Mixed-Flow Lanes

This alternative would widen the freeway from six lanes to eight lanes by adding one lane in each direction in the median from Country Club Boulevard (post mile 28.5) to north of Eight Mile Road (post mile 37.1) for mixed-flow traffic. All bridges over local roads and waterways in this segment would be widened in the median. The proposed widening in the median would match the existing eight-lane section of road south of Country Club Boulevard.

Interstate 5 would be widened to the outside to provide auxiliary lanes in both northbound and southbound directions between the March Lane and Benjamin Holt Drive interchanges and between Benjamin Holt Drive and Hammer Lane.

Interchange Changes and Additions

The following interchange improvements would be made:

Hammer Lane Interchange. On- and off-ramps would be widened to accommodate greater traffic volumes entering and exiting the Interstate 5 mainline. Hammer Lane would be changed to improve left-turn lane storage and intersection operations at Mariner's Drive and Kelly Drive intersections.

Otto Drive Interchange. A new interchange would be built on Interstate 5 at Otto Drive, 1 mile north of Hammer Lane, next to the Twin Creek Estates residential community to the west and residential uses to the east. Otto Drive currently dead ends at Interstate 5 on both sides of the freeway. Northbound and southbound auxiliary lanes would be built between Otto Drive and Hammer Lane interchange ramps. Interstate 5 would be raised over Otto Drive with new bridges built for Otto Drive to pass underneath at grade. Otto Drive would be elevated slightly to the east of Interstate 5 to provide floodplain protection for areas east of Interstate 5. Otto Drive would be further changed to provide left-turn lane storage and intersection traffic signals at Mariners Drive and Bancroft Way.

Eight Mile Road Interchange. On- and off-ramps would be widened to accommodate forecasted traffic volumes entering and exiting the Interstate 5 mainline. Northbound and southbound auxiliary lanes would be built between the new interchange at Otto Drive and the Eight Mile Road interchange ramps.

New Interstate 5 Crossing. An additional new east-west crossing of Interstate 5 will be built about 2,100 feet north of the Eight Mile Road centerline. This crossing would be an undercrossing of Interstate 5 connecting planned development east and west of the freeway. No access to Interstate 5 would be provided.

North Gateway Interchange. A new interchange would be built about 1.8 miles north of Eight Mile Road. The proposed interchange would also accommodate a new east-west arterial/expressway, tentatively known as North Gateway Boulevard, between Interstate 5 and State Route 99.

Alternative 2 Mainline/Interchanges – High-Occupancy Vehicle/Carpool Lanes

This alternative would widen the freeway from six lanes to eight lanes by adding one lane in each direction in the median from Country Club Boulevard (post mile 28.5) to north of Eight Mile Road (post mile 37.1) operated for high-occupancy vehicle/carpool lane traffic during morning and afternoon peak hours. All bridges

over local roads and waterways in this segment would be widened in the median. The proposed widening in the median would match the existing eight-lane section of road south of Country Club Boulevard.

Interstate 5 would be widened to the outside to provide both northbound and southbound directions between the March Lane and Benjamin Holt Drive interchanges and between Benjamin Holt Drive and Hammer Lane.

This alternative would also convert the existing inside fourth lane in each direction to high-occupancy vehicle/carpool lanes from Country Club Boulevard (post mile 28.5) to north of Eight Mile Road (post mile 37.1). This action would apply to the two inside lanes of the existing eight-lane section between Charter Way/Martin Luther King Jr. Boulevard and Country Club Boulevard, which would be re-striped and converted to high-occupancy vehicle/carpool lanes to conform to the proposed widening in the median for high-occupancy vehicle/carpool lanes. This alternative has been selected as the preferred alternative.

Joint California Environmental Quality Act/National Environmental Policy Act Document

The proposed project is a joint project by the Caltrans and the Federal Highway Administration, and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act and the National Environmental Policy Act. Caltrans is the lead agency under California Environmental Quality Act. In addition, Federal Highway Administration's responsibility for 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 per 23 United States Code 327.

Some impacts determined to be significant under the California Environmental Quality Act may not lead to a determination of significance under the National Environmental Policy Act. Because the National Environmental Policy Act is concerned with the significance of the project as a whole, it is quite often the case that a "lower level" document is prepared for the National Environmental Policy Act. One of the most commonly seen joint document types is an Environmental Impact Report/Environmental Assessment.

Following receipt of public comments on the Draft Environmental Impact Report/Environmental Assessment and circulation of the Final Environmental Impact Report/Environmental Assessment, as lead agency, Caltrans will be required to take actions regarding the environmental document including whether to certify the Environmental Impact Report and issue findings and a Statement of Overriding Considerations. Caltrans will also decide whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement.

Project Impacts

The following table summarizes the results of the environmental studies, displaying the potential impacts for each alternative.

Summary of Major Potential Impacts from Alternatives

Potential Impact		Alternative 1	Alternative 2 (Preferred Alternative)	No-Build Alternative
Land Use	**Consistency with the City of Stockton General Plan**	Yes	Yes	No
	Consistency with the San Joaquin County General Plan	Yes	Yes	No
Farmlands/Timberlands		58 acres	58 acres	No impact
Community Character and Cohesion		Residential displacement and change in circulation patterns	Residential displacement and change in circulation patterns	No impact
Relocation	**Business displacements**	No impact	No impact	No impact
	Housing displacements	24 multi-family units	24 multi-family units	No impact
	Utility service relocation	Temporary interruption of services to utility customers during relocation of power lines for construction may occur	Temporary interruption of services to utility customers during relocation of power lines for construction may occur	No impact
Environmental Justice		No disproportionately high or adverse effects	No disproportionately high or adverse effects	No impact
Utilities/Emergency Services		Temporary interruption of services to utility customers during relocation of the power lines for construction. No interruption of emergency services anticipated.	Temporary interruption of services to utility customers during relocation of the power lines for construction. No interruption of emergency services anticipated.	No impact
Traffic and Transportation/ Pedestrian and Bicycle Facilities		The project would improve conditions for vehicles, pedestrians, and bicycles	The project would improve conditions for vehicles, pedestrians, and bicycles	No impact

Potential Impact	Alternative 1	Alternative 2 (Preferred Alternative)	No-Build Alternative
Visual/Aesthetics	Realignment and replacement of structures would have visual impacts	Realignment and replacement of structures would have visual impacts	No impact
Water Quality and Storm Water Runoff	Surrounding infiltration basins	Surrounding infiltration basins	No impact
Paleontology	Sensitive for fossil resources in Calaveras River deposits	Sensitive for fossil resources in Calaveras River deposits	No impact
Air Quality	No permanent impacts	No permanent impacts	No impact
Noise and Vibration	Increased noise levels require consideration of noise abatement	Increased noise levels require consideration of noise abatement	No impact
Natural Communities	8.33 acres of valley oak woodland	8.33 acres of valley oak woodland	No impact
Wetlands and other Waters	0.02 acres of wetlands	0.02 acres of wetlands	No impact
Plant Species	Slough thistle, delta tule pea, Sanford's arrowhead, Suisan marsh aster, and Delta mudwort	Slough thistle, delta tule pea, Sanford's arrowhead, Suisan marsh aster, and Delta mudwort	No impact
Animal Species	Various bat species, cooper's hawk, sharp-shinned hawk, tricolored blackbird, western burrowing owl, ferruginous hawk, mountain plover, northern harrier, yellow warbler, white-tailed kite, Merlin, prairie falcon, yellow-breasted chat, loggerhead shrike, pacific pond turtle, central valley fall/late fall-run chinook salmon, Sacramento splittail, Longfin smelt	Various bat species, cooper's hawk, sharp-shinned hawk, tricolored blackbird, western burrowing owl, ferruginous hawk, mountain plover, northern harrier, yellow warbler, white-tailed kite, Merlin, prairie falcon, yellow-breasted chat, loggerhead shrike, pacific pond turtle, central valley fall/late fall-run chinook salmon, Sacramento splittail, Longfin smelt	No impact
Threatened and Endangered Species	Giant garter snake, Swainson's hawk, Delta smelt, Central Valley steelhead trout	Giant garter snake, Swainson's hawk, Delta smelt, Central Valley steelhead trout	No impact
Construction	Temporary impacts	Temporary impacts	No impact

Potential Impact	Alternative 1	Alternative 2 (Preferred Alternative)	No-Build Alternative
Cumulative Impacts	No impact	No impact	No impact

Coordination with Other Agencies

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

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Services	Section 7 consultation for threatened and endangered species.	Formal consultation for impacts to the giant garter snake was initiated on March 13, 2009. Anticipating Biological Opinion from U.S. Fish and Wildlife Service by August 2009.
U.S. Army Corps of Engineers	Section 404 Individual Permit for filling or dredging waters of the United States. Section 408 Permit for changes to levees at water crossings.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
California Department of Fish and Game	1602 Agreement for Streambed Alteration Section 2080.1. Consistency Determination for Threatened and Endangered Species.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification. Waste Discharge Permit Review and approval of stormwater discharge treatments.	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
NOAA Fisheries	Section 7 consultation for Threatened and Endangered Species and Essential Fish Habitat.	Formal consultation for impacts to the Delta smelt and Central Valley steelhead trout was initiated on March 13, 2009.
City of Stockton Encroachment Permit	For construction of improvements on local roadways within the City of Stockton.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
San Joaquin County Encroachment Permit	For construction of improvements on local roadways within San Joaquin County.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
San Joaquin County Flood Control Agency	Confirmation that the project meets 200-year flood control as required by Federal Emergency Management Agency.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
U.S. Coast Guard	Section 10 Permit for construction of bridges in navigable waters.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
Central Valley Flood Control Board	Permit for changes to levees at water crossings.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), in cooperation with the City of Stockton and the San Joaquin Council of Governments, proposes to build freeway and interchange improvements on Interstate 5 between 0.2 mile south of Charter Way/Martin Luther King Jr. Boulevard and 1.8 miles north of Eight Mile Road in northwest Stockton. The improvements would add two additional travel lanes (one in each direction) on Interstate 5 between Country Club Boulevard and Eight Mile Road, add auxiliary lanes between interchange ramps from March Lane to North Gateway Boulevard, change two existing interchanges (Hammer Lane and Eight Mile Road) and build two new interchanges (at Otto Drive and North Gateway Boulevard).

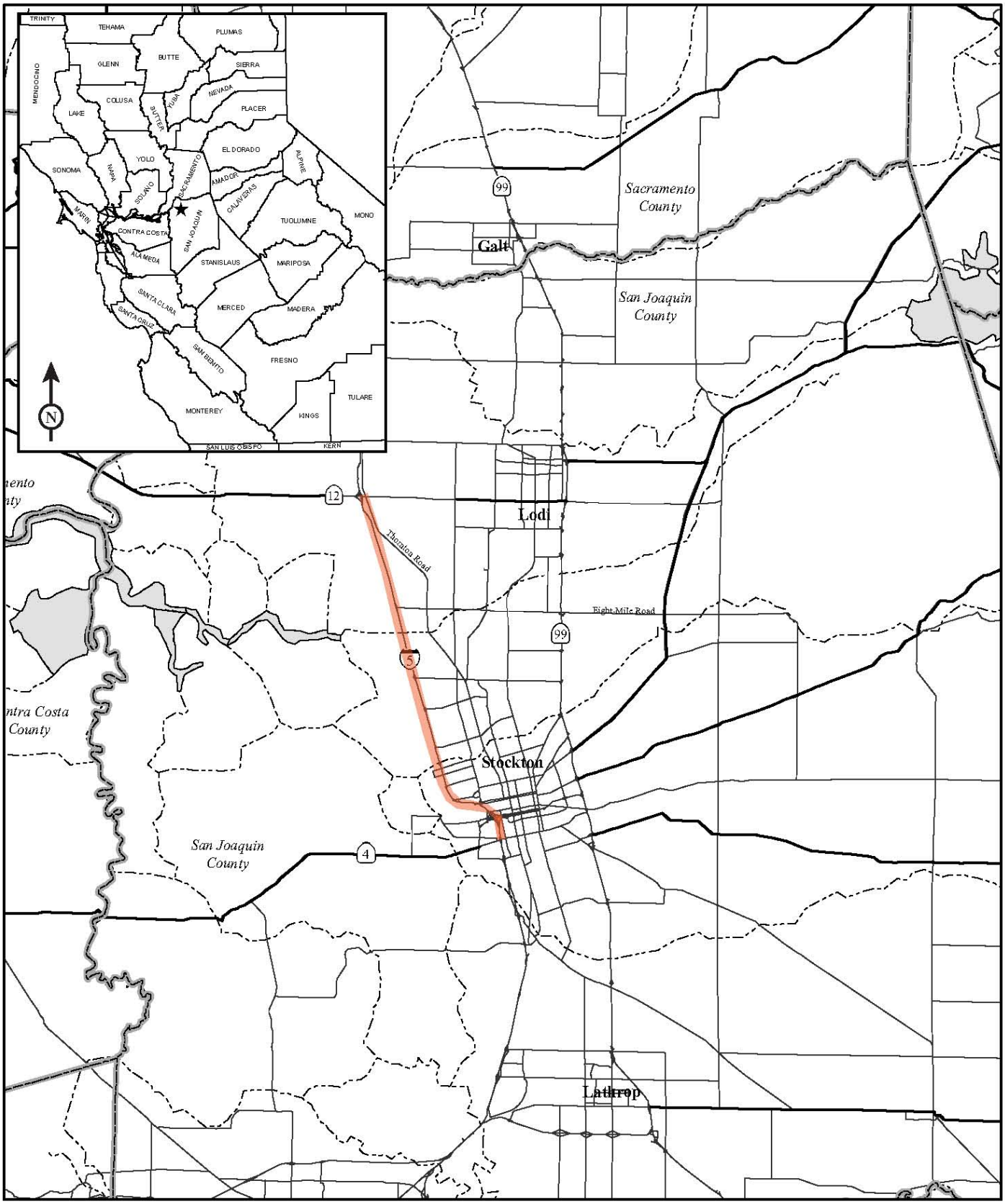
Once completed, the additional travel lanes would operate as high-occupancy vehicle/carpool lanes during the morning and afternoon peak periods. The project would also re-stripe the existing inside lanes between Charter Way/Martin Luther King Jr. Boulevard and Country Club Boulevard to be high-occupancy vehicle/carpool lanes during peak periods or as mixed-flow lanes depending on the alternative chosen. The changes to the four interchanges would include high-occupancy vehicle bypass lanes on the on-ramps (see proposed project overview plans in Appendix G).

The project would cover 12.1 miles of Interstate 5, from post mile 25.0 to post mile 37.1 (see Figures 1.1 and 1.2).

This project is included in the 2007 and 2008 Federal Statewide Transportation Improvement Program and the San Joaquin Council of Governments' 2007 Regional Transportation Plan. Funding is proposed from a variety of sources including the San Joaquin County Measure K Renewal sales tax program, Regional Surface Transportation Program, future state bond programs, City of Stockton Public Facility Fees generated by ongoing development, and direct developer contributions.

Background

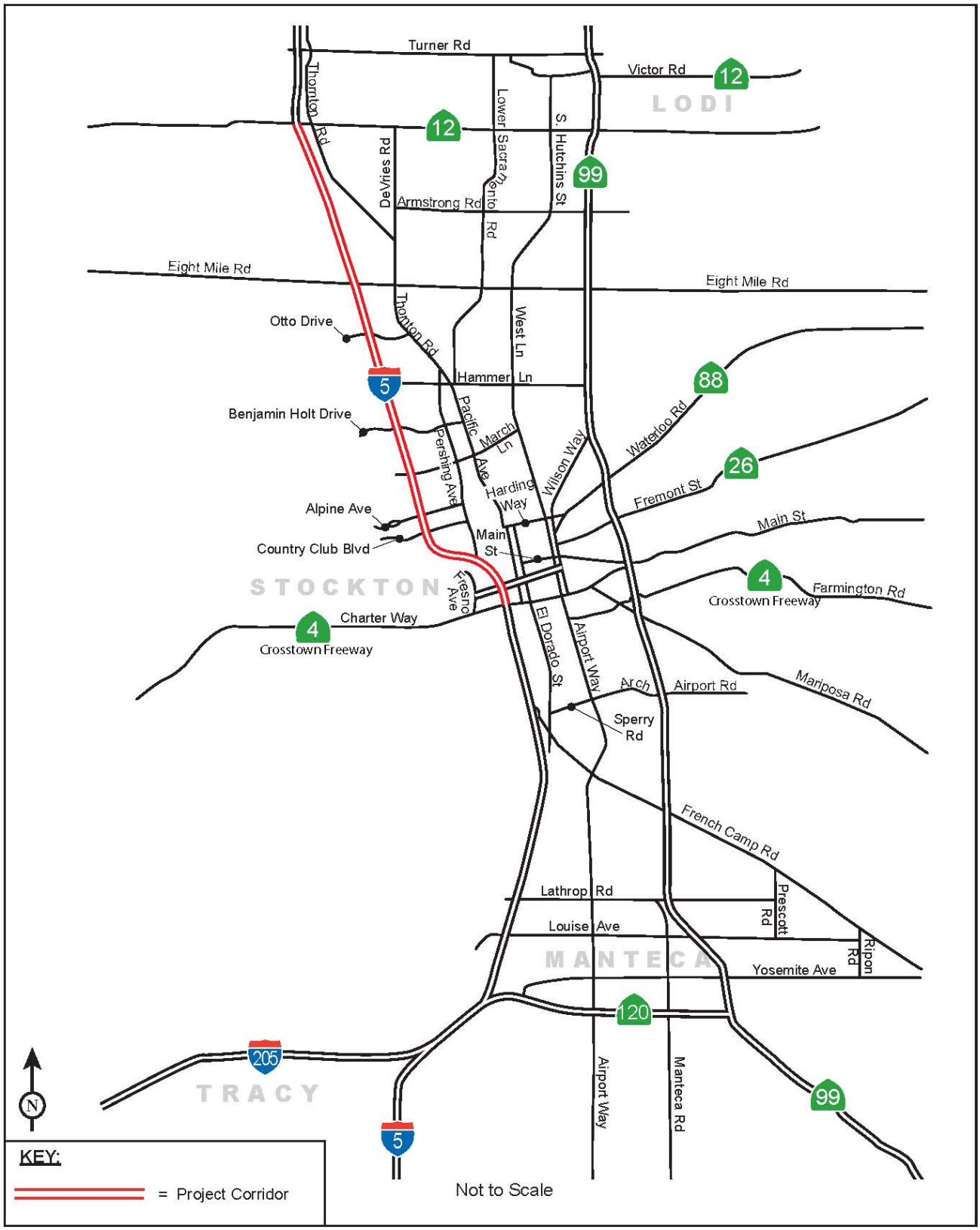
Interstate 5 within the project limits is an eight-lane freeway (four mixed-flow lanes in each direction) from south of Charter Way/Martin Luther King Jr. Boulevard to Country Club Boulevard. It is a six-lane freeway (three mixed-flow lanes in each direction) from Country Club Boulevard to Highway 12 in Lodi.



SOURCE: US Census Burea, Tiger2K (2002)

Figure 1.1

Vicinity Map



SOURCE: US Census Burea, Tiger2K (2002)

Figure 1.2

Project Location Map

Interstate 5 was funded as part of the Federal-Aid Highway Act of 1956, also known as the National Interstate and Defense Highways Act (Public Law 84-627), enacted on June 29, 1956. Before the creation of Interstate 5, the segment of Interstate 5 through Stockton was part of the State Highway System as Legislative Route 5.

The Interstate 5 project improvements were originally included in requests for California Measure 1B (Corridor Management Improvement Account) funding, but were not included in the list of projects initially adopted by the California Transportation Commission in 2007.

The environmental document underway for the project is in part funded by a grant from the Federal Highway Administration, as included in the Transportation Equity Act for the 21st Century legislation (enacted June 9, 1998). No other legislative funding has been specifically targeted for the project.

1.2 Purpose and Need

1.2.1 Purpose and Need

The purpose of the project is to:

- Reduce traffic congestion and delay on Interstate 5
- Encourage High-Occupancy Vehicle use in the Interstate 5 corridor within the project area
- Improve regional mobility
- Provide a balanced circulation system and reduce out-of-direction travel

The project is needed because northwest Stockton has been and is expected to continue experiencing substantial traffic growth, both locally from new area development and regionally from nearby communities such as Sacramento, Lodi, Lathrop, Manteca, and Tracy.

1.2.1.1 Reduce Congestion and Delay

Level of service is a qualitative measure of the effectiveness of the roadway to transport vehicles through a corridor. A rating system of "A" through "F" describes and measures service quality (see Figure 1.3). A designation of level of service "A" is used to indicate excellent travel conditions, while level of service "F" indicates

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. **No delays**
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. **No delays**
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. **Minimal delays**
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. **Minimal delays**
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. **Significant delays**
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. **Considerable delays**

lifornia Department of Transportation

Figure 1.3

Levels Of Service For Freeways

poorly operating, congested travel conditions. According to Caltrans and Federal Highway Administration standards, an acceptable level of service rating for this type of roadway is "D." When volumes exceed the level of service "D" threshold, roadway capacity is reached, resulting in very slow or stop-and-go-conditions. Traffic demand beyond the capacity of the road results in gridlock operations and a level of service "F".

The following discussion about the Interstate 5 mainline and affected interchanges addresses level of service standards to measure congestion and delay.

Interstate 5 Existing and Projected Traffic Level of Service

The traffic analysis prepared for the project identified that several segments currently operate at level of service "E" or "F." Figure 1.4 shows the level of service for segments of Interstate 5 under existing (current) conditions.

The delays in the peak travel directions under existing conditions stem from three bottlenecks found during the traffic study for the project (Interstate 5 North Stockton Interchanges and Mainline Widening Final Traffic Report, dated February 11, 2008):

- In the southbound direction on Interstate 5 between the Benjamin Holt Drive southbound on-ramp and the March Lane off-ramp during the morning peak hour.
- In the southbound direction on Interstate 5 between Alpine Avenue and Country Club Boulevard during the afternoon peak hour.
- In the northbound direction on Interstate 5 between Country Club Boulevard and March Lane during the afternoon peak hour.

These bottlenecks cause traffic backups and congestion behind the bottleneck. Results of the 2035 traffic analysis indicated that, without any improvements, traffic operations and delay would worsen substantially on Interstate 5, with the number of freeway segments operating at level of service "E" and "F" increasing from six under existing conditions to 19 under projected future conditions. Figure 1.5 shows the levels of service for Interstate 5 under the no-build condition in 2035.

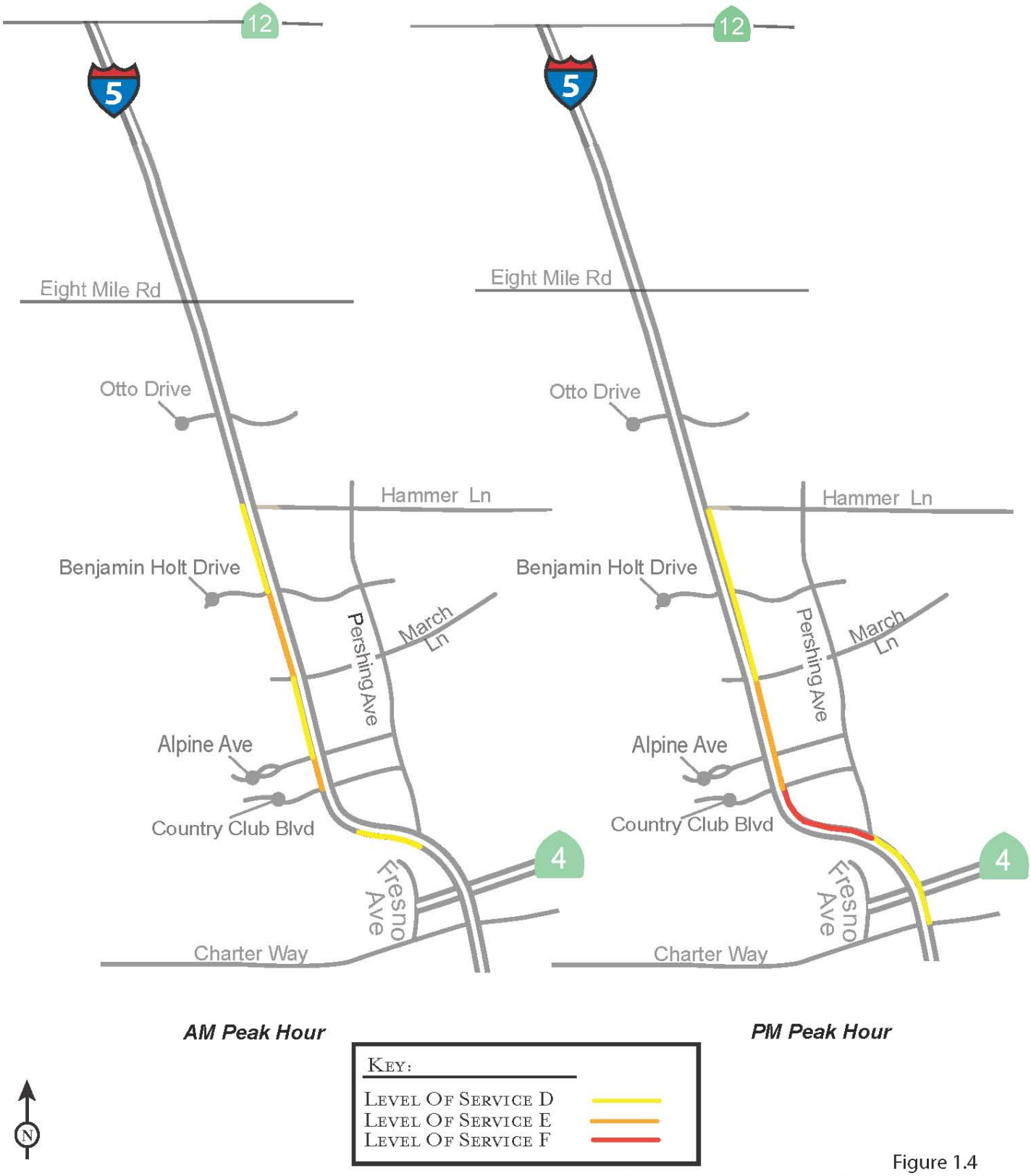


Figure 1.4
Interstate 5 Levels of Service - Existing Conditions

SOURCE: US Census Burea, Tiger2K (2002), Fehr and Peers (2008)

SOURCE: US Census Burea, Tiger2K (2002)

Figure 1.5

Interstate 5 Levels of Service - No Build Alternative Year 2035

Existing and Projected Interchange Traffic Level of Service

The results of the 2035 traffic operations analysis indicated that, without any improvements, traffic operations would reach level of service "F" conditions on all ramp and adjacent local road street intersections at the Hammer Lane and Eight Mile Road interchanges on Interstate 5.

Cost of Congestion

To understand the costs resulting from not building the project on Interstate 5, calculations have been made to identify the average time savings from vehicles traveling the route and money saved based on this amount of delay saved. Table 1.1 below shows the results of the analysis for both average time delay savings and cost savings per year for both the Alternative 1 Mainline (mixed-flow) and Alternative 2 Mainline (high-occupancy vehicle).

Table 1.1: Cost of Congestion

Vehicle Hour Savings Per Year	Delay Cost Savings Per Year
2,147,500	$ 29,894,000.00

Source: Fehr and Peers (2008)
*These numbers are averages based on the traffic congestion delay index for 2035 conditions assuming a safety index equal to 0

1.2.1.2 Improve Regional Mobility

The new North Gateway Boulevard and Otto Drive interchanges would improve local access to Interstate 5, reduce demands at existing interchanges, and connect a planned regional arterial with Interstate 5. In addition to the proposed interchanges, the City of Stockton is proposing a new east-west arterial/expressway (North Gateway Boulevard) along the city's northern boundary to provide a direct connection between Interstate 5 and State Route 99. The North Gateway Boulevard interchange is needed to fulfill the objective of the new east-west roadway and to provide intraregional connectivity.

1.2.1.3 Congestion and Circulation

Currently, 13 percent to 30 percent of the traffic entering the freeway at the existing Hammer Lane and Eight Mile Road on-ramps is classified as high-occupancy vehicles (2 or more passengers per vehicle) depending on location and peak period. The proposed interchange improvements, which include high-occupancy vehicle

bypass lanes, would better serve the existing high-occupancy vehicle demand on the ramps.

Traffic analysis indicates that motorists seek to avoid congestion by selecting alternate routes; this can result in out-of-direction travel. These additional movements on local roads and highways contribute to overall congestion in the area. The proposed project would add and improve circulation network choices for local motorists to more quickly access and leave the regional Interstate 5 mainline. Congestion would then drop as vehicles disperse over a broader circulation network. The project would also reduce out-of-direction travel by motorists seeking to avoid congested conditions. Accordingly, the project would reduce the vehicle miles traveled and minimize congested conditions in other locations along the chain.

1.2.2 Construction Phasing

Given the magnitude of these improvements, construction of the entire project by one contractor at one time is impractical and would adversely affect the public with construction activities, lane closures, detours, and so on. To avoid these complications, the project improvements must be divided into logical construction phases that are sized appropriately to ease construction management and handling by the selected contractors.

There would be five construction phases for freeway and interchange improvements on Interstate 5 in Stockton from Charter Way/Martin Luther King Jr. Boulevard to Eight Mile Road. The Phase 1 freeway widening provides logical termini and independent utility along with each of the interchange projects. While the lane additions (Phase 1) and the proposed interchange projects (Phases 2 through 5) each show independent utility, only Phase 1 has funding identified currently, with the remaining phases to be built as funding becomes available. The range and extent of improvements by phase are as follows:

- Phase 1 – Widen Interstate 5 from Charter Way/Martin Luther King Jr. Boulevard to Eight Mile Road (including auxiliary lanes from March Lane to Benjamin Holt and Benjamin Holt to Hammer Lane). Estimated completion: 2012-2015. Estimated Cost: $213,490,000.

- Phase 2 – Hammer Lane Interchange. Estimated completion: 2014–2015. Estimated Cost: $19,004,000.

- Phase 3 – Otto Drive Interchange (including auxiliary lanes to Hammer Lane, including soundwalls). Estimated completion: 2013–2015. Estimated Cost: $75,111,000. (Hammer Lane was envisioned as beginning before Otto Drive originally; however, traffic analysis later showed that Otto Drive would help alleviate traffic at Hammer Lane and as such is a higher priority. This timeline is consistent with the latest Project Report.)

- Phase 4 – Eight Mile Road Interchange (including auxiliary lanes to Otto Drive and soundwalls). Estimated completion: 2014–2015. Estimated Cost: $60,121,000.

- Phase 5 – North Gateway Interchange (including auxiliary lanes to Eight Mile Road). Estimated completion: 2014–2015. Estimated Cost: $74,535,000.

All construction phases described above have been designed as stand-alone projects capable of being implemented on their own without the need to build any other construction phase. While each construction phase or improvement component can stand on its own in terms of better traffic operations and independent utility, the combination of all proposed widening and interchange improvements are required to achieve the greatest overall benefit to the motoring public.

The following three major phasing components would require extensive traffic staging:

- Construction of the inside median, roadway, and bridge-widening between Country Club Boulevard and Eight Mile Road would be built in two phases. Under the first phase, all travel lanes would be reduced to 11 feet wide, and a temporary Type K rail would be pinned at the existing left edge of travel way. Road construction and bridge widening would be completed. The second phase would shift traffic back and provide final pavement.

- Construction of the Otto Drive undercrossing bridge would be built in two phases. Under the first phase, temporary pavement would be provided for standard transition of northbound Interstate 5 lanes to six 11-foot-wide lanes on the west side of the freeway, with north and south directions separated by temporary concrete barrier. Once traffic is shifted, construction of the freeway embankment and northbound bridge over the Otto Drive undercrossing would be completed, with a minimum of six 12-foot travel lanes against temporary barrier, for a total width of 72 feet. After completion of the northbound

bridge, all traffic lanes would be shifted to the new bridge and roadway, again with northbound and southbound movements separated by temporary concrete barrier. Once traffic is shifted, the southbound lanes would be demolished and the southbound bridge over Otto Drive would be built. Once this construction is complete, traffic would be shifted to its final configuration on Interstate 5.

- Construction of the pavement replacement between Country Club Boulevard and March Lane would also be built in two phases. Under the first phase, median construction and final pavement would be provided for standard transition of northbound and southbound Interstate 5 lanes to three 11-foot lanes in each direction, with north and south directions separated by temporary concrete barrier. Once traffic is shifted, construction of pavement replacement in the existing concrete sections would be completed. Once this construction is complete, traffic would be shifted to its final configuration on Interstate 5.

The logical terminus for the project limits is established at the northern boundary near the Stockton Sphere of Influence/City of Lodi boundary. This is the northerly limit of the City of Stockton's General Plan land use program; farther to the north are agricultural lands with no substantial urban development planned.

Two distinct southern limits are included for the mainline depending on the build alternative. The southerly terminus for Interstate 5 widening occurs logically just south of the Country Club Boulevard interchange. In this section of the road, the proposed improvements would match the cross-section currently in place on the interstate, eliminating a current bottleneck due to the reduction of freeway lanes. Another alternative defines the southern terminus as occurring just south of Charter Way/Martin Luther King Jr. Boulevard, where the inside lanes would be converted from High-Occupancy Vehicle lanes to mixed-flow lanes. This second terminus is a logical completion of the project improvements, since Interstate 5 again narrows down to six lanes south of Charter Way/Martin Luther King Jr. Boulevard.

1.3 Alternatives

This section describes the proposed action and the build alternatives that have been developed by a multi-disciplinary and multi-agency project development team. Project development team members consist of Caltrans staff representing design,

traffic operations, environmental and right-of-way disciplines, as well as representatives of project stakeholders including the City of Stockton Public Works Department, the San Joaquin County Public Works Department, and the San Joaquin Council of Governments. The project development team recommended the alternatives to address the project's purpose and need, while avoiding or minimizing environmental impacts. Major features used for comparison included project cost, level of service and other traffic data, and specific environmental impacts.

Two build alternatives and a No-Build Alternative for the mainline widening have moved forward for evaluation in this document. This section describes the alternatives under consideration, explains why other alternatives were dropped from further consideration, and provides a comparison of how the alternatives meet the purpose and need, including input from other public agencies and the public.

1.3.1 Build Alternatives

Common Design Features of the Build Alternatives

The following improvements are common to the Interstate 5 improvements:

- New inside lanes would be built in the median with standard shoulder and paved median. A concrete median barrier would be built with drainage improvements.

- The Interstate 5 freeway would be widened to the outside to provide auxiliary lanes in both northbound and southbound directions between March Lane and Benjamin Holt Drive interchanges and between Benjamin Holt Drive and Hammer Lane. Fourteen Mile Slough and Five Mile Slough bridges would be widened to the outside to accommodate the auxiliary lanes.

Interchange Changes and Additions

Hammer Lane Interchange

The existing ramps and Hammer Lane road would be changed to improve traffic operations and accommodate increased traffic demands. On- and off-ramps would be widened to accommodate greater traffic volumes entering and exiting the Interstate 5 mainline. Hammer Lane would be changed to provide improved left-turn lane storage and intersection operations from Mariner's Drive to Kelly Drive.

Otto Drive Interchange

A new interchange on Interstate 5 would be built at Otto Drive, 1 mile north of Hammer Lane and next to the Twin Creek Estates residential community to the west and residential uses to the east. Otto Drive currently dead-ends at Interstate 5 on both sides of the freeway. Right-of-way has been previously reserved by the City for an interchange. Northbound and southbound auxiliary lanes would be built between Otto Drive and Hammer Lane interchange ramps. Otto Drive would be change to provide left-turn lane storage and intersection traffic signals at Mariners Drive and Bancroft Way.

Otto Drive would remain at-grade as an Interstate 5 undercrossing, and the Interstate 5 mainline would be elevated about 21 feet over Otto Drive, transitioning back down to the current freeway elevation about 1,700 feet north and south of Otto Drive. The vertical profile of Otto Drive would be raised about 3.5 feet to serve as floodplain protection for residents east of Interstate 5.

Eight Mile Road Interchange

On- and off-ramps would be widened to accommodate greater traffic volumes entering and exiting the Interstate 5 mainline. The design would include a northbound loop exit ramp. Northbound and southbound auxiliary lanes would be built between the Otto Drive and Eight Mile Road interchange ramps.

North Gateway Boulevard Interchange

The proposed interchange would accommodate a new east-west arterial/expressway, tentatively known as North Gateway Boulevard, between Interstate 5 and State Route 99. Northbound and southbound auxiliary lanes would be built between the North Gateway Boulevard and Eight Mile Road interchange ramps.

New Mainline Crossing

A new crossing would be provided perpendicular to Interstate 5 north of Eight Mile Road. The undercrossing would facilitate east-west vehicle access on a future/planned local roadway. The new crossing would be depressed, while Interstate 5 would be at-grade.

Structures

Existing structures must be widened to accommodate the improvements at each of the overcrossings or bridge widening as a result of additional lanes (inside widening) and/or auxiliary lane improvements. Improvements may include the addition of new columns (within waterways or on dry land) to support the widened structures.

Local Streets

Changes would be made to various local streets to accommodate interchange improvements (new or changes). Local streets would be affected temporarily during construction for contractor access and construction tasks.

Pedestrian and Bicycle Facilities

Where required, all existing pedestrian and bicycle facilities would be integrated into the project features to maintain non-motorized service. Pedestrian facilities consisting of pedestrian bridges and sidewalks would be provided to cross Interstate 5 on both the Otto Drive and North Gateway Boulevard interchanges.

Drainage

Additional drainage improvements are required along Interstate 5 because of the increase in paved surfaces and subsequent runoff. Drainage improvements would include, but are not limited to, surface and subsurface drains, retention/detention basins and pump facilities. Each terminal drainage location would include improvements to remove roadway contaminants from the runoff before discharging into the watershed.

Park and Ride Facilities

A planned new park and ride facility would be incorporated into new development parking at the North Gateway Boulevard interchange. This park and ride facility would be negotiated between the City and local development prior to construction of the interchange. The facility would be maintained by local development or the City.

Landscaping

Replacement planting would be provided within the new or modified interchange improvements. Along Interstate 5, landscaping would consist of erosion control material and vines on soundwalls. Other replacement landscaping would be provided for the loss of existing trees within the Interstate 5 corridor. In addition to the on-site planting, replacement landscaping may occur at an off-site location. All landscaping (new or modified) would be approved by a Caltrans landscape architect.

Alternative 1 – Mainline Mixed-Flow Lanes

This alternative proposes to widen the freeway from six lanes to eight lanes by adding one lane in each direction (one northbound and one southbound) in the median, from Country Club Boulevard (post mile 28.5) to 0.3 mile north of Eight Mile Road (post mile 35.6) for mixed-flow traffic.

Alternative 2 – Mainline High-Occupancy Vehicle/Carpool Lanes

This alternative, which has been identified as the preferred alternative, would widen Interstate 5 from six lanes to eight lanes by adding one lane in each direction (one northbound and one southbound) in the median, from Country Club Boulevard (post mile 28.5) to 0.3 mile north of Eight Mile Road (post mile 35.6) for high-occupancy vehicle lane traffic. The additional inside lanes would be signed, striped and, during peak hours, operated as high-occupancy vehicle/carpool lanes from Country Club Boulevard to north of Eight Mile Road. In addition, this alternative would convert the existing inside fourth lane in each direction to high-occupancy vehicle use during peak hours from south of Charter Way/Martin Luther King Jr. Boulevard (post mile 25.0) on the south to Country Club Boulevard.

Unique Features of the Build Alternatives

Fundamental to the two Interstate 5 widening alternatives is adding a new lane in each direction to the center freeway median. However, the differences between alternatives focus on the use of the new inside lanes.

For Alternative 1, the inside lanes would be used for mixed-flow traffic. The southerly project limits would end at Country Club Boulevard due to the connection of existing mixed-flow lanes at this location.

For Alternative 2 (the Preferred Alternative), the inside lanes would be used during peak hours as high-occupancy vehicle/carpool lanes. Also for Alternative 2, the high-occupancy vehicle/carpool lanes would extend south on Interstate 5 to Charter Way/Martin Luther King Jr. Boulevard.

Transportation System Management (TSM) and Mass Transit Alternatives, Transportation Demand Management Alternative (TDM)

Transportation System Management measures alone could not satisfy the purpose and need of the project. However, the following Transportation System Management measures would be incorporated into the build alternatives for this project:

Traffic Operations Systems Elements

The project improvements on Interstate 5 would include changeable message signs and video cameras for congestion monitoring, as well as integration of the ramp metering equipment included with the four interchange projects.

Park and Ride Facility

Planned new Park and Ride facilities would be incorporated into new development parking at the Eight Mile Road interchange and the North Gateway Boulevard interchange, through agreement with local property owners and as a condition of development.

Transit Use of High-Occupancy Vehicle Lanes

The proposed high-occupancy vehicle lane would be available for use by local and regional transit operators.

1.3.2 No-Build Alternative

The No-Build Alternative for the mainline freeway would involve no change to the existing freeway lanes or median. The lane configurations would remain unchanged, and the mainline would continue to provide mixed-flow lane use only. The No-Build Alternative does not meet the project purpose and need identified in Section 1.2 of this document.

With the project, projected traffic volumes by 2035 would cause highly congested levels of service along Interstate 5, plus substantial traffic delay. Objectives outlined in the regional planning documents would remain unfulfilled, resulting in land use/circulation inconsistencies for the projected planning horizon. None of the circulation improvements (Interstate 5 widening and interchange improvements) would occur, and vehicular mobility would be constrained. The mounting congestion would cause motorist delay and increasing difficulty for motorists accessing the region via Interstate 5. Without the proposed widening improvements, opportunity to provide carpooling or transit in high-occupancy lanes on Interstate 5 would not exist. Additionally, reduced congestion through ridesharing and high-occupancy vehicle usage would be unattainable. Finally, poor levels of service and congestion with this alternative would minimize the opportunities to provide a balanced transportation network for the region. Motorists could not rely on Interstate 5 or other interchanges or local street improvements to provide acceptable transportation service.

The No-Build Alternative would retain the existing Hammer Lane and Eight Mile Road interchanges in their current configurations. No new interchanges would be built at either Otto Drive or North Gateway Boulevard. The existing interchanges at Hammer Lane and Eight Mile Road could handle current traffic flow but, with increased growth in the area, those interchanges would not be able to handle the

traffic flows. Gridlock would result at the freeway exit ramps and along Hammer Lane, Eight Mile Road and intersecting roadways. With no new interchanges at either Otto Drive or North Gateway Boulevard, traffic would be forced from these areas onto surface streets and to existing interchanges, adding more congestion to the current interchanges and street system. Traffic would back up onto Interstate 5 from the exit ramps.

If the No-Build Alternative were to be selected, a number of environmental conditions would decline when compared with the build alternatives. Levels of service would degrade to unacceptable levels, resulting in severe congestion and gridlock. Along with the congested conditions, air quality would degrade, potentially exceeding the federal and state standards for various emissions.

1.3.3 Comparison of Alternatives

Criteria considered by the project development team to evaluate the alternatives included project purpose and need objectives, project costs, potential environmental effects, and input from public services, public agencies, property owners, and the general public.

Each of the build alternatives is viable and meets the project purpose and need; however, the build alternatives vary in how well they improve traffic operations throughout the entire project area.

Alternative 1 would provide decreased travel demand on local roadways and increased travel demand on Interstate 5 compared to the No-Build Alternative. Alternative 2 would also provide decreased travel demand on local roadways and increased travel demand on Interstate 5 compared to the No-Build Alternative.

Alternative 1 would reduce mainline vehicle delay by 64 percent (northbound)/58 percent (southbound) during the morning peak period and 82 percent (northbound)/66 percent (southbound) during the afternoon peak period. Alternative 2 would result in slightly greater mainline vehicle delay reductions.

After the public circulation period, all comments were considered. Caltrans identified a preferred alternative (Alternative 2 – Mainline High-Occupancy Vehicle/Carpool Lanes) and will make the final determination of the project's effect on the environment. In accordance with CEQA, Caltrans will certify that the project

complies with CEQA, findings for all significant impacts were identified, and will prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and will certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. Similarly, if Caltrans, as assigned by the Federal Highway Administration, will determine that the NEPA action does not significantly impact the environment, Caltrans will issue a Finding of No Significant Impact (FONSI) in accordance with NEPA.

Except as noted above, all environmental impacts are equivalent for the build alternatives. Neither alternative would have impacts that cannot be mitigated through avoidance, minimization and/or mitigation measures. See the table in the Summary for a comparison of the alternatives and their environmental impacts.

1.3.4 Identification of the Preferred Alternative

After comparing and weighing the benefits and impacts of both of the feasible alternatives, Caltrans identified Alternative 2 – Mainline/High-Occupancy Vehicle/Carpool Lanes as the preferred alternative, because the project meets the purpose and need, because it is consistent with adopted programs and policies of the San Joaquin Council of Governments, Caltrans, and the City of Stockton, because it provides the best person carrying capacity of the corridor, and because it provides superior reduction in air quality emissions.

1.3.5 Alternatives Considered but Eliminated from Further Discussion

No other alternatives were identified by the project development team for consideration. Therefore, there were no alternatives considered but eliminated from further review. However, interchange design variations were considered and rejected as follows:

Otto Drive Interchange

Alternative O-1B, a lowered compact diamond (Type L-1) interchange, was considered but rejected by the project development team because the depressed

undercrossing would require two pump stations to be built: one to pump the groundwater seepage and the other for storm water discharge. In addition, extensive reconstruction of Otto Drive east and west of Interstate 5 would be required to lower the roadway under Interstate 5. Extensive right-of-way acquisition and residential relocation would be required between the Interstate 5 ramps and Bancroft Way due to lowering of Otto Drive.

Alternative O-2, a single-point (Type L-13) interchange, was considered and rejected because of its high cost and because it offered less operational benefit than the preferred design variation.

Eight Mile Road Interchange

Alternative E-1, a compact diamond interchange with a new southbound loop on-ramp in the northwestern quadrant and a new southbound off-ramp, was rejected because traffic operations under this alternative would not have been as good as those under the recommended design.

North Gateway Boulevard Interchange

Alternative G-1, a partial cloverleaf (Type L-9) interchange with a northbound loop on-ramp in the southeastern quadrant and a southbound loop on-ramp in the northwestern quadrant, was considered and rejected because of its higher construction cost and lack of added benefit in roadway operation.

1.4 Permits and Approvals Needed

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

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Services	Section 7 consultation for threatened and endangered species.	Formal consultation for impacts to the giant garter snake and delta smelt was initiated on March 13, 2009. Biological Opinion from U.S. Fish and Wildlife Service issued March 3, 2010.
U.S. Army Corps of Engineers	Section 404 Individual Permit for filling or dredging waters of the United States. Section 408 Permit for changes to levees at water crossings.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
California Department of Fish and Game	1602 Agreement for Streambed Alteration Section 2080.1. Consistency Determination for Threatened and Endangered Species.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
Central Valley Regional Water Quality Control	Section 401 Water Quality Certification. Waste Discharge Permit Review and approval of stormwater	Pending completion in the Project Specifications and Estimates phase of the process. Anticipate completion before

Agency	Permit/Approval	Status
Board	discharge treatments.	2012.
NOAA Fisheries	Section 7 consultation for Threatened and Endangered Species and Essential Fish Habitat.	Formal consultation for impacts to the Central Valley steelhead trout was initiated on March 13, 2009. NOAA Fisheries issued letter of findings April 15, 2009.
City of Stockton Encroachment Permit	For construction of improvements on local roadways within the City of Stockton.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
San Joaquin County Encroachment Permit	For construction of improvements on local roadways within San Joaquin County.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
San Joaquin County Flood Control Agency	Confirmation that the project meets 200-year flood control as required by Federal Emergency Management Agency.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
U.S. Coast Guard	Section 10 Permit for construction of bridges in navigable waters.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.
Central Valley Flood Control Board	Permit for changes to levees at water crossings.	Pending completion of the Project Specifications and Estimates phase of the process. Anticipate completion before 2012.

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

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project, potential impacts from each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

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

- Wild and Scenic Rivers – The project is not near any wild or scenic rivers.
- Energy – Implementation of the "Energy Decision Tree" (Caltrans Environmental Handbook Volume 1, Chapter 13) determined that this project is not a "major project" requiring further energy analysis. When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have substantial energy impacts.

2.1 Human Environment

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

2.1.1 Land Use

This section describes existing and proposed land uses in the project area. Relocation impacts are addressed in Section 2.1.4.2 Community Impacts.

2.1.1.1 Existing and Future Land Use

Affected Environment

A Community Impact Assessment, which included an assessment of the current and future land uses in the project area, was completed in March 2009. In the assessment, land use planning was evaluated from the City of Stockton General Plan 1990 and General Plan Update 2035, the San Joaquin County General Plan 2010, and the San Joaquin Council of Governments Regional Transportation Plan 2007.

The City of Stockton adopted an updated general plan in December 2007, creating a land use blueprint for long-term growth to at least 2035. The new general plan allows substantial amounts of new residential, commercial, and office development in northwest Stockton, as well as throughout the city.

As the city grows from development projects consistent with the recent 2035 General Plan Update, the demand for transportation improvement will increase. Traffic generated by future projects and growth will need to use Interstate 5 to access travel destinations in the region.

The City of Stockton's 2007 General Plan Update governs land use planning in the study area. The San Joaquin Council of Governments is the regional transportation planning agency for the county and conducts regional transportation planning for the area. The City of Stockton, San Joaquin Council of Governments, and Caltrans are working cooperatively on long-range programs to address the transportation needs of the community and region.

The study area consists of a mix of residential, commercial, industrial, park, and planned development "village" land uses. Planned development land uses sit north of Eight Mile Road, with Commercial and Residential land uses along most of the project corridor. Industrial land uses occur mainly where Interstate 5 and State 4 meet. Figure 2.1 shows land uses in the City of Stockton planning area and the project area.

Future land use in the Stockton area is following a regional trend toward more residential and commercial development within the areas surrounding the project area where there is currently open land designated for agriculture. A shortage of affordable housing in the San Francisco Bay Area has led to the creation of new housing in San Joaquin County where land costs are lower and workers can still within commuting distance to the Bay Area. The historical development trend has been toward the north

end of Stockton. To respond to high demand for housing that is within commuting distance from the Bay Area, numerous proposals for large-scale, market-rate residential development in the study area are in the application development process or in the construction pipeline. Table 2.1 shows major projects in the Stockton General Plan planning area.

Table 2.1: Proposed Major Projects

Name	Jurisdiction	Proposed Uses	Status
Atlas Tract	City of Stockton	Master-planned community: 1,404 new residential housing units on 360 acres	0% built
Crystal Bay	City of Stockton	Master-planned community: 1,363 new residential housing units on 173 acres	0% built
North Stockton Village	City of Stockton	Master-planned community: 4,000 new residential housing units on 771 acres	0% built
Gateway	City of Stockton	Master-planned community: 7,448 new residential housing units on 2,239 acres	0% built
Bear Creek South	City of Stockton	Master-planned community: 2,941 new residential housing units on 510 acres	0% built
Bear Creek West	City of Stockton	Master-planned community: 6,811 new residential housing units on 1,159 acres	0% built
Bear Creek East	City of Stockton	Master-planned community: 2,285 new residential housing units on 330 acres	0% built
Cannery Park	City of Stockton	Master-planned community: 1,100 new residential housing units on 450 acres	9% built
Tidewater	City of Stockton	Master-planned community: 2,633 new residential housing units on 909 acres	0% built
Westlake Villages	City of Stockton	Master-planned community: 2,600 new residential housing units on 680 acres	10% built

Source: City of Stockton's website.

*All projects listed have been approved.

Environmental Consequences

Land would have to be acquired for each build alternative to accommodate interchange improvements. Land use impacts would be the same for both build alternatives since zoning designations would be affected. No substantial impacts to land use would result from construction of the proposed project because the project is consistent with local planning for the area and would not cause land use inconsistencies. The project also improves roadway conditions that support the current and future land use activities within the project area.

Most of the construction for the Interstate 5 widening can be performed inside the current Interstate 5 right-of-way; however, some temporary construction easements

would be necessary as well as relocation of approximately 24 multi-family residential units.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.1.1.2 Consistency with State, Regional and Local Plans

Affected Environment

State

State Improvement Plan for Air Quality

The project complies with the State Improvement Plan for air quality. It is listed in the San Joaquin County 2007 Regional Transportation Plan, approved by the San Joaquin Council of Governments on May 24, 2007.

Regional

Ultimate Route Concept

The ultimate route concept for this section of Interstate 5 is an eight-lane freeway. The project is proposed to build-out to eight-lanes and complies with the Ultimate Route Concept. While the city general plan requires widening Interstate 5 to 10 lanes to meet the future traffic demand, that concept is not included in the Regional Transportation Plan, and therefore does not conform to the State Implementation Plan. In addition, a 10-lane facility has no funding and has not been programmed for funding.

San Joaquin Regional Transportation Plan

The project is consistent with the San Joaquin Regional Transportation Plan to widen Interstate 5 to eight lanes.

Local

City of Stockton General Plan 1990 and 2035

The proposed project (including mainline widening, new/rebuilt interchanges, and changes to roadways and intersections) is consistent with the city's general plan as documented in the sections for Urban Growth and Overall Development, Residential Land Use, Streets and Highways, and Natural and Cultural Resources. Specifically, these sections identify and accommodate development, and provide safe access for residents and businesses, while maintaining environmental quality, especially with regard to air and noise impacts.

While the City of Stockton General Plan update 2035 has proposed widening the roadway to 10 lanes to meet the future traffic demand, funding is not available for the expansion and would conflict with the San Joaquin Council of Governments' Regional Transportation Plan.

San Joaquin County General Plan 2010 adopted 1992

The project is consistent with the county's general plan as documented in the sections for Infrastructure and Services, Residential Development, Housing and Neighborhood Preservation, and Transportation Coordination with Land Use. The project does provide features to improve access and congested traffic conditions within the project area and the freeway.

Environmental Consequences

There are no impacts regarding the implementation of the project on land use planning programs. The project is consistent with state, regional, and local planning for the project area.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.1.1.3 Parks and Recreation

Affected Environment

Oak Grove Regional Park and Mike Garrigan City Park sit within 500 feet of the project limits. Additionally, several pedestrian and equestrian trails run within 500 feet of the project limits.

Oak Grove Regional Park is south of Eight Mile Road and just east of Interstate 5. The park is 180 acres and has a Nature Center that offers activities throughout the spring and summer, while trails remain open all year. Within the Nature Center are displays focusing on the inhabitants of the oak woodlands, including:

- Native animal dioramas
- Preserved wildlife creations
- Yokuts and Miwoks tribal artifacts and history
- Live native animals

Educational programs at the center are sponsored and conducted by the Oak Grove Docent Council. The focus of the Nature Center programs is on wildlife species, their

native habitats, and the early residents of the oak grove, specifically the Miwok and Yokuts tribes. Classes offered include:

- Trail hike and Nature Center tour
- Nature Center visit
- Skunks and Snakes, Bats and Bugs – The Animals of Oak Grove
- Under the Oaks in 1493 – Miwok and Yokuts of the Valley

Several of the trails in the park are also nature preserves, including the Miwok and Yokuts trails.

Additionally, Garrigan Park sits next to Iron Canyon Circle just east of Interstate 5 between Eight Mile Road and Hammer Lane. This city park consists of 5.7 acres and is a multi-use park with skateboard area and disc golf facilities.

Several pedestrian and equestrian trails border Interstate 5 to the east between Hammer Lane and Eight Mile Road. These trails border existing suburban areas, provide access to Garrigan Park, and are used by residents and others in the surrounding neighborhood.

Environmental Consequences

None of the park or trail facilities within 500 feet of the project limits are expected to be affected by the project. As such, there are no impacts regarding the implementation of the project on parks and recreation facilities. Section 4(f) resources would not be affected (see Appendix B).

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.1.2 Growth

Regulatory Setting

The Council on Environmental Quality regulations, which implement the National Environmental Policy Act of 1969, requires 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 Federal Regulations 1508.8, refers to these consequences as indirect impacts. Indirect impacts may include

changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act also requires the analysis of a project's potential to induce growth. California Environmental Quality Act guidelines, Section 15126.2(d), require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

Affected Environment

Stockton is the 13th largest city in California. Its population increased by 15 percent from 2000 to 2006. The city has become a regional commerce center because it is strategically located for quick and cost-effective distribution of goods and services to major West Coast markets, and it is within commuting distance of the Bay Area employment centers.

Stockton has a rich, diverse populace. Its expanding and productive labor pool contributes to the city's steady job growth. Consisting of a large skilled and semi-skilled workforce of more than 279,513 employees and an affordable wage structure, the vast labor pool provides a distinct hiring opportunity for employers.

Although historically an agriculture-based economy, Stockton has begun to diversify into all sectors of industry and business. According to city records, close to 15,000 businesses hold licenses with the City of Stockton.

Environmental Consequences

The proposed project would not directly affect growth within the Stockton region or San Joaquin County, but accessibility in the project area would change. In general, Interstate 5 would have higher traffic volumes than in the no-build scenario. Additionally, side streets in the affected project area would have lower volumes overall. New interchanges at Otto Drive and North Gateway would provide greater accessibility to those vicinities.

The project would generally improve regional transportation along the Interstate 5 corridor in the Stockton area, consistent with the City's 2035 General Plan, San Joaquin County 2010 General Plan, and San Joaquin Council of Governments 2007 Regional Transportation Plan.

Both the 2035 Stockton General Plan and the 2010 San Joaquin County General Plan do not project any potential growth as a result of the proposed project; only transportation circulation would improve in the region. The addition of North Gateway Boulevard and Otto Drive interchanges would handle increased traffic volumes from ongoing population and housing growth in this region of Stockton.

The City of Stockton is projected to have a population of 406,482 residents by 2025. This projection is almost double of the current city population. Most of this growth is planned in the north Stockton region near the Otto Drive, Eight Mile Road and North Gateway Boulevard interchanges. Though elements of the proposed project are in response to growth within the region, the proposed project does not contribute to generating growth.

Avoidance, Minimization, and/or Mitigation Measures

The project and its relative cumulative projects would not stimulate unplanned residential or related commercial growth. It is not foreseeable that project-related growth would put pressure on or cause impacts to the environmental resources of concern. No avoidance, minimization, and/or mitigation measures are proposed because growth impacts would be minimal.

2.1.3 Farmlands/Timberlands

Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (FPPA, 7 United States Code 4201-4209; and its regulations, 7 Code of Federal Regulations Part 658) require federal agencies, such as the Federal Highway Administration, and Caltrans as assigned, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

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

Affected Environment

The California Department of Conservation designates and maps "important farmlands" in California. The categories that are used for "important farmlands" are described below:

- Prime farmland – land with the best combination of physical and chemical features for production of agricultural crops.
- Farmland of statewide importance – land with a good combination of physical and chemical features for production of agricultural crops.
- Unique farmland – land of lesser quality soils used for the production of the state's leading agricultural crops.
- Grazing land – land with existing vegetation suited for livestock grazing.
- Urban and built-up land – land occupied by structures with a building density of at least 1 unit to 1.5 acres, or about 6 structures to a 10-acre parcel.
- Other land – land that does not meet the criteria of any other category.

Table 2.2 shows the distribution of these categories in the project area.

Table 2.2: Farmland Conversion by Alternative

Alternatives	Total Land Converted (acres)	Prime & Unique Farmland (acres)	Percentage of Farmland in County	Percentage of Farmland in State	Farmland Conversion Impact Rating
All	51	5.0	0.00*	0.00*	83.6

* Less than 0.001 %

Source: Form NRCS-CPA-106 (Farmland Conversion Impact Rating for Corridor-Type Projects)

Existing land uses near the project area reflect both urban development and rural agriculture. According to the Significant Farmlands map for the project area (Table 2.2), the underlying soils for the project area north of Eight Mile Road are considered Farmland of Statewide Importance, Prime Farmland and Unique Farmland. There is no timberland in the area.

Environmental Consequences

Construction of the project (inside widening, auxiliary lanes, interchange construction) would result in irreversible conversion of about 58 acres of agricultural soils to urban (highway) uses for each of the build alternatives. Most impacts occur within the existing footprint or right-of-way needed to create the North Gate interchange or change the existing Eight Mile Road interchange.

The impact on agricultural soils is associated with soils contained within the proposed new right-of-way lands to be acquired and where project improvements would be constructed. The amount of agricultural land to be converted by the project is negligible compared to the total amount of farmland in San Joaquin County (812,629 acres) or in California (27,589,027 acres) (Census of Agriculture 2002).

The loss of agricultural lands was evaluated based on the U.S. Department of Agriculture, Natural Resources Conservation Service Farmland Conversion Impact Rating System. Implementation of the proposed project design would affect soils designated for various crop productions, defined by the U.S. Department of Agriculture, Natural Resources Conservation Service as having prime agricultural significance. The total relative value of farmland rating calculated by the Natural Resources Conservation Service was 27.6 with a total site assessment of 56.0 points, for a combined total of 83.6 points. Scores below 160 points do not require examination of alternatives capable of reducing the amount of farmland conversion. No Williamson Act parcels that would be affected by the project. This environmental document provides written notice to the Department of Conservation regarding the parcels that would be used for the project.

Because of the minor loss of agricultural lands (conversion of lands to urban uses) and a rating below 160 points from the Justification for Site Assessment, the project would not significantly affect agricultural soils or productivity. See Appendix G for the Farmland Conversion Impact Rating form.

Avoidance, Minimization, and/or Mitigation Measures

Because there are no significant impacts to agricultural soils, no mitigation is required.

2.1.4 Community Impacts

2.1.4.1 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. The Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as, destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

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

Affected Environment

Regional Population Characteristics

Ethnicity

The racial makeup of the study area, City of Stockton and San Joaquin County is shown in Table 2.3 and described below.

Table 2.3: Ethnicity Breakdown

Study Area	White		Black or African-American		American Indian/Alaskan Native		Asian		Native Hawaiian/ Other Pacific Islander		Hispanic		Other	
	Person	%	Person	%	Person	%	Person	%	Person	%	Person	%	Person	%
Study Area	39,383	52	5,072	7	603	0	10,011	13	213	0	13,762	18	6,530	9
City of Stockton	78,539	32	26,359	11	1,337	1	47,093	19	810	0	79,217	32	10,416	4
San Joaquin County	267,002	47	36,139	6	3,531	1	62,126	11	1,624	0	172,073	31	21,103	4

Source: U.S. Census Bureau (information is based on a ½ radius around the project site)

U.S. Census Bureau census tract data indicate the following:

- 52 percent of the study area is White compared to 32 percent for the city and 47 percent for the county.
- 7 percent of the study is Black or African-American compared to 11 percent for the city and 6 percent for the county.
- 13 percent of the study area is Asian compared to 19 percent for the city and 11 percent for the county.
- 18 percent of the study area is Hispanic compared to 32 percent for the city and 31 percent for the county.

Education

There are 166,383 residents of Stockton age 25 years or older. Of these, 24.1 percent do not have a high school diploma (includes equivalency). About 29.4 percent have a high school education, 21.6 percent have attended some college, 7 percent have an associate's degree, 12 percent have a bachelor's degree, and 5.9 percent have a graduate or professional degree.

Local Population and Housing

The City of Stockton has a high population density due to its urban character and high percentage of developed land. The 2000 San Joaquin County population density was 4,450 persons per square mile, compared to the state population density of 220 persons per square mile. Stockton's 2006 population was 290,141 representing a gain of about 16 percent from the city's 2000 population of 243,771 (U.S. Census, 2000).

The population of Stockton is expected to continue to increase, and the city is projecting population to be about 580,000 by 2035.

The population of the City of Stockton makes up about 43 percent of San Joaquin County's population (U.S. Census, 2000). The study area has a population of 75,576, which is 31 percent of Stockton's residents and 13 percent of the county's population. Table 2.4 shows population for the study area, City of Stockton and San Joaquin County.

Table 2.4: Population by Area

Population Area	Number of Residents
Study Area	75,576
Stockton	243,771
San Joaquin County	563,598

Source: U.S. Census, 2000 (information is based on a ½ radius around the project site)

Table 2.5 shows the average household size and total number of households. The study area has a smaller average household size because it's in an area with a high concentration of single-family homes. Historically, single-family homes have a lower household size than more multi-family residential units.

Table 2.5: Number of Households

Population Area	Average Household Size (number of persons)	Total Number of Households*
Study Area	2.80	23,708
City of Stockton	3.10	78,556
San Joaquin County	3.10	181,629

Source: U.S. Census, 2000 (information is based on a ½ radius around the project site)
* The U.S. Census Bureau defines a household as a group of people, related or otherwise, living together in a dwelling unit.

Neighborhoods/Communities

The project sits within three different neighborhood districts: Bear Creek District, Lakeview District, and Civic District. Within each district are several neighborhood/communities along the Interstate 5 corridor. Table 2.6 shows the neighborhoods that Interstate 5 goes by in the project area.

Table 2.6: Neighborhood

Neighborhood District	Neighborhood
Bear Creek	Spanos Park West
Bear Creek	Spanos Park East
Bear Creek	Creekside/Wagner
Bear Creek	Colonial Heights
Lakeview	Parkwoods
Lakeview	Lincoln Village West
Lakeview	Quail Lakes/Venetian Bridges
Lakeview	Brookside
Civic	Country Club

Source: City of Stockton, 2008 (information is based on a ½ radius around the project site)

Housing

The City of Stockton has 82,042 housing units. Of these housing units, 78,556 units are occupied. There are 40,534 owner-occupied housing units and 38,022 renter-occupied housing units (U.S. Census, 2000). In 2006, the U.S. Census Bureau reported that of the 50,129 homes in the city, 39,051 homes had a mortgage and 11,078 homes did not. The median home price in the Stockton area at that time was $399,600.

Over the past decade, Stockton and the nearby communities of Tracy, Manteca, and Lodi have experienced a housing boom, due largely to thousands of people from the Bay Area finding more affordable housing in the area. This influx of new residents has resulted in a sharp increase in the cost of living for Stockton, though the cost of living is still substantially lower than that of any Bay Area city of comparable size.

Environmental Consequences

Regional Population Characteristics

The project would accommodate the long-range regional population planning. The city's 2035 General Plan and San Joaquin Council of Governments 2007 Regional Transportation Plan include the proposed project as an element needed to accommodate regional population forecasts.

Neighborhoods/Communities

The project lies in an area of Stockton that has a high concentration of residential units, but very few of the households would be affected by the project. A few residential units in the Otto Drive interchange area would be affected by the project. (The Relocations section discusses any potential impacts to these residential units.) The project would affect one local neighborhood (see Relocations below). However,

the project should not affect any other local neighborhoods or community since most of the project footprint would remain within the current right-of-way of Interstate 5, except for the land to be acquired for the two new interchanges. Currently, vacant land (at the proposed new North Gateway interchange) would not affect regional population characteristics. However, residential units (see Relocations) would be displaced at the new North Otto Drive interchange.

Housing

The project would result in only a small amount of land being acquired. Of the lands involved in acquisition, except for the Otto Drive location, none of the acquisitions would require a displacement. However, land to be acquired at the Otto Drive location to accommodate the proposed interchange would require full property acquisitions of 12 duplexes (24 units) due to the change in road status for Otto Drive (from two lanes to four lanes), resulting in the elimination of individual driveway access. No non-residential displacements are anticipated. The residences are all single-story duplex units that were built in the early 1980s.

Avoidance, Minimization, and/or Mitigation Measures

No impacts would be expected on community character and cohesion; therefore, no mitigation is required.

Any potential temporary impacts to facilities in the area would be minimized and avoided with implementation of best management practices during construction and a Traffic Management Plan.

2.1.4.2 Relocations

Regulatory Setting

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

Caltrans' Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations, Part 24. The purpose of the Relocation Assistance Program is to ensure 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. Please see Appendix D for a summary of the Relocation Assistance Program.

Affected Environment

The project involves improvements contained mostly within the existing mainline right-of-way. While other areas throughout the corridor would require some partial acquisitions, none of these locations involve residential or commercial displacements. Therefore, only the properties affected by the Otto Drive interchange construction are addressed in this section.

The Otto Drive interchange area contains single-family residences and a few multi-family residences. The single-family residences consist of three- and four-bedroom homes built mostly around or after 1990. The multi-family residences consist of one- and two-bedroom units built around or after 1990.

Approximately 12 duplexes (24 units) sit in the Otto Drive area at the proposed Otto Drive interchange. The residences are single-story duplex units that were built in the late 1980s. County assessor data indicate there are two two-bedroom units and 22 three-bedroom units.

No non-residential acquisitions are anticipated.

Environmental Consequences

Approximately 12 duplexes (24 units) would be acquired in the proposed Otto Drive interchange area. Of the 24 units, only one appears to be owner-occupied. The remaining 23 units are assumed to be tenant-occupied. A total of 73 residents live in the 24 units.

A survey was conducted by Caltrans from April to June 2008 to identify available housing units in the project area. The survey indicated that the Stockton area has a sufficient number of duplexes and single-family residences available for rent and sale. A Relocation Impact Study was prepared, including a search for available housing resources. The search included the communities of Manteca, Lathrop, and Lodi. It is anticipated that two two-bedroom multi-family residences and 22 three-bedroom multi-family residences would adequately relocate the 24 households. The survey focused on confirming the availability of housing units of the right size and bedroom number for each household.

Rent for two-bedroom single-family residences ranged from $700 to $1,000; rent for three-bedroom single-family residences ranged from $900 to $1,300. At the time of the survey, 19 two-bedroom single-family residences and 54 three-bedroom single-family residences were available. Based on the survey, there were at least 10 single-family residences, condominiums, and duplexes with two-bedrooms; 32 three-bedroom and 7 four-bedroom units available in Stockton area. There were more than 9 two-bedroom and 22 three-bedroom single-family units in the neighboring communities of Manteca, Lathrop, and Stockton.

In addition to properties available in the rental market, as a consequence of the current economic conditions there are currently hundreds of two- to four-bedroom single-family residences on the market within Stockton alone. Stockton has 21 subdivisions in development with both single-family residences and multi-family development. Until demand catches up with supply, these subdivisions provide 9,734 single-family residences and 1,537 multi-family units to the market.

The number of available properties on the market exceeds the amount needed to relocate the affected properties. Therefore, there are adequate resources currently available within or near the project area to facilitate relocations for affected residential owners. The special needs of each displacement are not known at this time, but would be determined before negotiations for acquisition.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would be required to address property displacements and relocations associated with the Otto Drive interchange improvements, as well as other minor property acquisitions within the mainline corridor:

- All displacees would be contacted by a Relocation Agent who would ensure that eligible displaced residents receive their full relocation benefits including advisory assistance, and that all activities be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to all displaced residents free of discrimination. At the time of the first written offer to purchase, owner occupants are given a detailed explanation of Caltrans' "Relocation Program and 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 Caltrans' "Relocation Program and 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 non-profit organization displaced as a result of acquisition of real property for public use.

- The Uniform Relocation Assistance and Real Property Acquisitions Policies Act (Uniform Act) of 1970 (Public Law 91-646, 84 Stat. 1894) mandates that payments be made available to eligible residents, businesses, and nonprofit organizations displaced or affected by projects. The Uniform Act provides for equitable land acquisition policies.

- Where acquisition is unavoidable, the provisions of the Uniform Act and the 1987 Amendments as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by the Department of Transportation dated March 2, 1989 would be followed. An independent appraisal of the affected property would be obtained, and an offer for the full appraisal would be made.

2.1.4.3 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* signed by President Bill Clinton on February 11, 1994. This executive order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2005, this was $17,000 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is found in its Title VI policy statement, signed by the director (see Appendix C).

Affected Environment

A Community Impact Assessment was completed in March 2009. Part of that study involved an environmental justice analysis using demographic data from the 2000

Census, plus general qualitative observations of community conditions. The following factors are compared to evaluate environmental justice:

- Ethnicity
- Percentage of population below poverty level
- Median household income

Within the project limits, the construction of the Otto Drive interchange would result in residential displacements (24 single-family units); therefore, property relocations are required. Table 2.7 shows the minority and poverty level characteristics of the homeowners/renters of affected area around Otto Drive, compared to characteristics for City of Stockton and San Joaquin County.

Table 2.7: Minority and Poverty Status of the Otto Drive Area, City and County

Population Area	Minority Percentage of Population	Poverty Percentage of Population
Otto Drive interchange vicinity	47%	11%
City of Stockton	68%	23%
San Joaquin County	53%	17%

Source: U.S. Census, 2000 (information is based on a ½ radius around the project site)

Composition of the area affected by the construction of the interchange at Otto Drive is 53 percent white and 47 percent minority. The city's population is 32 percent white and 68 percent minority. The county's population is 47 percent white and 53 percent minority.

The percentage of people living below the 2009 federal poverty line ($10,830 for an individual or $18,310 for a family of 3) in the Otto Drive interchange area is 11 percent. For the City of Stockton, it's 23 percent. For San Joaquin County, it's 17 percent.

Environmental Consequences

Every build alternative would affect approximately 24 multi-family residential units at the Otto Drive interchange.

Table 2.7 gives the minority and poverty status of block groups in the study area according to the 2000 Census.

The study area has a predominantly minority population (47 percent), and a substantial percentage of people live below the federal poverty line (11 percent).

A field review of the Otto Drive interchange area (including the residences that would be relocated) shows that most of the residences in the area are in fair to poor condition and that minority populations are present, which is consistent with the statistics above. Additionally, local newspapers were identified to determine if minority populations are present in the study area. Local newspapers such as the *Bilingual Weekly*, *Latino Times, El Sol,* and others have a strong presence in the Stockton area and are consistent with the statistics presented above.

Construction of the new interchange in the Otto Drive area could adversely affect minority populations or people living below the federal poverty line.

Avoidance, Minimization, and/or Mitigation Measures

A sequential mitigation approach was taken—first avoidance was considered, then measures to minimize, and finally mitigation.

There is no feasible avoidance alternative. Interstate 5 is a major roadway, providing access to cities throughout the San Joaquin Valley. There is no feasible interchange alternative that could avoid the neighborhoods along the existing Interstate 5 corridor. If a new roadway and interchange were proposed, minority and low-income populations would still be encountered to the east and west of the current project study area. Also, a separate new roadway and interchange would be too costly in terms of both impacts to the surrounding area and in dollars to fund a feasible avoidance alternative. Additionally, a realignment alternative would not provide an avoidance alternative based on the minority and low-income populations on either side of the existing corridor in the surrounding areas.

The project design would reduce negative impacts to properties. The project team has worked diligently to design an interchange that follows the required regulatory and safety standards and has the least negative effects to the surrounding community. Residents to be relocated would be provided a full range of benefits through the Relocation Assistance Program.

Measures were implemented to redesign and reduce the number of properties negatively affected. Soundwalls are proposed to provide abatement for a potential increase in noise along Interstate 5 (see Section 2.2.7 Noise and Vibration). The walls would not only alleviate potential increased noise resulting from this project, but would alleviate noise in areas that never received walls in the past, when developers were not required to build sound barriers with housing developments. Features are included to provide better drainage for safer travel of vehicles along the roadway during rainy conditions, and to collect runoff, which would protect the surrounding environment from potential pollutants draining off the roadway (see Section 2.2.2 Water Quality/Storm Water Runoff).

The project development team held a public outreach meeting to identify interested parties and groups within the project area, to hear their concerns, and to determine how the project could be designed to better fit into the community. Once a set of design alternatives were identified, a public meeting was held January 3, 2008 to begin public outreach.

Based on the results of the project team's public outreach efforts, the build alternatives were modified to minimize relocation impacts and maximize improvements to provide better access to properties, services, and shopping for the community in the project area.

Based on the above discussion and analysis, the proposed alternatives would not cause a disproportionately high and adverse impact on any minority and/or low-income populations per Executive Order 12898 regarding environmental justice.

2.1.5 Utilities/Emergency Services

Affected Environment

Three major water companies supply the Stockton metropolitan area: California Water Service Company, City of Stockton, and Stockton East Water District. In addition, county maintenance districts and numerous private wells serve the north Stockton area.

About 32 percent of the water supplied to the system originates from wells owned by the city, with the remainder being treated surface water supplied by Stockton East Water District. Additionally, three water storage sites provide temporary storage of up to 9,000,000 gallons of drinking water a day.

Wastewater collection and treatment are provided by the City of Stockton. The Regional Wastewater Control Facility is located in Stockton on Navy Drive. There is a 30-inch sewer line at the intersection of Trinity Parkway and Eight Mile Road, a 24-inch sewer line at the intersection of Thornton Road and AG Spanos Boulevard, and a 48-inch sewer line at the intersection of Thornton Road and Whistler Way.

Because the proposed project would build structures over the East Bay Municipal Utility District aqueduct, an agreement would need to be made with East Bay Municipal Utility District.

Telephone service in Stockton is provided by AT&T. The communications facilities are routed underground in public utility easements following the street alignments and include a mix of fiber optics, copper cable, and their supporting facilities.

Electric and natural gas services are interwoven into the proposed project area and are provided by Pacific Gas and Electric. Electric and gas facilities are routed above and below ground as needed in public utility easements.

The Stockton Fire Department provides fire protection and prevention services as well as paramedic emergency medical service to all areas of Stockton.

Police protection services are provided by the Stockton Police Department, San Joaquin County Sheriff's Department, and California Highway Patrol. Police personnel operate under the philosophy and strategy of Community Oriented Policing and Problem Solving. This requires police personnel to form partnerships with the citizens they serve in an attempt to identify the major problems that negatively affect the overall quality of life in the community. Police personnel are then challenged to arrive at a solution by innovative thinking and using the many resources available to them.

Environmental Consequences

A number of utilities for water, wastewater, storm drainage, electric and natural gas services, emergency service providers, and other services are located in the project area. Construction of the proposed project may require the relocation of utilities. These relocations should not present any unusual circumstances and are considered routine for roadway construction projects. Impacts to emergency service providers are temporary and would be addressed in the Traffic Mitigation Plan.

Avoidance, Minimization, and/or Mitigation Measures

Minimization measures to alleviate utilities/emergency services impacts are as follows:

- The project would be designed to minimize conflicts with utilities in the project area. The project would include relocation of those utilities that would be inaccessible for maintenance or access purposes as a result of the project.
- The contractor would be required to notify utility users of any short-term, limited interruptions of service.
- If unexpected underground utilities were encountered, the contractor would coordinate with the utility provider to develop plans to address the utility conflict, protect the utility if needed, and limit services interruptions.
- The contractor would circulate construction schedules and traffic control information to city emergency service providers at least one to two weeks before any road closures.

2.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

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

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

Affected Environment

Level of service, as it pertains to freeway operations and intersection operations, is a description of traffic flow based on speed, travel time, delay, and freedom to

maneuver. Level of service is described and illustrated for the alternatives in Section 1.2.1.1 Congestion.

The concept level of service for Interstate 5 in Stockton and unincorporated areas of San Joaquin County is level of service "D," which is consistent with the minimum level of service "D" standard adopted in the San Joaquin County Regional Congestion Management Program (December 2007). The 2006 City of Stockton General Plan Update has also identified level of service "D" as the threshold for acceptable operations at the intersections within the city limits except at a few locations.

As noted above, the City of Stockton General Plan has identified specific locations where level of service "D" is not the threshold for acceptable operations. The following locations have a level of service threshold that is lower than level of service "D" and are pertinent to this project:

- Eight Mile Road, Trinity Parkway to Interstate 5 – level of service "E"
- Hammer Lane, Interstate 5 to Kelly Drive – level of service "E"
- Interstate 5, Hammer Lane to Benjamin Holt Drive – level of service "E"
- Interstate 5, Benjamin Holt Drive to Downing Avenue – level of service "F"
- Otto Drive, Interstate 5 to Thornton Road – level of service "F"

The posted speed limit on Interstate 5 in the study area is 65 miles per hour. Interstate 5 has three lanes in each direction north of Country Club Boulevard and four lanes in each direction south of Country Club Boulevard.

North of Country Club Boulevard, the average daily traffic count on Interstate 5 is 130,000 vehicles; south of Country Club Boulevard, the average daily traffic count is 115,000 vehicles.

Interchanges

There are 11 local street interchanges on Interstate 5 between Charter Way/Martin Luther King Jr. Boulevard and State Route 12; one freeway-to-freeway interchange sits at Interstate 5 and State Route 4. Two of the existing local street interchanges proposed for improvement include Eight Mile Road and Hammer Lane.

The Eight Mile Road interchange is a standard tight-diamond configuration (Caltrans Type L-1) with single-lane on- and off-ramps except the northbound off-ramp, which

has two exit lanes. This interchange was recently upgraded with additional capacity, including an auxiliary lane extending the merge area for the southbound on-ramp.

The Hammer Lane interchange is also a standard tight-diamond configuration with single-lane on- and off-ramps to and from the north. The northbound off-ramp has two exit lanes, and the southbound on-ramp has an auxiliary lane extending the merge area.

Most of the local street interchanges on Interstate 5 between Charter Way/Martin Luther King Jr. Boulevard and State Route 12 are tight-diamond configurations. The Interstate 5/State Route 4 freeway-to-freeway interchange has a Caltrans Type F-1 configuration.

All of the interchanges provide full access to the freeway, except for Alpine Avenue and Country Club Boulevard, which are Type L-5 interchanges with a one-way couplet connecting the ramps. The Alpine Avenue interchange provides access to and from the north; the Country Club Boulevard interchange provides access to and from the south. Auxiliary lanes are provided on Interstate 5 between Charter Way/Martin Luther King Jr. Boulevard and State Route 4, State Route 4 and Pershing Avenue, Monte Diablo Avenue and County Club Boulevard, and Alpine Avenue and March Lane. None of these interchanges would be affected by the project.

Transportation Facilities

Numerous public transit, carpool, pedestrian, and bicycle facilities are provided in the vicinity of the proposed project. City of Stockton public transit, bicycle and pedestrian facilities are described in the *Stockton General Plan 2035 Background Report* (report prepared for the City of Stockton by Mintier & Associates 2007) and the *Final Draft City of Stockton Bicycle Master Plan* (City of Stockton 2007). The following describes the systems or facilities relevant to the project:

Bus

The San Joaquin Regional Transit District is the main public transportation system operating in Stockton. Its fixed-route, flexible fixed-route, and dial-a-ride services connect passengers to attractions within Stockton, neighboring cities, and adjacent metropolitan areas. Several San Joaquin Regional Transit District bus routes cross or run parallel to the project site.

Carpool

The San Joaquin Council of Governments operates Commute Connection, which provides referral services to those interested in joining a carpool or vanpool. Three Park and Ride lots sit in the project corridor: Interstate 5 at Country Club Boulevard (American Legion), Interstate 5 at Hammer Lane (Hammer Skate Center), and Interstate 5 at Benjamin Holt Drive (Marina Shopping Center).

Pedestrians

The pedestrian network in Stockton consists mainly of sidewalks and multi-use trails. There are no pedestrian facilities on the project site itself, but there are a number of pedestrian facilities on the streets surrounding it.

Bicycle

The City of Stockton has an extensive network of bicycle facilities, including off-street trails and paths as well as on-street bicycle lanes and routes. Existing and proposed bicycle routes are detailed in the Final Draft City of Stockton Bicycle Master Plan (City of Stockton 2007). Although there are no bicycle routes on the project site (bicycles are prohibited on Interstate 5), a number of bicycle routes cross over the roadway.

Mainline and Ramp Operations

From the Traffic Operations Analysis Report, the following mainline and ramp conditions have level of service conditions that operate at level of service "E" or "F," including:

- Southbound morning between March Lane and Alpine Avenue – level of service "E"
- Northbound afternoon between State Route 4 and Pershing Avenue – level of service "F"
- Northbound afternoon between Country Club Boulevard and Alpine Avenue – level of service "E"
- Northbound afternoon between Alpine Avenue and March Lane – level of service "E"
- Northbound afternoon between March Lane and Benjamin Holt Drive – level of service "E"

- Southbound morning Benjamin Holt Drive off-ramp – level of service "E"
- Southbound morning March Lane off-ramp – level of service "E"
- Northbound afternoon March Lane on-ramp – level of service "E"

A second type of analysis was done for mainline operations that studied the entire three-hour peak period. This method can provide a better understanding of overall traffic operations during these periods. Generally, travel times are lower and travel speeds are higher for the three-hour peak periods than for the individual peak hours.

During the morning peak hour, most freeway segments operate at level of service "D" or better, except the following:

- Southbound Benjamin Holt to March Lane (level of service "E")
- Southbound Alpine Avenue to Country Club (level of service "E")

During the afternoon peak hour, most freeway segments operate at level of service "D" or better, except the following:

- Northbound Pershing Avenue to Monte Diablo (level of service "F")
- Northbound Monte Diablo to Country Club Boulevard (level of service "F")
- Northbound Country Club Boulevard to Alpine Avenue (level of service "E")
- Northbound Alpine Avenue to March Lane (level of service "E")

Vehicle Miles of Travel

The term "vehicle miles of travel" represents the total distance traveled by all vehicles using the Interstate 5 corridor. Vehicle miles traveled is the sum of the volume served for each segment multiplied by the length of each segment. The highest vehicle miles traveled occurs during the northbound afternoon peak period, while the lowest occurs during the northbound morning peak period.

Average Travel Time

The average time traveled is longest in the afternoon in the northbound direction with an average time of 13 minutes and 17 seconds. The shortest average time traveled occurs in the morning in the northbound direction with an average time of 11 minutes and 55 seconds.

Average Travel Speed

The average travel speed is highest in the morning in the northbound direction and in the afternoon in the southbound direction with a speed of 69 miles per hour. The average travel speed is lowest in the afternoon in the northbound direction with a speed of 62 miles per hour.

Vehicle Delay

Vehicle delay is the amount of delay incurred during the peak hour as a result of congestion and demand exceeding the capacity of a freeway segment or ramp. The greatest delay is experienced in the afternoon in the northbound direction with a total delay of 546 vehicle-hours. The least delay is experienced in the morning in the northbound direction with a total delay of 34 vehicle-hours.

Duration of Congestion

The duration of congestion is the amount of time that vehicles are congested and traveling at substantially slower speeds than the free-flow speed. Congestion lasts about 45 minutes in the morning in the southbound direction and about 2 hours in the afternoon in the northbound direction at bottleneck locations.

Table 2.8: Accident History for Interstate 5

Facility	Number of Accidents			Accident Rate (accidents/million vehicle miles)					
				Actual			State Average		
	Total	Fatal	Fatal + Injury	Fatal	Fatal + Injury	Total	Fatality	Fatal + Injury	Total
Interstate 5 Northbound MLK/Charter Way to SR 12	567	5	191	0.007	0.26	0.78	0.008	0.29	0.86
Interstate 5 Southbound SR 12 to MLK/Charter Way	504	5	165	0.007	0.23	0.70	0.008	0.29	0.86
SB On-Ramp from Hammer Lane	8	0	3	0.000	0.19	0.50	0.002	0.32	0.80
NB Off-Ramp to Hammer Lane	18	0	3	0.000	0.18	1.09	0.005	0.61	1.50
SB Off-Ramp to Hammer Lane	9	0	2	0.000	0.51	2.31	0.005	0.61	1.50
NB On-Ramp from Hammer Lane	4	0	2	0.00	0.50	1.00	0.002	0.32	0.80
SB On-Ramp from Eight Mile Road	11	0	4	0.000	1.09	2.99	0.002	0.32	0.80
NB Off-Ramp to Eight Mile Road	20	0	6	0.000	1.47	4.91	0.005	0.61	1.50
SB Off-Ramp to	7	0	5	0.000	4.08	5.71	0.005	0.61	1.50

Eight Mile Road									
NB On-Ramp from Eight Mile Road	6	0	4	0.000	3.51	5.27	0.007	0.21	0.55

Source: Caltrans District 10 TASAS data between 8/1/2004 and 7/31/2007.

Accident History

Caltrans compiled accident data for Interstate 5 through the study corridor. A total of 610 accidents were reported on the northbound freeway, and 562 accidents were reported on the southbound freeway from July 1, 2003 to June 30, 2006. At the ramps, 75 accidents were reported. Fourteen fatalities occurred on the freeway; no fatalities occurred at the ramps.

Interstate 5 in both directions has a lower overall accident rate than the statewide average for similar facilities. However, the fatality rate for the southbound direction exceeds the statewide average. The overall accident rate is greater than the statewide average at the southbound off-ramp to Hammer Lane and all of the ramps at Eight Mile Road.

Traffic Forecasts

Methodology used to forecast traffic volumes included documenting planned transportation improvements and land use projections and executing the City of Stockton Travel Demand Model to develop mainline and intersection turning movement forecasts under the No-Build Alternative and two build alternatives.

Environmental Consequences

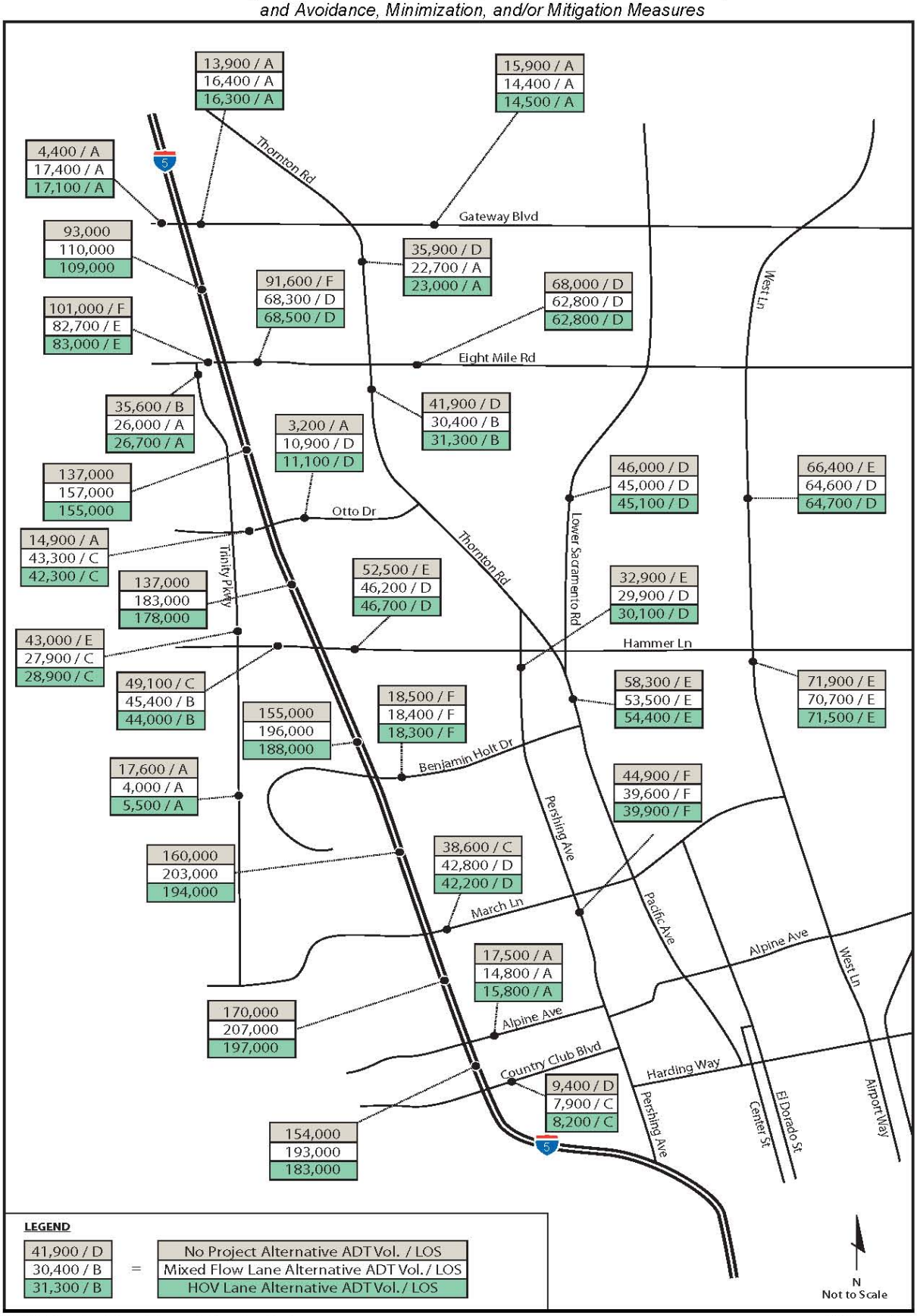
The following discussion compares the potential effects of building the build alternatives with the No-Build Alternative. Since both build alternatives (Mixed-Flow Lane and High-Occupancy Vehicle Lane) have similar (or even identical) results, they are presented in the discussion below as "the build alternatives," except where specifically referenced.

The combination of mainline widening, improved interchanges, and new interchanges under the build alternatives would result in an overall traffic increase on Interstate 5 when compared to no-build conditions. In general, traffic volumes on Interstate 5 north of Country Club Boulevard would increase by about 16 percent and 27 percent in the morning and afternoon peak hours, respectively. A corresponding decrease in traffic volumes would occur on several local streets that parallel Interstate 5.

The project's addition of two new interchanges (at Gateway Boulevard and Otto Drive) would result in lower total volumes at the Eight Mile Road and Hammer Lane interchanges by several thousand vehicles when compared to no-build conditions.

Figure 2.1 presents the projected 2035 average daily traffic volumes under the no-build and build scenarios. As shown in Figure 2.1, the improved access to Interstate 5 under the build alternatives would increase demand on Interstate 5, while substantially reducing demand on several other key roadways in the project area, including Trinity Parkway, Thornton Road, Eight Mile Road, and Hammer Lane.

Under the Mixed-Flow Lane Alternative, traffic volumes on Trinity Parkway are anticipated to drop between 27 percent and 35 percent, depending on location. Traffic volumes on Thornton Road are anticipated to drop by as much as 27 percent, while traffic volumes on Eight Mile Road are anticipated to drop between 8 percent and 25 percent, depending on location. Finally, traffic volumes on Hammer Lane are anticipated to drop between 8 percent and 12 percent. The High-Occupancy Vehicle Lane Alternative would result in volume reductions and level of service similar to the Mixed-Flow Lane Alternative.



SOURCE: Fehr & Peers Transportation Consultants

Figure 2.1

Year 2035 Average Daily Traffic Volumes

Table 2.9 compares the average daily areawide vehicle miles of travel, vehicle hours of travel, and vehicle hours of delay for the No-Build Alternative and both build alternatives based on output from the City of Stockton Travel Demand Model.

Table 2.9: Regional Measures of Effectiveness for the Northwest Stockton Area[1]

Effectiveness Measure	Alternative[2]		
	No-Build	Mixed-Flow Lane	High-Occupancy Vehicle Lane
Daily Vehicle Miles of Travel (vehicle miles traveled)	4,890,885	4,839,704 (-1%)	4,842,596 (-1%)
Daily Vehicle Hours of Travel	204,099	167,702 (-18%)	170,583 (-16%)
Daily Vehicle Hours of Delay)	86,882	54,301 (-38%)	56,580 (-35%)
Daily Person Miles of Travel	6,015,789	5,952,836 (-1%)	5,956,393 (-1%)
Daily Person Hours of Travel	251,042	206,273 (-18%)	209,817 (-16%)
Daily Person Hours of Delay	106,865	66,790 (-38%)	69,593 (-35%)

Notes:
1. The Northwest Stockton Area extends from just north of Gateway Boulevard south to Country Club Boulevard and from West Lane on the east to the delta on the west. It includes all roadways bounded by these limits.
2. The percentage of change from No-Build conditions is presented in parentheses.

As Table 2.9 shows, the overall amount of daily travel in the study area, as reflected in the measures of vehicle and person miles of travel, would remain very similar under all alternatives. However, the Mixed-Flow Lane Alternative is expected to decrease travel times by 18 percent and travel delays by 38 percent, while the High-Occupancy Vehicle Lane Alternative is expected to decrease travel times by 16 percent and travel delays by 35 percent. Both build alternatives serve similar amounts of travel with improved efficiency and quality of traffic flow.

Some of the key benefits of the project over no-project conditions are the following:

- Interstate 5 would generally serve more traffic under project conditions than under no-project conditions, with less delay.

- The Mixed-Flow Lane Alternative would reduce travel times in the northbound direction by 4 percent during the morning peak period and 35 percent during the afternoon peak hour. The High-Occupancy Vehicle Lane Alternative would result in similar travel time reductions.

- The Mixed-Flow Lane Alternative would reduce travel times in the southbound direction by 14 percent during the morning peak period and 37 percent during the afternoon peak period. The High-Occupancy Vehicle Lane Alternative would result in a similar travel time reductions.

- The Mixed-Flow Lane Alternative would reduce mainline vehicle delay in the northbound direction by 64 percent during the morning peak period and 82 percent during the afternoon peak period. The High-Occupancy Vehicle Lane Alternative would result in slightly greater mainline vehicle delay reductions.

- The Mixed-Flow Lane Alternative would reduce mainline vehicle delay in the southbound direction by 58 percent during the morning peak period and 66 percent during the afternoon peak period. The High-Occupancy Vehicle Lane Alternative would result in the slightly lower mainline vehicle delay reductions.

The results indicate that both build alternatives would improve traffic conditions over no-build conditions on Interstate 5. The build alternatives would also provide similar benefits (reduction in delays, travel times, etc.) on Interstate 5.

The increased capacity on Interstate 5 under the build alternatives would substantially reduce the daily vehicle demand on other project-area roadways. As shown in Figure 2.1, the improved access to Interstate 5 under the build alternatives would increase demand on Interstate 5, but substantially reduce demand on several other key roadways in the project area, including Trinity Parkway, Thornton Road, Eight Mile Road, and Hammer Lane. Traffic shifts caused by the build alternatives are not anticipated to degrade a roadway operating at acceptable level of service or better to unacceptable level of service or worse.

In several locations, level of service would improve under the build alternatives:

- Eight Mile Road on the east side of Interstate 5 – from level of service “F” to “D”
- Hammer Lane on the east side of Interstate 5 – from level of service “E” to “D”
- Trinity Parkway north of Hammer Lane – from level of service “E” to “C”
- Pershing Avenue south of Hammer Lane – from level of service “E” to “D”
- West Lane between Eight Mile Road and Hammer Lane – from level of service “E” to “D”

This impact is considered beneficial, and no mitigation is required.

Impacts to Mainline

Both the Mixed-Flow Lane Alternative and High-Occupancy Vehicle Lane Alternative are expected to provide better traffic conditions than no project in the northbound direction during the morning peak hour. Three mainline segments are anticipated to operate at level of service "E" under the no-build conditions, while both the Mixed-Flow Lane Alternative and High-Occupancy Lane Alternative would provide level of service "D" or better operations at all locations. Mainline queuing is not expected under any of the alternatives.

In the southbound direction, a bottleneck would develop between Benjamin Holt Drive and March Lane under no-build conditions. This would result in two locations operating at level of service "E" or worse, plus mainline queues.

The Mixed-Flow Lane Alternative would eliminate this bottleneck, but a new bottleneck would occur between Monte Diablo Boulevard and Pershing Avenue as a result of the higher traffic volume arriving at this location after upstream the bottleneck is eliminated. The section of Interstate 5 between Monte Diablo Boulevard and Pershing Avenue is outside the project limits and would remain at its existing configuration (four lanes). The City of Stockton General Plan Update indicates that Interstate 5 would need to be widened to 10 lanes to accommodate the future demand. Widening this section to 10 lanes (five lanes in each direction) would likely eliminate the bottleneck. Under the Mixed-Flow Lane Alternative, two sections of Interstate 5 would operate at unacceptable service levels, but the mainline queues would be substantially reduced compared to no-build conditions.

The High-Occupancy Vehicle Lane Alternative would also eliminate the bottleneck that would develop under no-build conditions. However, similar to the Mixed-Flow Alternative, it would result in a new bottleneck in the mixed-flow lanes between Monte Diablo Boulevard and Pershing Avenue. The High-Occupancy Vehicle Lane is expected to operate at acceptable service levels with no mainline queuing. The new bottleneck on the mixed-flow lanes would result in three mixed-flow sections of Interstate 5 operating at unacceptable service levels; however, the mainline queues would be substantially reduced over no-build conditions.

Impacts to Local Streets

The build alternatives would redistribute traffic at the existing local street interchanges and attract new traffic to Interstate 5 as a result of building two new interchanges:

- The ramp terminal intersections and adjacent intersections at the proposed Gateway Boulevard interchange are anticipated to operate at acceptable level of service "C" or better conditions during the morning and afternoon peak hour. There are no impacts to this interchange, and mitigation is not required.

- The Eight Mile Road interchange would improve traffic operations to acceptable service levels from level of service "F" conditions under the no-build conditions to level of service "B" or better during the morning and afternoon peak hour. There are no impacts to this interchange, and mitigation is not required.

- The proposed design for the Otto Drive interchange and adjacent intersections would result in level of service "C" operations or better during the morning and afternoon peak hour. There are no impacts to this interchange, and mitigation is not required.

- At the Hammer Lane interchange, the proposed improvements would improve traffic operations from unacceptable service levels at several locations under no-build conditions to acceptable service levels at all locations during the morning and afternoon peak hour. There are no impacts to this interchange, and mitigation is not required.

All of the study intersections are anticipated to operate at level of service "D" or better under the build alternatives, except the Otto Drive/Estate Drive intersection (which is less than 900 feet from Interstate 5), which is expected to degrade to level of service "F" operations. Mitigation for this intersection is discussed under Avoidance, Minimization, and/or Mitigation Measures.

The build alternatives would attract new traffic to the Otto Drive interchange and would redistribute or increase traffic on key local streets near the Otto Drive interchange. The redistribution of traffic would improve the level of service at two locations operating at unacceptable service levels under no-build conditions. All of the roadway segments would operate at acceptable service levels under build

alternative conditions. There are no impacts to local street roadway segments, and mitigation is not required.

Impacts to Public Transportation

Public transportation within the Stockton area is not expected to be greatly affected by the project. Bus routes along Interstate 5 and affected interchanges would have minor delays during construction phases. Once construction is complete, the proposed project is expected to improve traffic flow, including improved public transportation along Interstate 5 within the North Stockton area.

The proposed project would not affect transit-dependent persons. While there are residents in the Stockton area who do not or cannot drive a vehicle, these needs are met by friends, relatives or by other means, including a fixed bus route, dial-a-ride, specialized dial-a-ride, intercity fixed bus routes, interregional fixed bus route, and intercity and commuter rail. Within the Stockton area, there are also nine different taxi companies that offer service 24 hours a day. Ultimately, since public transportation systems are not expected to be greatly affected by the project, any transit-dependent population would, likewise, not be affected.

Impacts to Pedestrian and Bikeway Facilities

Both build alternatives would provide pedestrian/bikeway facilities that are consistent with the city's planned future pedestrian/bikeway network. Gateway Boulevard, Eight Mile Road, Otto Drive (west of Estate Drive), and Hammer Lane are identified as arterials in the City of Stockton General Plan Update (December 2006). Based on the City of Stockton Street Design Guidelines (November 2003), arterials should provide a minimum 8-foot detached sidewalk/bike path on both sides of the roadway to serve both pedestrians and bicyclists. The following pedestrian/bicycle facilities are currently proposed for these arterials:

- Gateway Boulevard interchange—sidewalks would be 5 feet wide with 5-foot shoulders on both sides.
- Eight Mile Road interchange—the existing 10-foot-wide sidewalk/bike path would be maintained on only the south side, and 4-foot shoulders are proposed on both sides.
- Otto Drive interchange—new 10-foot-wide sidewalk would be on the north side of the interchange, with 5-foot shoulders on both sides.

- Hammer Lane interchange—east of interchange, the existing cross section would be maintained. Sidewalks would be 5 feet wide, with 5-foot shoulders on both sides. At the undercrossing and west side of interchange, a 17-foot-wide sidewalk/bike path is proposed on the south side of Hammer Lane within the project footprints of the interchange.

Both build alternatives would temporarily disrupt traffic patterns and emergency services during construction. Construction activities would disrupt traffic patterns and emergency services during the 54- to 60-month construction schedule in each direction.

The following three construction phases would require extensive traffic staging:

- Construction of the inside median, roadway, and bridge widening between Country Club Boulevard and Eight Mile Road would be carried out in two phases. In the first phase, all travel lanes would be reduced to 11 feet wide, and a temporary Type K rail would stand along the existing left edge of the roadway. Construction of roadway and bridge widening would be completed. The second phase would shift traffic back and provide final pavement.

- Construction of the Otto Drive undercrossing bridge would be carried out in two phases. In the first phase, temporary pavement would be provided for standard transition of northbound Interstate 5 lanes to six 11-foot-wide lanes on the west side of the freeway, with north and south directions separated by temporary concrete barrier. Once traffic is shifted, construction of the freeway embankment and northbound bridge over the Otto Drive undercrossing would be completed, with a minimum of six 12-foot travel lanes against temporary barrier, for a total width of 72 feet. After completion of the northbound bridge, all traffic lanes would be shifted to the new bridge and roadway, again with northbound and southbound movements separated by temporary concrete barrier. Once traffic is shifted, the southbound lanes would be demolished and the southbound bridge over Otto Drive would be built. Once this construction is complete, traffic would be shifted to its final configuration on Interstate 5.

- The pavement replacement between Country Club Boulevard and March Lane would also be carried out in two phases. In the first phase, median construction and final pavement would be provided for standard transition of

northbound and southbound Interstate 5 lanes to three 11-foot lanes in each direction, with north and south directions separated by temporary concrete barrier. Once traffic is shifted, pavement replacement in the existing concrete sections would be completed. Once this construction is complete, traffic would be shifted to its final configuration on Interstate 5.

Temporary construction impacts are expected to be the greatest during the Interstate 5 widening from Country Club Boulevard to Eight Mile Road, which is expected to disrupt operations at 11 undercrossings.

Avoidance, Minimization, and Compensation Measures

Local Street Intersection Traffic Impacts

The project would implement the following measures to reduce local street intersection traffic impacts.

The project would change the Otto Drive/Estate Drive intersection to provide the following:

- Traffic signal
- Northbound approach – 1 left-turn lane (150 feet) and 1 shared through/right-turn lane
- Southbound approach – 1 shared through/left-turn lane and 1 right-turn lane (150 feet)
- Westbound approach – 1 left-turn lane (50 feet) and 1 shared through/right-turn lane
- Eastbound approach – 1 left-turn lane (full lane) and 1 shared through/right-turn lane

As part of the intersection change, the city would maintain the existing Class II bicycle facilities by eliminating some on-street parking spaces.

Pedestrian/Bikeway Facilities Impacts

The following measures would reduce the pedestrian/bikeway facilities impacts:

- *Gateway Boulevard interchange.* The 5-foot sidewalk on both sides of the roadway is adequate for pedestrians, but not wide enough for bicyclists. Impacts at this interchange could be minimized by providing bicyclists the opportunity to use the 5-foot shoulders. The interchange should be designed to allow bicyclists to transfer from and to the 8-foot pedestrian/bikeway

facilities on Gateway Boulevard outside the interchange area to the 5-foot shoulders on Gateway Boulevard through the interchange.

- *Eight Mile Road interchange.* Pedestrian barricades and supporting design features should be provided on the north side of Eight Mile Road approaching the interchange to direct both pedestrian and bicycle traffic to the 10-foot-wide pedestrian/bikeway path on the south side of the interchange.

- *Otto Drive interchange.* The 5-foot sidewalk on both sides of the roadway is adequate for pedestrians, but not wide enough for bicyclists. Impacts at this interchange could be minimized by providing bicyclists the opportunity to use the 5-foot shoulders. Two 5-foot5wide sidewalks would be provided on either side of Otto Drive within the interchange limits.

- *Hammer Lane interchange.* East of the interchange, the 5-foot sidewalk should be restricted to pedestrians only, while the 5-foot shoulders should be designed for bicycle use. At the undercrossing and west of the interchange, pedestrian barricades and supporting design should be provided to direct pedestrian and bicycle traffic to the 17-foot-wide sidewalk/bike path on the south side.

Construction-related Traffic Impacts

The project would implement the following measures to reduce construction-related traffic impacts:

- The contractor would be required to prepare and implement a traffic management plan that would identify the locations of temporary detours and signage to facilitate local traffic patterns and through-traffic requirements.

- The project special provisions of the highway contract would require that emergency service providers (i.e., law enforcement, fire protection, and ambulance services) be given adequate advance notice of any street closures during the construction phases of the proposed project.

- Construction activities would be coordinated to avoid blocking or limiting access to homes and businesses to the extent possible. Residents would be notified in advance about potential access or parking effects before construction activities begin.

- Any interchange, ramp, or road closures required during construction would, to the extent possible, be limited to nighttime hours to reduce effects on businesses in the study area.

- Construction activities would be coordinated to avoid blocking or limiting access to businesses along Eight Mile Road and Hammer Lane during business hours. Businesses would be notified in advance concerning construction activities before construction begins near businesses.

- A traffic management plan would be prepared to address short-term disruptions in existing circulation patterns during construction; for example, the traffic management plan would identify the locations of temporary detours or temporary roads to facilitate local traffic circulation and through-traffic requirements.

2.1.7 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration (or Caltrans as delegated) in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final project decisions consider the best overall public interest in respect to adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities." [CA Public Resources Code Section 21001(b)]

Affected Environment

The regional landscape in the project area has large open expanses with little change in elevation, typical of the Central Valley of California. The land is generally flat. Any landform differences are typically human-made features or elements such as elevated roadway overpasses, interchanges, and depressed roadways.

The City of Stockton lies near the center of San Joaquin County and serves as the seat of the city and county government. The urban core area of the city is characterized by a mix of heavy industrial uses with limited landscape features, older residential neighborhoods, neighborhood commercial shopping centers, and a variety of other commercial and industrial parcels. Owing to the flat topography, views within the urban center are generally limited to foreground elements such as houses, stores, factories, and streetscapes. Land on the periphery of the city is largely agricultural with the occasional rural residence. The most significant visual features within the Stockton area are the existing agricultural and rural residential landscapes. Riparian areas along the local waterways including the San Joaquin River, the Calaveras River, and the larger delta waterways also provide important visual elements in the Stockton area. To a lesser extent, local creeks and sloughs provide visual value as well, including those features that cross Interstate 5 through the study area.

A Visual Impact Assessment was prepared for the proposed project in July 2008. The assessment included a field review of distinct landscapes surrounding each element of the proposed project within the project area. Visual simulations (see Figures 2.2a, 2.2b, 2.2c) show before and after views of project construction areas.

The Visual Impact Assessment evaluates the value of visual quality within the right-of-way and outside of the right-of-way (referred to as inside the landscape unit and outside the landscape unit, respectively). Three key criteria were evaluated to determine the overall visual quality: vividness, intactness, and unity. These elements were evaluated on a scale from 1 to 7 (very low to very high) (see Appendix I). None

Existing

Proposed

SOURCE: Visual Impact Assessment

Figure 2.2a

Visual Simulations

Existing

Proposed

SOURCE: Visual Impact Assessment

Figure 2.2b

Visual Simulations

Existing

Proposed

SOURCE: Visual Impact Assessment

Figure 2.2c

Visual Simulations

of these qualities individually equate to visual quality; all three components must be high to indicate high quality.

Environmental Consequences

The Interstate 5 widening and interchange improvements would change the visual environment in the project area. In some locations, the changes would be major, particularly where new interchanges would be built. The new interchanges would be a noticeable visual change along the corridor.

The Otto Drive interchange would convert this section of Otto Drive from a quiet cul-de-sac to a major arterial street with access to the interstate. The North Gateway Boulevard interchange would be built on lands that are currently agricultural but that are expected to generate additional traffic based on the projected 2035 General Plan land use.

Most of the project construction/improvements along the interstate would be minor: lane additions, changes to existing interchanges, and soundwalls. The most noticeable change would be the loss of the center median. Weedy grasses and shrubs would be replaced by an additional lane and a concrete barrier.

As a result of the proposed project, trees would be removed to accommodate construction of the interstate improvements. Several oak and non-oak trees would have to be removed or replanted along the project corridor. According to the Tree Removal Plan approved by Caltrans, 9 percent of the oaks trees and 12 percent of non-oak trees would have to be removed or replanted to provide land for the proposed project.

The most noticeable change would be at Otto Drive and Gateway Boulevard where new interchanges would be built.

The following is a summary of project impacts by segment:

Segment 1 (North Gateway Boulevard to Eight Mile Road)

This segment extends along mostly flat terrain through the north Stockton area. Additional lanes would be built in the median for northbound and southbound travel, connecting with the existing eight lanes on Interstate 5, just north of Eight Mile Road. The two new auxiliary lanes would be built on the outside shoulders, which are currently covered with non-native, weedy grasses.

A new interchange would be built about a mile north of Eight Mile Road. The interchange would be built on agricultural lands, but not until proposed development is built triggering the need for the interchange.

Segment 2 (Eight Mile Road to Hammer Lane)

This segment extends along mostly flat terrain through the north Stockton area. An additional lane in each direction would be added in the median. The median is relatively flat with a small swale, and non-native grasses and brush cover this section of land. The existing median thrie-beam barrier would be replaced with a concrete wall barrier to separate northbound and southbound motorists. Soundwalls would be added in some segments to mitigate noise between the interstate and residential homes, where warranted. The soundwalls would create a visual barrier between the homes and the interstate.

Midway through this segment, an interchange would be built at Otto Drive. To facilitate the new interchange, approximately 24 duplex units would be removed and replaced with an arterial roadway, additional open space/landscaping and interchange improvements (ramps/bridge undercrossing). This elevation increase would change the scale of the freeway in this section, as well as the views from the roadway and of the roadway. Shade and shadow effects from the raised freeway would be longer (both in time exposure and surface distance).

Soundwalls would reduce the view for motorists along the Interstate 5 corridor, eliminating mid- and distant views. For adjacent residents, views would be restricted to the soundwalls, eliminating views of the freeway traffic and beyond. For the elevation change, views would be affected, but the overall visual quality would not change.

The interchange at Eight Mile Road had been recently reconstructed to accommodate traffic generated by the General Plan land use south of Eight Mile Road. However, with the approval of the new 2035 Stockton General Plan, the interchange must be further improved to accommodate additional traffic volumes. These improvements would widen the interchange and extend the on- and off-ramps farther into the adjacent agricultural lands.

Segment 3 (Hammer Lane to Country Club Boulevard)

The segment between Hammer Lane and County Club Boulevard requires construction of an additional auxiliary/high-occupancy vehicle lane in both the northbound and southbound direction. The median is relatively flat with minor swales

to collect runoff from the roadway. The median is covered with non-native grass and brush. The proposed lanes would be built in the median, and a concrete barrier would be replaced with barrier to separate the northbound and southbound lanes. Soundwalls would be added to create a visual barrier between the interstate and nearby residential homes, where warranted.

At the Hammer Lane interchange, the project would change the existing interchange, including the on- and off-ramps and Hammer Lane approaches to Interstate 5. On- and off-ramps would be widened for traffic entering and exiting the interstate.

Overall Impacts

The overall visual impact of the proposed project would change views of the project portion of Interstate 5. With the addition and change of the new elements of the project, the visual character of the entire project would affect the "views of the road" and "views from the road."

Overall impacts to "views of the road" would result in some decline to the surrounding visual environment as a result of the proposed project. Changes to the view as a result of the project alternatives would marginally degrade all observation points.

Overall impacts to "views from the road" would not change the views dramatically as a result of the proposed project. Changes to the view as a result of the project alternatives would have nearly no degradation to most of the observation points and would actually increase visual quality at several observation points.

Avoidance, Minimization, and/or Mitigation Measures

The following minimization measures, to be completed in cooperation with the District 10 Landscape Architect, incorporate design features and methods to avoid permanent adverse impacts:

- Architectural detailing and/or surface treatments consistent with the surrounding community should be incorporated into new bridge designs.
- Artistic soundwall design should be implemented to break up the built environment and enhance the driving experience. Soundwall design should be compatible with the surrounding area and meet community goals.
- Soundwalls should be designed to discourage the proliferation of graffiti. Some examples of soundwall design may include rough-textured finishes or

uneven surfaces, graffiti-resistant coatings, and vine plantings of a type that would attach to walls.

- Highway art may also be incorporated to break up the built environment and enhance the quality of the driving experience. Artistic design elements must be consistent with community goals.

- Replacement planting would include the replacement of removed landscaping.

- Areas affected or disturbed by construction would be replanted in the form of new landscape planting and irrigation systems.

2.1.8 Cultural Resources

Regulatory Setting

"Cultural resources" as used in this document refers to historic and archaeological resources, regardless of significance. Laws and regulations dealing with historic and archaeological resources include the following.

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. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2004, a Section 106 Programmatic Agreement among the Advisory Council, the Federal Highway Administration, the State Historic Preservation Officer, and Caltrans went into effect for Caltrans projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council's regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The Federal Highway Administration's responsibilities under the agreement have been assigned to Caltrans as part of the Surface Transportation Delivery Pilot Program (23 Code of Federal Regulations 773) (July 1, 2007).

Historical resources are considered under the California Environmental Quality Act, as well as California Public Resources Code Section 5024.1, which established the California Register of Historical Resources. Section 5024 of the Public Resources Code requires state agencies to identify and protect state-owned resources that meet listing criteria for the National Register of Historic Places. It further specifically requires Caltrans 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 State Historic Preservation Officer before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

Affected Environment

An Archeological Survey Report and Historic Property Survey Report were prepared to document cultural and historic resources within the project. The reports included a records search, literature review, map review, a Native American and historical organizations consultation, and a pedestrian site survey.

The records review found no cultural resources within the area of potential effects. Two cultural resources were found within a quarter-mile radius of the area of potential effects: 1) the Atlas Tract Levee west of Interstate 5 between the channelized Bear Creek and Mosher Slough, and 2) an historic-period artifact scatter consisting of brick, ceramics, and bottle glass located east of Interstate 5 between the southern boundary of Oak Grove Regional Park and Atherton Road.

Twelve cultural resource studies have been done near or within portions of the area of potential effects, but no cultural resources were found in any of the studies. The literature review, map reviews, and the pedestrian site survey revealed no historic properties within the area of potential effects.

Environmental Consequences

Twelve cultural resource studies have been done near or within the area of potential effects, but no cultural resources have been found. The literature review, map reviews, and the pedestrian site survey likewise found no historic properties.

Avoidance, Minimization, and/or Mitigation Measures

If any unknown archeological resources are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist could assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities must stop in any area or nearby area suspected to overlie remains and the county coroner contacted. Per Public Resources Code Section 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission, which would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact the City of Stockton so that staff may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. Requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A. To comply, the following must be analyzed:

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

Affected Environment

A Location Hydraulic Study and Floodplain Evaluation Report Summary form was completed for this project in July 2008. The study evaluated potential impacts resulting from the proposed project on a 100-year floodplain.

The project corridor lies in the Central Valley Region (Region 5) of the Regional Water Quality Control Board under the direction of the California State Water Resources Control Board. This region includes the Sacramento and San Joaquin River basins, including all areas from the crest of the Sierra Nevada Mountains west to the Coast Range and Klamath Mountains. The region's northern border is the California-Oregon border and extends south to the headwaters of the San Joaquin River. The two rivers meet and form the delta, ultimately draining into San Francisco Bay. This basin covers about one-fourth of the total area of the state, over 30 percent of the state's irrigable land, and furnishes about 51 percent of the state's water supply.

The project site is within the San Joaquin Valley River basin, which covers 15,880 square miles and drains 9 percent of the state's runoff water, about 6.4 million acre feet in an average year. The main tributaries within this basin include the Cosumnes River, Mokelumne River, Calaveras River, Stanislaus River, Tuolumne River, Merced River, San Joaquin River, Kings River, Kern River, Tule River and Kaweah River.

The Porter-Cologne Water Quality Control Act (1969) requires each Regional Water Quality Control Board within the state to formulate or adopt water quality control plans for all areas of the region. The fourth edition of the Water Quality Control Plan for the Central Valley Region (Basin Plan) was adopted by the Regional Water Quality Control Board. The Basin Plan, which includes the project area, contains standards and recommended control measures for use by other local, state, or federal agencies to avoid degrading water quality. The Basin Plan identifies beneficial uses and water quality objectives to protect water resources and water quality.

The Basin Plan lists the beneficial uses for major surface waters contained in the San Joaquin River basin for the Medota Dam to Airport Way Bridge (near Vernalis) major tributaries. These beneficial uses include protecting water quality for municipal and domestic uses, agricultural uses, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, mitigation of aquatic organisms, fish spawning, and industrial services and supplies.

Drainage

The project site is relatively flat, and drainage is generally by sheet flow, or collected by local drainage systems and drained to nearby sloughs, creeks or rivers such as Smith Canal, Calaveras River, Fourteen Mile Slough, Five Mile Slough, Mosher Slough and Bear Creek. Runoff from the Hammer Lane interchange discharges

directly into the City of Stockton MS4 system. The area of the proposed Otto Drive interchange currently discharges into off-site detention basins and into the existing Stockton MS4 system. The Eight Mile Road interchange currently drains into the existing detention basin in the northwestern quadrant of the interchange before discharging into the city system in Trinity Parkway.

Existing freeway drainage is contained within retention ditches provided along the toe of the slopes. The overflow from the ditches on the east side of the freeway is directed to the west through cross-drainage structures. The inlets in the median discharge into the same cross-drainage structures that drain to the west. The ditches along the west side discharge into nearby sloughs and creeks. The existing culverts and cross drainage structures are being surveyed to determine the condition and service life. A Culvert Inspection Report will be prepared and submitted to Caltrans for review before final design.

Five watercourses within the project area would be affected by the project: Bear Creek, Mosher Slough, Five Mile Slough, Fourteen Mile Slough, and Calaveras River. See Figure 2.3a-h for FEMA maps.

Bear Creek

Bear Creek is an east-to-west, low-velocity earthen channel with well-developed, vegetated banks. Bear Creek bridge is on Interstate 5 (post mile 34.26). The structure is a reinforced concrete slab on continuous reinforced concrete girders set atop precast, prestressed pile column bents, and reinforced concrete diaphragm abutments with “U” wing walls. Abutments are on precast, prestressed piles.

Mosher Slough

Mosher Slough is an east-to-west, low-velocity earthen channel with well-developed, vegetated banks. Mosher Slough bridge is on Interstate 5 (post mile 33.5). The structure is a reinforced concrete slab on continuous reinforced concrete girders set atop precast, prestressed pile column bents and reinforced concrete diaphragm abutments with “U” wing walls. Abutments are on precast, prestressed piles.

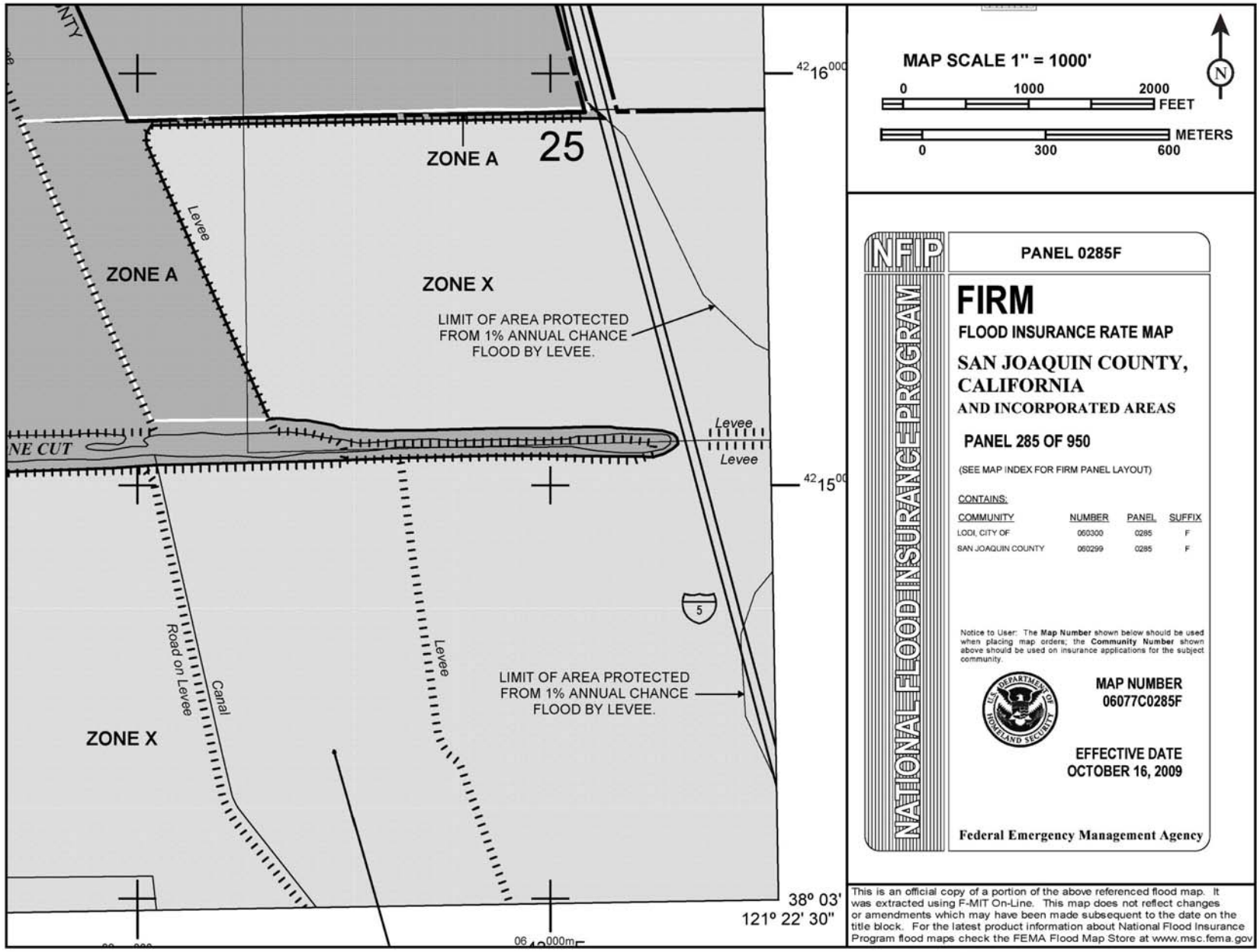


Figure 2.3a

FEMA Map

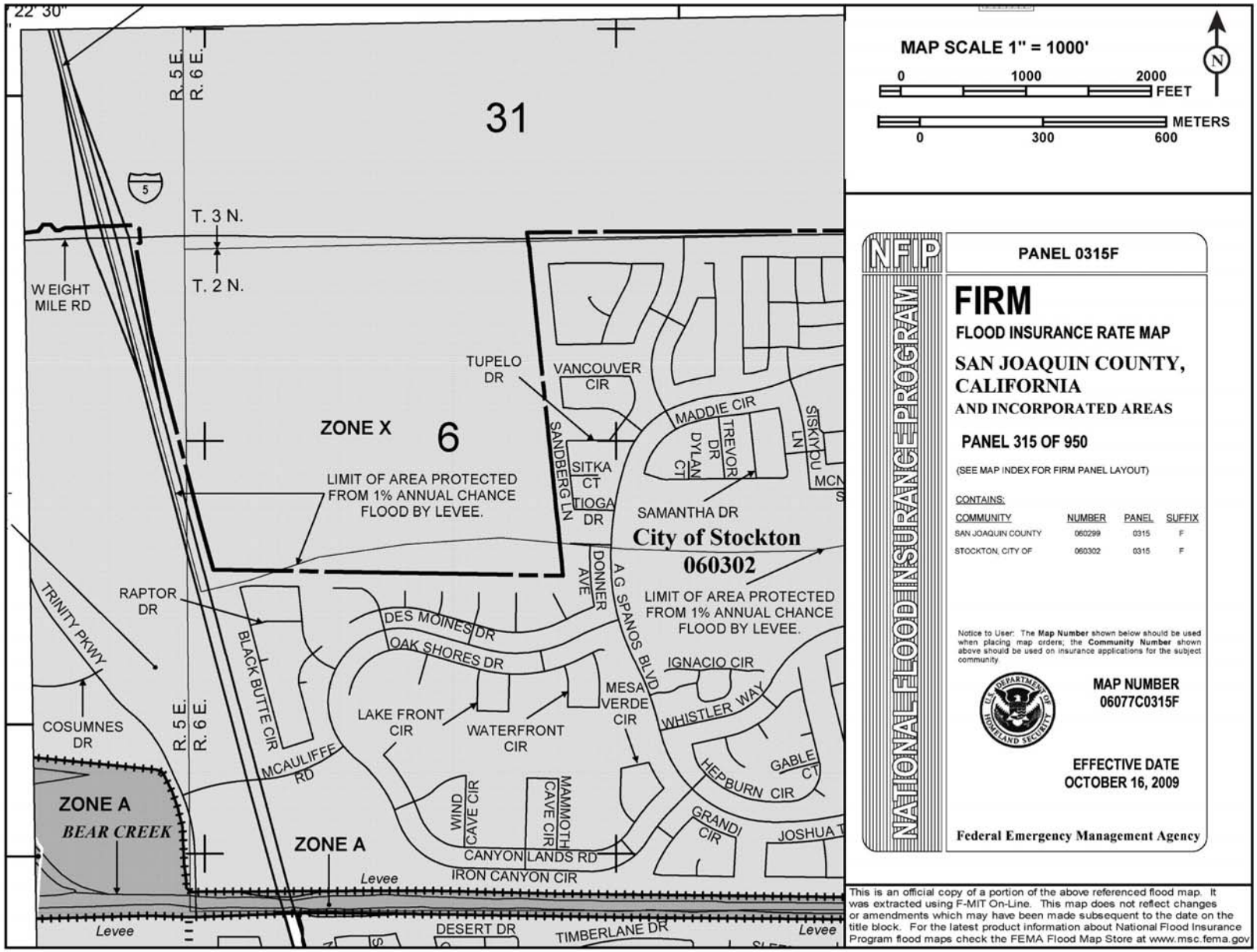


Figure 2.3b

FEMA Map

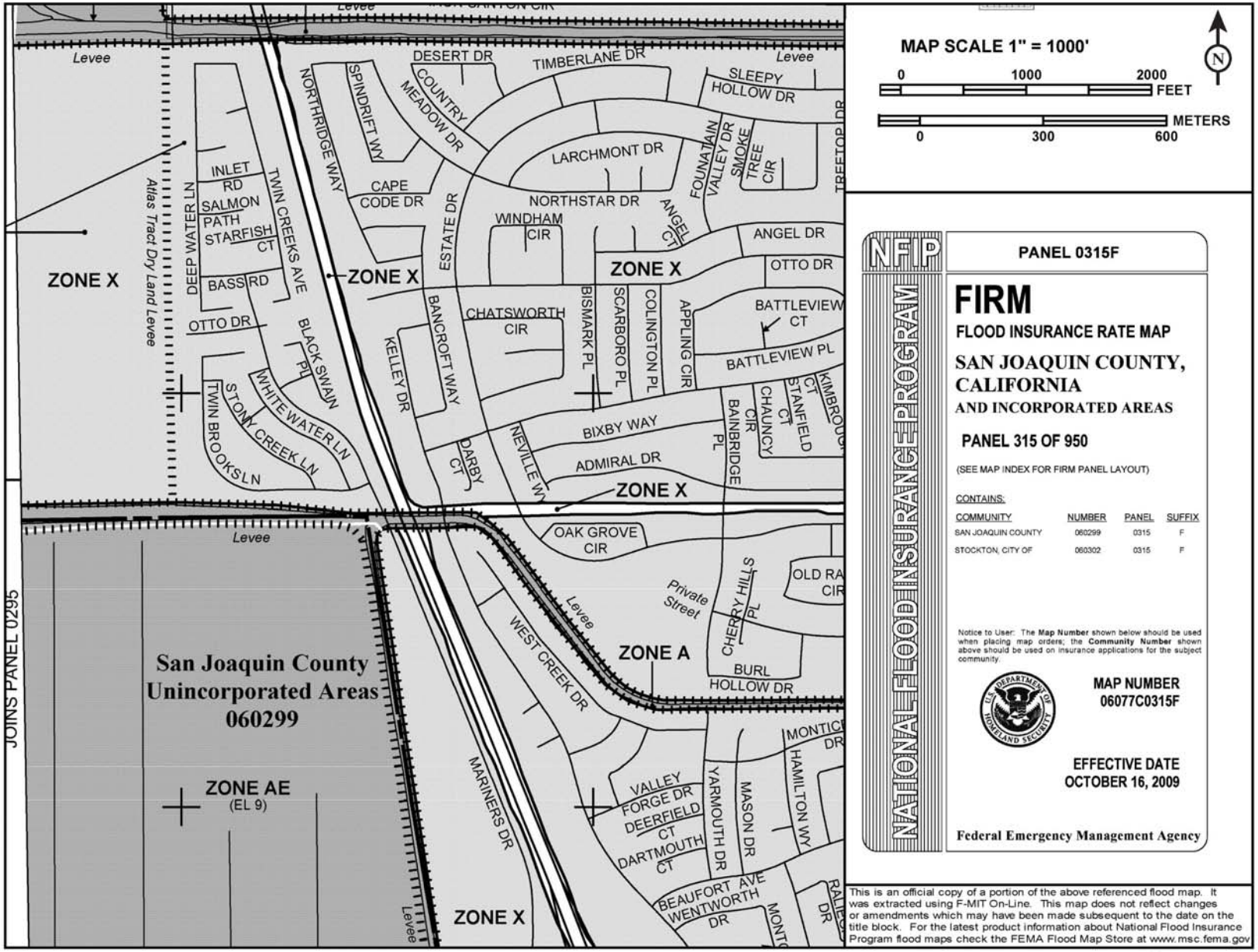


Figure 2.3c

FEMA Map

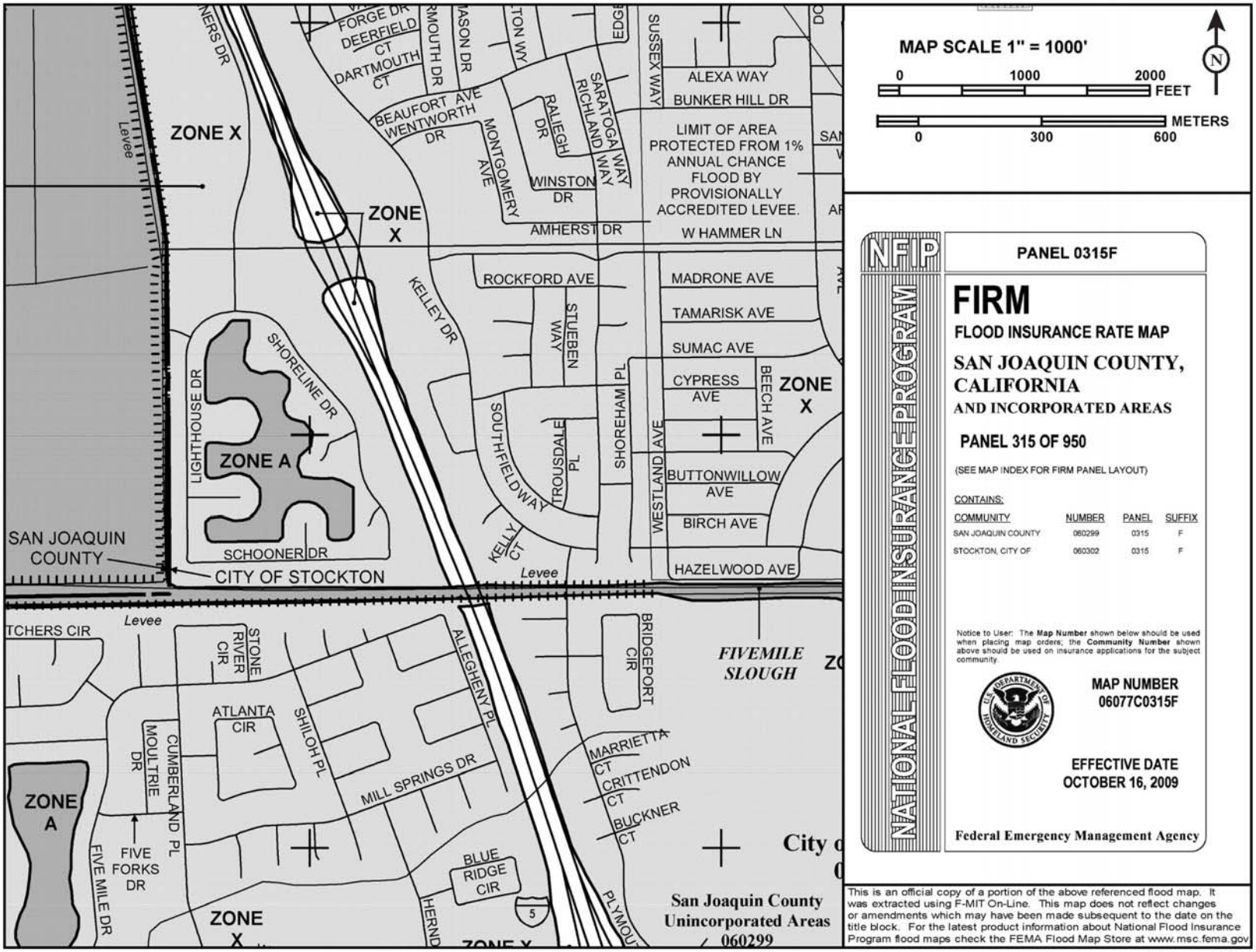


Figure 2.3d

FEMA Map

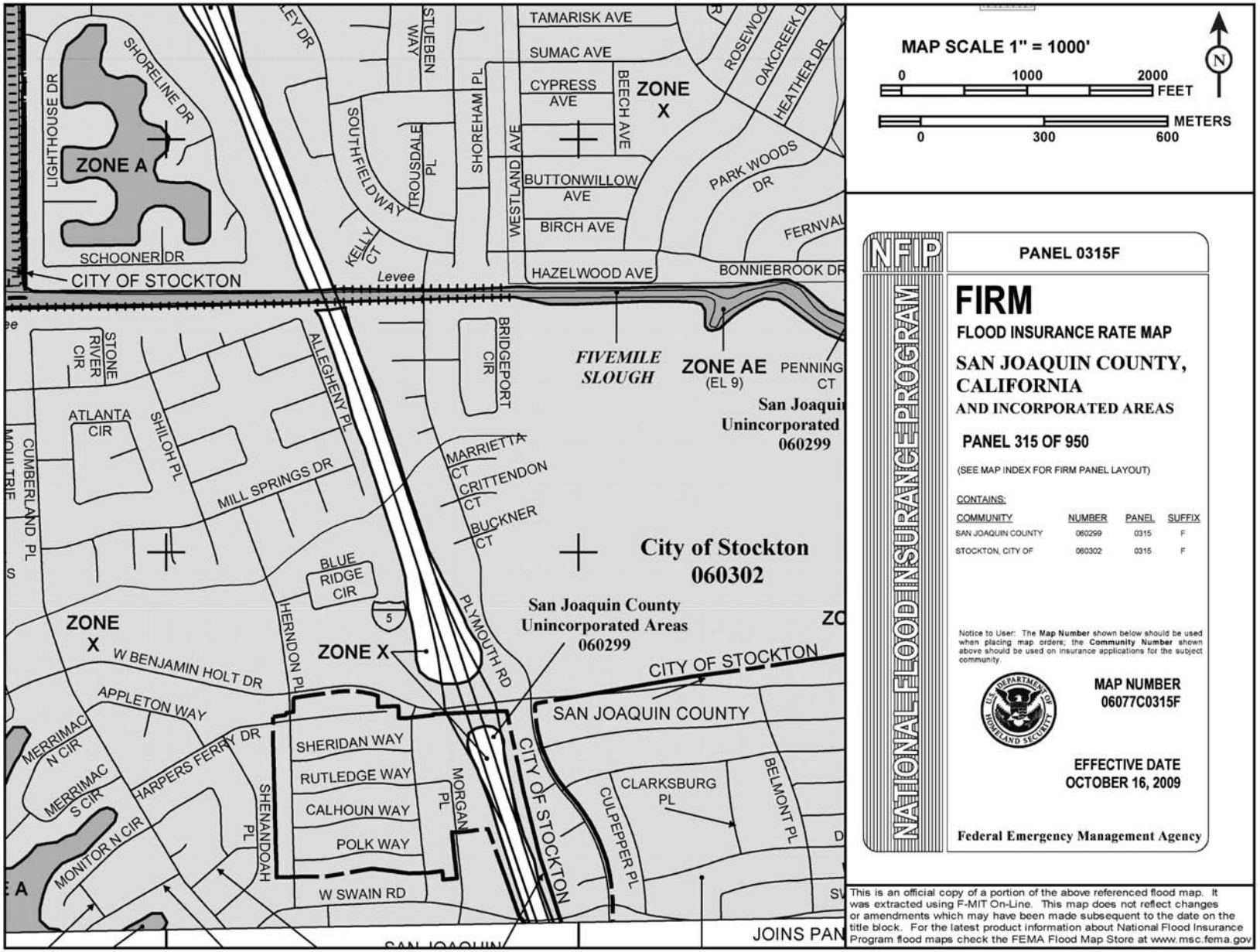


Figure 2.3e

FEMA Map

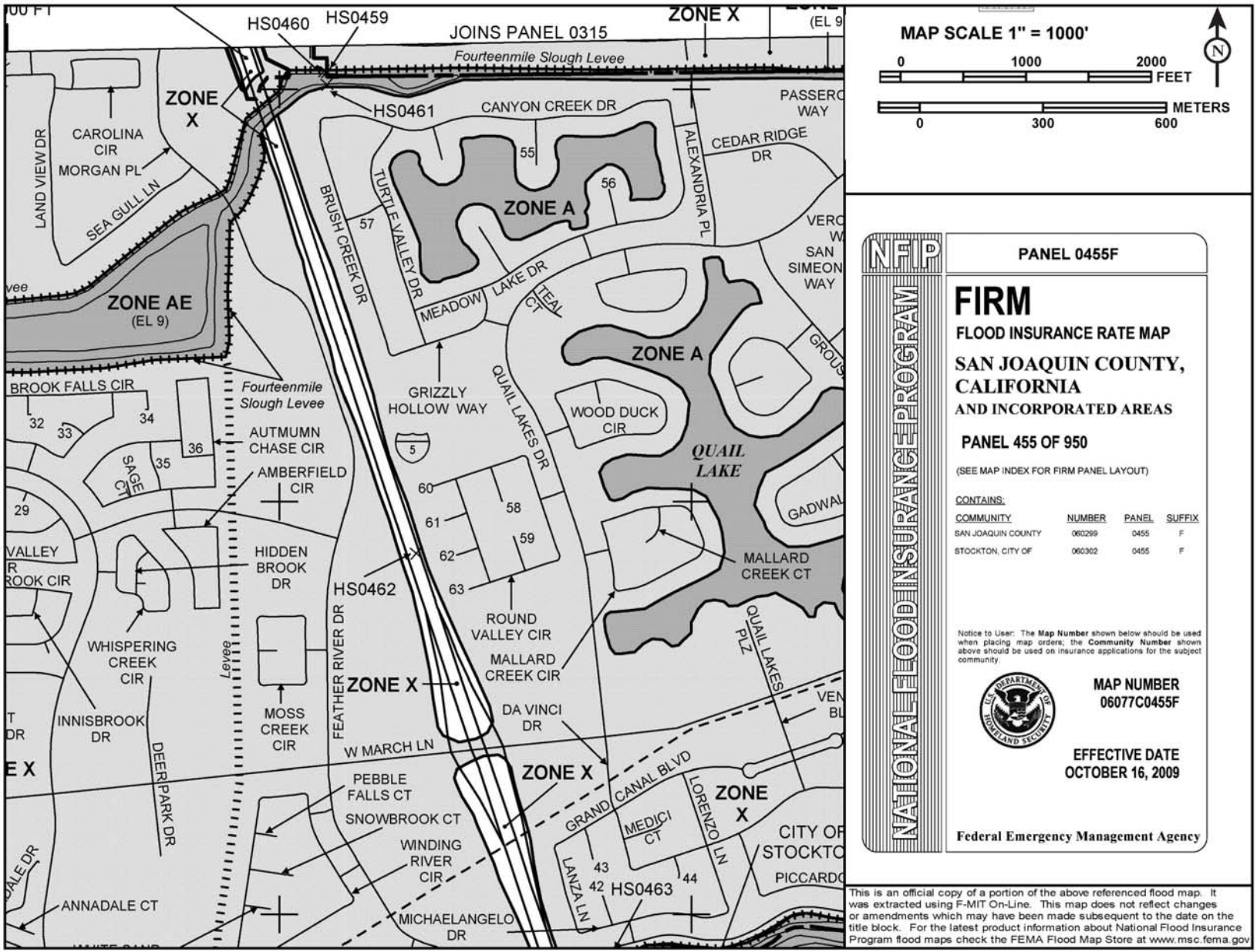


Figure 2.3f

FEMA Map

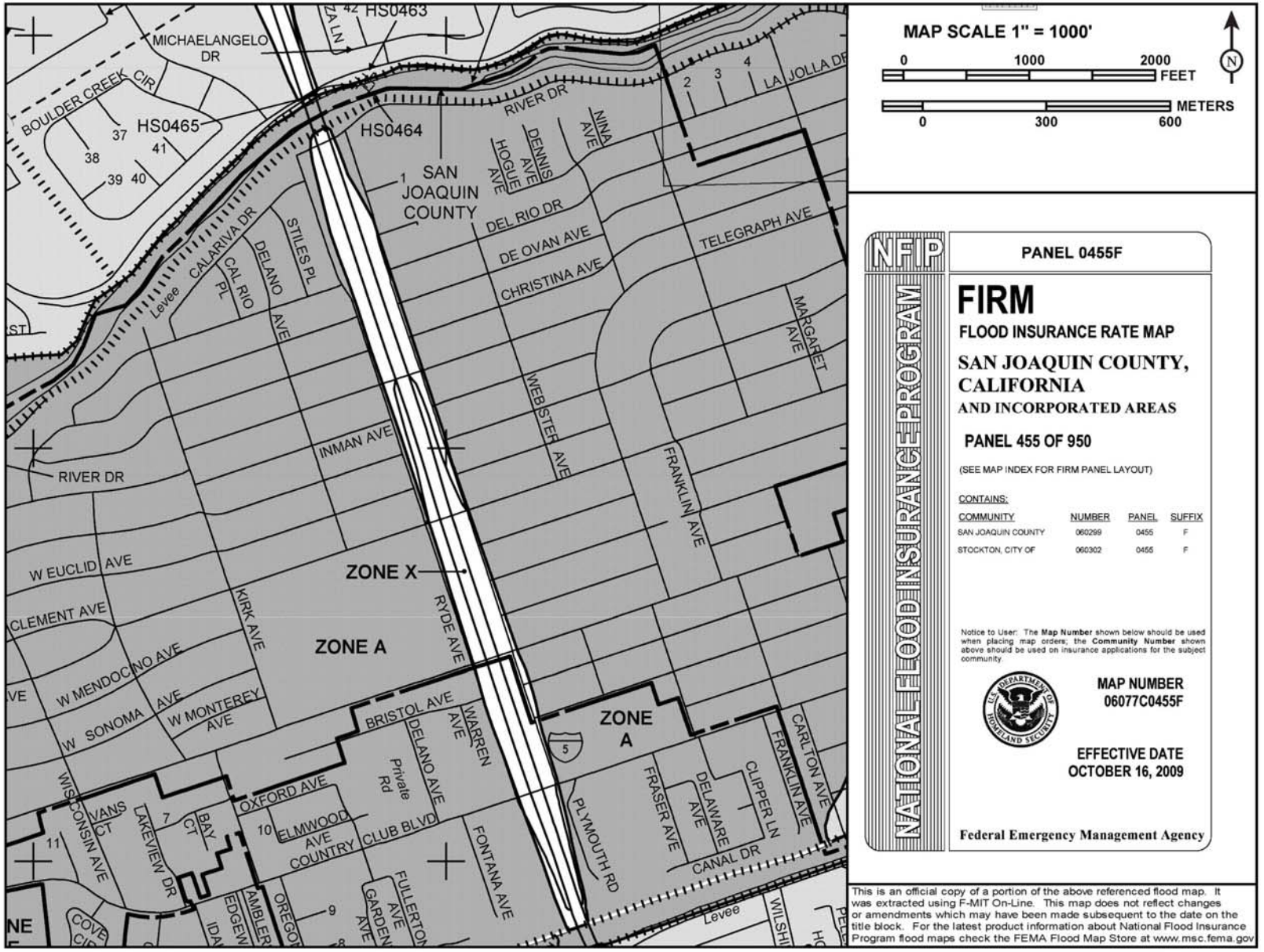


Figure 2.3g

FEMA Map

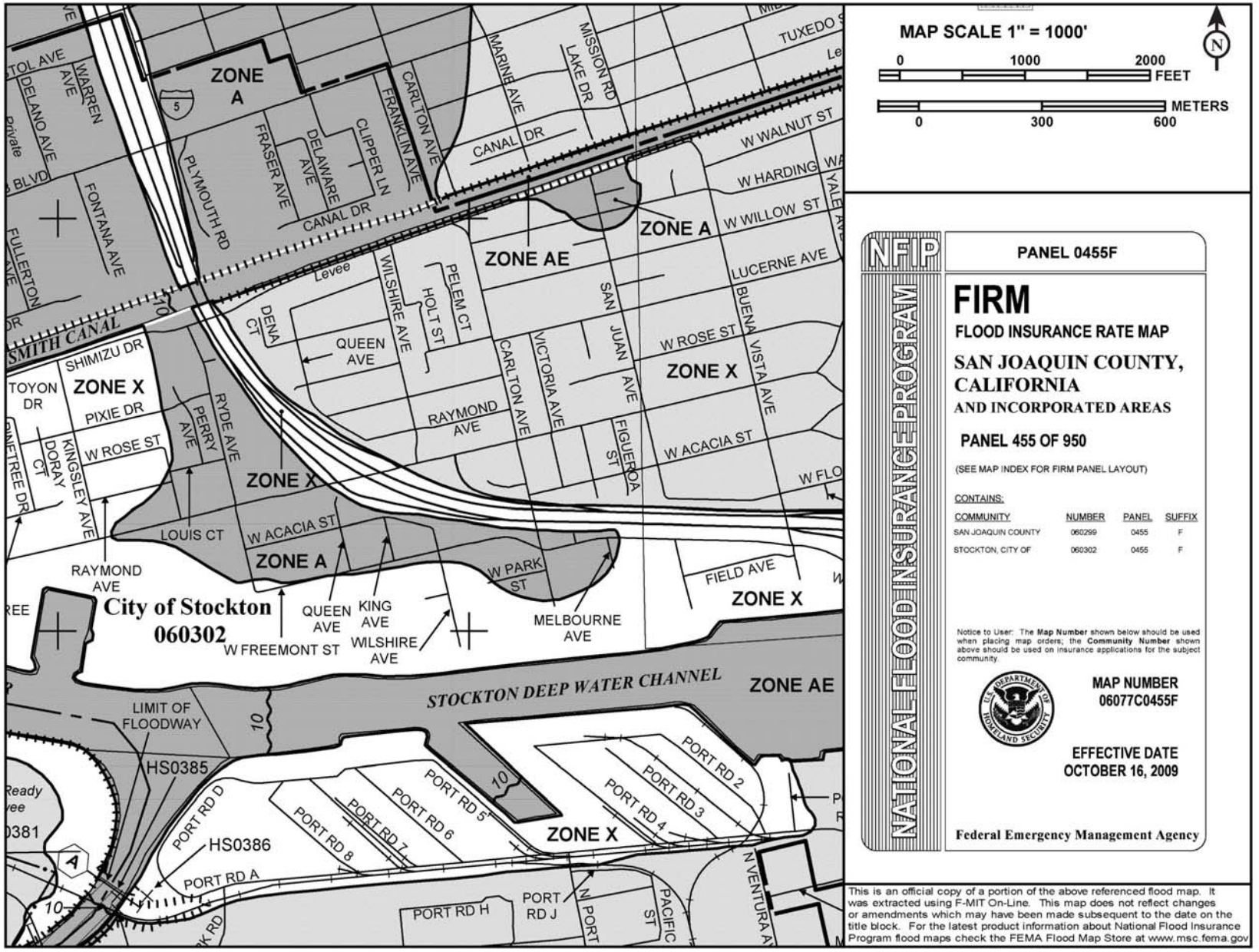


Figure 2.3h

FEMA Map

Five Mile Slough

Five Mile Slough is an east-to-west, low-velocity earthen channel with partially vegetated banks. The Five Mile Slough crossing is on Interstate 5 (near post mile 32.1) about 5,800 feet north of the Fourteen Mile Slough bridge. Based on field topography, the crossing appears to be a concrete rectangular double-box culvert, about 7.5 feet high, 26 feet wide (each box is 13 feet wide), with a centerline length of 190 feet. The openings consist of straight concrete headwalls, about 15 feet outside the culvert openings, with rip-rap protection on the adjacent channel banks.

Fourteen Mile Slough

Fourteen Mile Slough is an east-to-west, low-velocity earthen channel with partially vegetated banks. Fourteen Mile Slough bridge (Caltrans bridge number 29 0175 L/R) is on Interstate 5 (post mile 31). The structure is a reinforced concrete slab on a reinforced concrete diaphragm with "U" wing walls and bents set on 7 reinforced concrete bents.

Calaveras River

Calaveras River is an east-to-west, low-velocity earthen channel with well-vegetated banks. The Calaveras River bridge (Caltrans bridge number 29 0174 L/R) is on Interstate 5 (post mile 29.56). The structure is a reinforced concrete slab on continuous reinforced concrete tee girders set atop reinforced concrete pile extensions. The reinforced concrete cellular abutments are outside the levee and are not applicable to this report with respect to hydraulic concerns.

Environmental Consequences

Floodplain encroachment is categorized in two ways: longitudinal encroachment and transverse encroachment. Longitudinal encroachment occurs when a structure crosses an area in which flood extends beyond the "normal channel boundary." Transverse encroachment occurs when a structure crosses an area in which the flood is contained within the channel.

As part of the Interstate 5 widening and auxiliary lane construction, five bridges would require widening. These bridges would be widened to the inside and would require additional support pilings to be placed within the waterways. According to the Location Hydraulic Study, the bridges included in the proposed widening are considered longitudinal encroachment, but would not have a substantial adverse impact to the existing floodplain or alter the hydraulics of the project site. The

proposed widening of the bridges would not substantially change the water surface elevations nor contribute to incompatible floodplain development.

Construction of the Otto Drive interchange could cause a change in the Flood Zone designation for the residential area on the east side of Interstate 5 south of Bear Creek and north of Mosher Slough. This would occur as a result of creating an opening under the freeway at Otto Drive, potentially allowing floodwaters to flow through the opening.

The Federal Emergency Management Agency has reported that the levee on the south side of Bear Creek, west of Interstate 5, has been compromised by the improvements along the levee in this section. The Federal Emergency Management Agency has suggested that this section of the levee can no longer provide protection for a 100-year flood, changing the designation from Zone X (areas of 0.2 percent annual chance flood; areas of 1 percent annual chance flood with average depths of less than 1 foot of with drainage areas less that 1 square mile; and areas protected by levees from 1 percent annual chance flood) to Zone A (special flood hazard areas subject to inundation by the 1 percent annual chance flood; no base flood elevations determined).

Avoidance, Minimization, and/or Mitigation Measures

Before construction of the Otto Drive interchange, levee recertification is required to provide 100-flood protection south of Bear Creek and west of Interstate 5. Improvements needed for levee recertification would be funded by the Interstate 5 Improvement Project.

2.2.2 Water Quality and Stormwater Runoff

Regulatory Setting

Section 401 of the Clean Water Act requires water quality certification from the State Water Resources Control Board or from a Regional Water Quality Control Board when the project requires a Clean Water Act Section 404 permit to dredge or fill within a water of the United States.

Along with Section 401 of the Clean Water Act, Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the National

Pollutant Discharge Elimination System program to the State Water Resources Control Board and nine Regional Water Quality Control Boards. The State Water Resources Control Board and Regional Water Quality Control Boards also regulate other waste discharges within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The State Water Resources Control Board has developed and issued a statewide National Pollutant Discharge Elimination System permit to regulate stormwater discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the statewide permit, and projects performed by other entities on Caltrans right-of-way (encroachments) are regulated by the State Water Resources Control Board's Statewide General Construction Permit. All construction projects require a Storm Water Pollution Prevention Plan to be prepared and implemented during construction.

The U.S. Coast Guard has jurisdiction over bridges that cross navigable waters of the United States. Coast Guard authority relates to the location, clearances of bridges, bridge permits, construction activities, navigation lights and signals at bridges, and the regulations that govern the operation of drawbridges.

For Coast Guard permitting purposes, Title 33 Subpart 2.05-25 defines navigable waters as follows:

> (a) any waterway which is subject to the ebb and flow of the tide; or
>
> (b) any waterway which is presently used and/or is susceptible to use in its natural condition, or by reasonable improvement, as a means to transport interstate or foreign commerce.

The General Bridge Act of 1946 requires the approval of the location and plans of bridges before start of construction (33 Section 525). The Coast Guard may issue a standard permit for a given activity within navigable waterway in Coast Guard jurisdiction or, if the location of the activity is within Coast Guard jurisdiction but the waterway is only navigable for small motorboats or smaller craft (e.g., canoes), the Coast Guard may issue an "advance approval" to authorize the activity (33 Section 115.70). The commandant has given advance approval to the location and plans of bridges to be constructed across reaches of waterways navigable in law, but not actually navigated other than by logs, log rafts, rowboats, canoes and small motorboats. In such cases, the clearances provided for high water stages would be

considered adequate to meet the reasonable needs of navigation. The term "small motorboats" means rowboats, canoes and other similar craft with outboard motors; it does not include sailing or cabin cruiser craft.

Affected Environment

The project corridor sits in the Central Valley Region (Region 5) of the Regional Water Quality Control Board under the direction of the California State Water Resources Control Board. This region includes the Sacramento and San Joaquin River basins including all areas from the crest of the Sierra Nevada Mountains west to the Coast Range and Klamath Mountains. The region's northern border is the California-Oregon border, and the region extends south to the headwaters of the San Joaquin River. The two rivers meet and form the delta, ultimately draining into San Francisco Bay. This basin covers about one-fourth of the total area of the state, over 30 percent of the state's irrigable land, and furnishes about 51 percent of the state's water supply.

The project site is within the San Joaquin Valley River basin, which covers 15,880 square miles and drains 9 percent of the state's runoff water, about 6.4 million acre feet in an average year. The main tributaries in the basin are the Cosumnes River, Mokelumne River, Calaveras River, Stanislaus River, Tuolumne River, Merced River, San Joaquin River, Kings River, Kern River, Tule River and Kaweah River.

The project area is noted in the fourth edition of the Water Quality Control Plan for the Central Valley Region (Basin Plan), adopted by the Regional Water Quality Control Board. The Basin Plan contains standards and recommended control measures for use by other local, state, or federal agencies to avoid degrading water quality. The Basin Plan identifies beneficial uses and water quality objectives to protect water resources and water quality.

The Basin Plan lists the beneficial uses for major surface waters found in the San Joaquin River basin for the Medota Dam to Airport Way Bridge (near Vernalis) major tributaries. These beneficial uses include protecting water quality for municipal and domestic uses, agricultural uses, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wild life habitat, mitigation of aquatic organisms, fish spawning, and industrial services and supplies.

Based on U.S. Coast Guard jurisdiction, the following waterways may be affected by the proposed project:

- Telephone Cut has a 60-inch-diameter concrete culvert at the Interstate 5 undercrossing that is inaccessible to any watercraft. Additionally, there is an impassable weir just downstream from the project area. Water in Telephone Cut upstream of this weir is managed for irrigation purposes. There are no docks on Telephone Cut in the project area. The average width of the channel in the project area is 35 feet.

- Bear Creek is navigable by small watercraft with its limiting factor being the existing bridge under Interstate 5, which has a sofit elevation of 10 feet above the mean high water elevation and a sofit elevation of 13 feet above the mean low water elevation. Water depth in Bear Creek at the existing Interstate 5 bridge averages about 1 foot at low tide (mean lower low water) and about 5 feet at mean high water. There are a few private docks to the west (downstream) of the bridge, but no access to marinas in nearby waterways. The average width of the channel in the project area is 110 feet.

- Mosher Slough in the project area is only suitable for small motorboats, canoes, and similar watercraft due to its shallow water, narrow banks, and low bridge. The bridge itself has a sofit elevation of 6 feet above the mean high water elevation and sofit elevation of 7 feet above the mean low water elevation. Water depth in Mosher Slough at the existing Interstate 5 bridge averages about zero feet at low tide (mean lower low water) and about 2 feet at mean high water. There are docks to the west of Interstate 5 along Mosher Slough and access to marinas in nearby waterways. The average width of the channel in the project area is 93 feet.

- Five Mile Slough is a box culvert that is limited by the Interstate 5 bridge with a sofit approximately 1 foot above mean high water elevation and approximately 3 feet above mean low water elevation. There is an impassible gate to the west of Interstate 5. The average width of the channel in the project area is 83 feet wide, narrowing to 36 feet wide in the box culvert.

- Fourteen Mile Slough has a sofit 13 feet from the mean high water elevation and 15 feet from the mean low water elevation. Water depth in Fourteen Mile Slough at the existing Interstate 5 bridge averages about zero feet at low tide (mean lower low water) and about 2 feet at mean high water. There are docks to the west (downstream) of Interstate 5 along Fourteen Mile Slough and

access to marinas downstream. The average width of the channel in the project area is 134 feet.

- Calaveras River has a sofit 16 feet from the mean high water elevation and 18 feet from the mean low water elevation. Water depth in the Calaveras River at the existing Interstate 5 bridge averages about 8 feet at low tide (mean lower low water) and about 12 feet at mean high water. There are docks along the Calaveras River in the project area and access to boat launches and marinas in nearby waterways. The average width of the channel in the project area is 170 feet.

Environmental Consequences

Stormwater runoff from within the project at most locations would flow into linear retention basins along the freeway slope. Runoff would be collected by local drainage systems or nearby sloughs, creeks, canals, and rivers such as Bear Creek, Mosher Slough, Five Mile Slough, Fourteen Mile Slough, Calaveras River and Smith Canal.

Stormwater from the Otto Drive interchange would be discharged into the city drainage MS4 system that is permitted for general stormwater discharge and taken westerly to treatment facilities in the Sanctuary Development (Atlas Tract) before being released into Mosher Slough.

At the Eight Mile Road and North Gateway interchanges, stormwater runoff would be collected in existing and new retention basins.

Bridge widening may cause disturbances to the ground surface from earthwork, potentially increasing the amount of sediment entering the watershed. Runoff during the winter season is of greater concern because of the potential for erosion of unprotected and/or graded surfaces. Sediments suspended in runoff would be carried downstream, where, if not controlled, could accumulate in downstream watercourses, or wetland areas, potentially harming any downstream aquatic resources and decreasing water quality.

Stormwater runoff from the roadway surfaces and construction activities may contain oil, grease, petroleum products, or other pollutants. Zinc, copper, lead, cadmium, iron, and other trace metals may also accumulate on road surfaces. Concentrations of these pollutants in stormwater runoff would be greatest during the first major rain of the season. The widened bridges would remain above the 100-year flood elevation. It can be expected the amount of roadway pollutants entering the river would not increase

during or after bridge widening. Materials used during the widening of the bridges may have chemical compounds potentially harmful to aquatic resources and water quality.

Construction of the proposed project would require temporary trestles at Bear Creek Bridge, Fourteen Mile Slough, Mosher Slough, and the Calaveras River bridge. These temporary trestles would lower the effective sofit elevation at Bear Creek bridge (from 18 feet to 9 feet above mean high water elevation), Fourteen Mile Slough (from 13 feet to 7 feet above mean high water elevation), and the Calaveras River Bridge (from 16 feet to 11 feet above mean high water elevation). The temporary trestle at Mosher Slough would not affect the existing sofit height. Temporary trestles would affect these waterways for four months.

Avoidance, Minimization, and/or Mitigation Measures

The design and construction of the proposed project must adhere to the requirements in the National Pollutant Discharge Elimination System, Caltrans Storm Water Management Plan, the Caltrans Project Planning and Design Guide, and best management practices. The following avoidance, minimization, and/or mitigation measures would ensure the elimination of potential water quality impacts both during and after construction:

- Work within the any live channel would be limited to the period between June 1 and October 31. Impacts to sensitive species should also be considered when coordinating construction schedules.

- Emergent and submergent aquatic vegetation would be retained to the maximum extent possible.

- Bridge and road footings would be located outside of high water zones and riparian habitats wherever practical within the constraints of the proposed project.

- Land-disturbing activities and the installation of erosion and sedimentation control practices would be coordinated to reduce on-site erosion and off-site sedimentation. These measures may include mulches (above the mean high water line only), soil binders, and erosion control blankets, silt fencing, fiber rolls, sediment desilting basins, sediment traps, and check dams.

- Existing vegetation would be protected where feasible to provide an effective form of erosion and sediment control, as well as watershed protection, landscape beautification, dust and pollution control, and noise reduction.

- Loose bulk materials would be applied to the soil surface as a temporary cover to protect bare soil from rainfall impact, increase infiltration, and reduce runoff and erosion.

- Stabilizing materials would be applied to the soil surface to prevent dust movement at the project site caused by traffic, wind, and grading activities.

- Roughening and terracing would be implemented, as feasible, to reduce erosion potential, decrease runoff velocities, and trap sediment aiding in the establishment of vegetative cover from seed and increasing infiltration into soil.

- The disturbed area would be graded to its preexisting contour and ripped, if necessary, to decompact the soil. Hydroseeding would be implemented as a temporary measure, if feasible.

- Berms would be provided along the tops of slopes to prevent water from running uncontrolled down the slopes and into adjacent water resources. Water would be collected in bermed basins and conveyed down the slopes in an erosion-proof drainage system. Sediment that is collected within bermed basins would be allowed to "settle out" and removed from the site.

- Permanent landscaping would be installed, as soon as practical, after the completion of grading.

- Construction activities and vehicles would be confined to paved areas, as feasible, to prevent erosion and sediment discharge to the adjacent water resources.

- All demolished or unused roadway and bridge material would be hauled off-site.

- All erosion control measures and stormwater control measures would be properly maintained until construction activities are completed. The condition and effectiveness of the measures would be monitored until they are removed.

At a minimum, all measures should be inspected after every rain, and weekly throughout the rainy season.

- Construction roadways would be properly protected to prevent excess erosion and sedimentation.
- All vehicle and equipment maintenance procedures would be conducted off-site. In the event of an emergency, maintenance would occur away from the water resources.
- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- A spill prevention and countermeasure plan would be prepared for the project before beginning construction activities.
- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the waterway as feasible. All stockpiles would be covered, as feasible.
- Energy dissipaters and erosion control pads would be provided at the bottom of downdrains before releasing into the watershed. Other flow conveyance control mechanisms may include earth dikes, swales, or ditches. Streambank stabilization measures should also be implemented.
- The drainage plan would include water quality control measures (including cleansing or filtration of drainage waters) to ensure minimized contaminants in waters discharged to surface streams or percolated into the ground.
- Fluvial erosion related to construction is controlled by a construction erosion control program, which would be filed with the City of Stockton Department of Public Works office and kept current throughout the site development phase.
- The erosion control program would include best management practices as appropriate, given the specific circumstances of the site and/or project.

2.2.3 Geology/Soils/Seismic/Topography

Regulatory Setting

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

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake, from young faults in and near California. The Maximum Credible Earthquake is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

Affected Environment

The project site sits in the northern portion of the San Joaquin Basin/San Joaquin Valley and the central portion of the Great Valley Geomorphic Province of California. Soils along Interstate 5 in the project area consist mainly of floodplain deposits. The subsurface soils are generally stiff silt/clay with layers of medium-dense to dense sands or pockets or layers of loose to dense sands.

Faults near the project area that have a moderate to high potential for seismic activity include the Coast Ranges-Sierran Block Fault, Greenville Fault, and Midway-San Joaquin Fault. Maximum credible earthquake magnitudes represent the largest earthquakes that could occur on a given fault based on the current understanding of the regional tectonic structure. Maximum credible earthquake magnitudes for some of the major faults in the area are shown in Table 2.10.

Table 2.10: Maximum Credible Earthquake Magnitudes

Fault	Estimated Distance to Fault from Project Area (in kilometers)	Maximum Credible Earthquake	Peak Bedrock Acceleration (g)
Coast Ranges-Sierran Block Fault (Reverse Fault, including Thrust) (CSB)	32-34	7.0	0.2
Midway-San Joaquin/(Not published) (MSJ)	32-36	6.75	0.1

Fault	Estimated Distance to Fault from Project Area (in kilometers)	Maximum Credible Earthquake	Peak Bedrock Acceleration (g)
Greenville (Strike-slip) (GVE)	40-43	7.25	0.1

Source: Geotechnical Report, January. 2007

Environmental Consequences

Slopes and Soil Impacts

Embankment and fill slopes exposed to weather are expected to be stable at 1:2H (vertical/horizontal) provided that they have adequate slope protection. The designed gradient of the fill slope for construction of auxiliary lane/shoulder and the embankment slopes of the new on-ramps and off-ramps is 1V4H (vertical/horizontal) slope.

The predominant soils in the project limits are generally fine sand to silt or clay and clay or silty clay in texture. Fine sand and non-plastic silts may experience some dynamic settlement or subsidence when subjected repeated loads. Because some soil units have moderate high shrink-swell potential, there is a slight hazard of water erosion and corrosivity to uncoated steel is high.

Seismic Impacts

Potential seismic hazards come from three sources: ground shaking, surface fault rupture, and liquefaction. No active faults pass through the project site. Therefore, the potential for fault rupture is low. Based on available geologic and seismic data, the probability that the project site would experience ground shaking is moderate to high.

Based on available boring information, the project site is underlain by stiff to very stiff silt/clay with interbedded layers of medium dense to very dense sands or occasional pockets or layers of loose to dense sands. The liquefaction potential along the project site is generally low to moderate and moderate to high at some locations.

The project would conform to seismic design standards specified to withstand the seismic effects that would result from a maximum credible earthquake. Additionally, the general recommendations and specifications in the preliminary geotechnical investigation would be incorporated into the project design.

Avoidance, Minimization, and/or Mitigation Measures

The project would incorporate recommendations and design features from the Preliminary Geotechnical Report to minimize geologic impacts, including the following:

- Foundation systems of the structures for the bridge widening may consist of Caltrans Standard Precast Prestressed Concrete Alternate "X" piles or Caltrans Standard Alternate "W" piles.

- Exploratory soil borings to investigate the subsurface soil conditions should be planned, and the potential for consolidation settlement should be investigated before project implementation.

- The retaining wall foundation may be designed in accordance with Caltrans standard retaining wall plans. The foundation of the proposed retaining wall may consist of Caltrans Type 1 retaining wall with spread footing. However, specific subsurface soil conditions and wall height may require consideration of cast-in-drilled-hole (CIDH) pile foundations.

- The soundwall foundation may be designed in accordance with Caltrans standard soundwall plans. The soundwall foundation may consist of CIDH piles. The potential for corrosion should be investigated before project implementation.

- Before project implementation, additional data should be collected to confirm that liquefaction potential at the project site is low. Any potential post-liquefaction settlement at abutements/bents of the bridge widening and new interchanges and undercrossing may cause downdrag to the foundation pile system. This should be considered in the pile design.

2.2.4 Paleontology

Regulatory Setting

Paleontology is the study of life in past geologic time based on fossil plants and animals. A number of federal statutes address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects (e.g., Antiquities Act of 1906 [16 United States Code 431-433], Federal-Aid Highway Act of 1935 [20 United States Code 78]). Under California law,

paleontological resources are protected by the California Environmental Quality Act, the California Administrative Code, Title 14, Section 4306 et seq., and Public Resources Code Section 5097.5.

Affected Environment

A Paleontological Identification and Evaluation Report was prepared in 2009.

The project lies in the northern portion of the San Joaquin Valley geologic province at the eastern edge of the Sacramento-San Joaquin Delta (the delta). The delta was once a 738,000-acre tidal marsh with a complex network of sloughs and islands at the confluence of the Sacramento and San Joaquin rivers. The delta occupies a roughly triangular area bounded on the north by the City of Sacramento, on the south by the City of Stockton, and on the west by Suisun Bay. Extensive human-made levees now protect 30 large islands from flooding caused by rivers and tidal action.

The southern portion of the project area, south of the Calaveras River, was historically (1850 A.D.) on the margin of the tidal marsh. Watercourses near and in the project area consist of channelized sloughs associated with the delta.

A review was made of paleontological and geological literature relevant to the project area and its vicinity. The review found that the project area was underlain by three paleontological sensitive Pleistocene sedimentary deposits: the Modesto and the Riverbank formations and Calaveras River deposits.

A records search at the University of California Museum of Paleontology found one fossil locality within or directly adjacent to the project area. This fossil locality (V4822) consists of one vertebrate specimen: a tooth fragment from a horse (*Equus* sp).

Environmental Consequences

The project area is underlain by Pleistocene Calaveras River deposits, Modesto and Riverbank formations. It is covered by Holocene floodplain deposits and a thin cover of Holocene soil. Interstate 5 is situated on fill 6 to 20 feet deep. The fill and the recent Holocene floodplain deposits are not sensitive for paleontological resources. The underlying Calaveras River deposits, Modesto and Riverbank formations, however, have a high potential for significant paleontological resources.

The Calaveras River deposits are in part Late Pleistocene in age, and that portion is of appropriate age to contain significant fossils. The one fossil locality identified within

the project area, a potentially scientifically significant fragmentary horse (*Equus* sp.) tooth, is from Calaveras River deposits. Like the Modesto Formation, the Calaveras River deposits cannot be considered to have low potential: "Sedimentary rocks expected to contain vertebrate fossils are not placed in this [low potential] category because vertebrates are generally rare and found in more localized stratum" (Caltrans 2007).

No excavation below the ground surface would be required for grading on the mainline widening, and excavation for roadside signs with footings is not anticipated to go deeper than 2 to 3 feet. The southern 2 miles of the project area from the south end to Charter Way is built on fill, and proposed project activities in this area include re-striping and installation of signs that would require excavation to a depth of only 2 feet. According to current plans, excavation for floodwall footings would extend to 2 feet deep. Excavation for the supporting structures for the roadway in the new interchanges, in the northern portion of the project area, would be 5 to 8 feet deep. Excavation for proposed interchange structures has potential to reach the paleontologically sensitive Modesto and Riverbank formations and the Calaveras River deposits.

The Eight Mile Road and North Gateway interchanges have been mapped as sitting on the Late Pleistocene Modesto Formation, exposed at the surface. Any excavation would encounter Pleistocene deposits and would potentially affect paleontological sensitive strata. Excavation for the two water-retention basins associated with the North Gateway interchange would also encounter the Modesto Formation. There is a potential at these interchanges for excavation to encounter the Riverbank Formation.

The Otto Drive and Hammer Lane interchanges have been mapped as sitting on Calaveras River deposits that, in part, are Late Pleistocene in age. Geotechnical boring logs were not available at the time of report preparation, but proposed excavation (depths of 5 to 8 feet) would contact the Calaveras River deposits and may reach the Modesto Formation, thus having potential to affect paleontological resources.

Avoidance, Minimization, and/or Mitigation Measures

The Paleontological Identification Report/Paleontological Evaluation Report recommends that the section of the Paleontological Identification Report describing the excavation monitoring for the project include the following to avoid and minimize impacts to paleontological resources as part of a Paleontological Mitigation Plan:

- A qualified principal paleontologist would be retained to be present to consult with grading and excavation contractors at pre-grading meetings.
- Paleontological monitor, under the direction of the qualified principal paleontologist would be on site to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.
- When fossils are discovered, the paleontologist (or paleontological monitor) would recover them. Construction work in these areas would be halted or diverted to allow recovery of fossil remains in a timely manner.
- Fossil remains collected during the monitoring and salvage portion of the mitigation program would be cleaned, repaired, sorted, and cataloged.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, would then be deposited in a scientific institution with paleontological collections.
- A final report would be completed that outlines the results of the mitigation program.
- Where feasible, selected road cuts or large finished slopes in areas of critically interesting geology may be left exposed as important educational and scientific features. This may be possible if no substantial adverse visual impact results.

2.2.5 Hazardous Waste or Materials

Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The main federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and

welfare are not compromised. The Resource Conservation and Recovery Act 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 & Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

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

Hazardous waste in California is regulated mainly 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 disturbed during project construction.

Affected Environment

Two initial site assessments were done for the proposed project. The first was completed in December 2005 and addressed post miles 32.9 to 37.1. The second was completed in March 2007 and addressed post miles 25.0 to 32.9. The assessments determined the presence of contaminated properties within the project boundaries that may affect selection of project alternatives, right-of-way property acquisition, and construction of the proposed highway improvements. Findings were based on information obtained from regulatory database records, historical references, physical setting references, and on-site field reviews.

Land uses in the project area include Interstate 5 (built in the early 1970s), railway, new and older residences, and varying ages of commercial and industrial

development. The historical land use of the project site was mainly agricultural. These properties can contain, or have contained in the past, underground storage tanks, petroleum products, monitoring of petroleum-related releases, facilities that handle or store hazardous materials and/or wastes, material associated with railroads, and/or material associated with highways.

Based on review of U.S. Geological Survey maps (Lodi, San Joaquin and Stockton West, 7.5 Minute), the elevation of the project varies from approximately 9 to 15 feet along the project route. Several creeks and canals, including the Smith Canal and the Calaveras River, run westbound and through the project. These creeks cross under the freeway in the westerly direction. In addition, the eastern extension of the Stockton Deep Water Channel for Port of Stockton goes eastbound under Interstate 5.

Regional depth to groundwater is approximately 9 to 15 feet, and the gradient is generally toward the west/southwest. Based on review of several environmental reports of nearby sites, the groundwater gradient can vary toward the northwest in some areas. Groundwater depth and flow direction may be influenced by local pumping, rainfall, and irrigation patterns.

Environmental Consequences

Both build alternatives would result in the same impacts because they have the same project footprint, whereas the no-build alternative would not result in hazardous materials impacts. For the build alternatives, impacts would be restricted to the construction phase involving demolition of structures, grading, and excavation. These construction-related activities have the potential to disturb contaminated soils, groundwater, and hazardous building materials that could result in the release of hazardous substances into the environment. Construction workers employed in the proposed project would be particularly vulnerable to such releases, but impacts could also result to surrounding residents, adjacent biological resources, and local air quality. Impacts related to hazardous materials during the operational phase of the proposed project would be similar to existing conditions.

The initial site assessments found several past and present land uses involving the use of hazardous materials that have the potential to affect implementation of the proposed project during the construction phase.

The project site is on a major highway corridor (Interstate 5) that has supported vehicular traffic since the early 1970s. Due to this vehicular activity, the soils along Interstate 5 are likely contaminated with lead from the exhaust of cars burning leaded

gasoline. The lead levels in surface soils along highways can reach concentrations in excess of the hazardous waste threshold, requiring either disposal at a Class I landfill or on-site stabilization.

Freeway overcrossings, bridges and undercrossings are located within the proposed project right-of-way. Due to the age of these structures, asbestos-containing materials and lead-based paint may be present. In addition, right-of-way properties with a history of agricultural use may have underground pipelines containing asbestos. Utility vaults along the boundary of Interstate 5 also have the potential to contain asbestos.

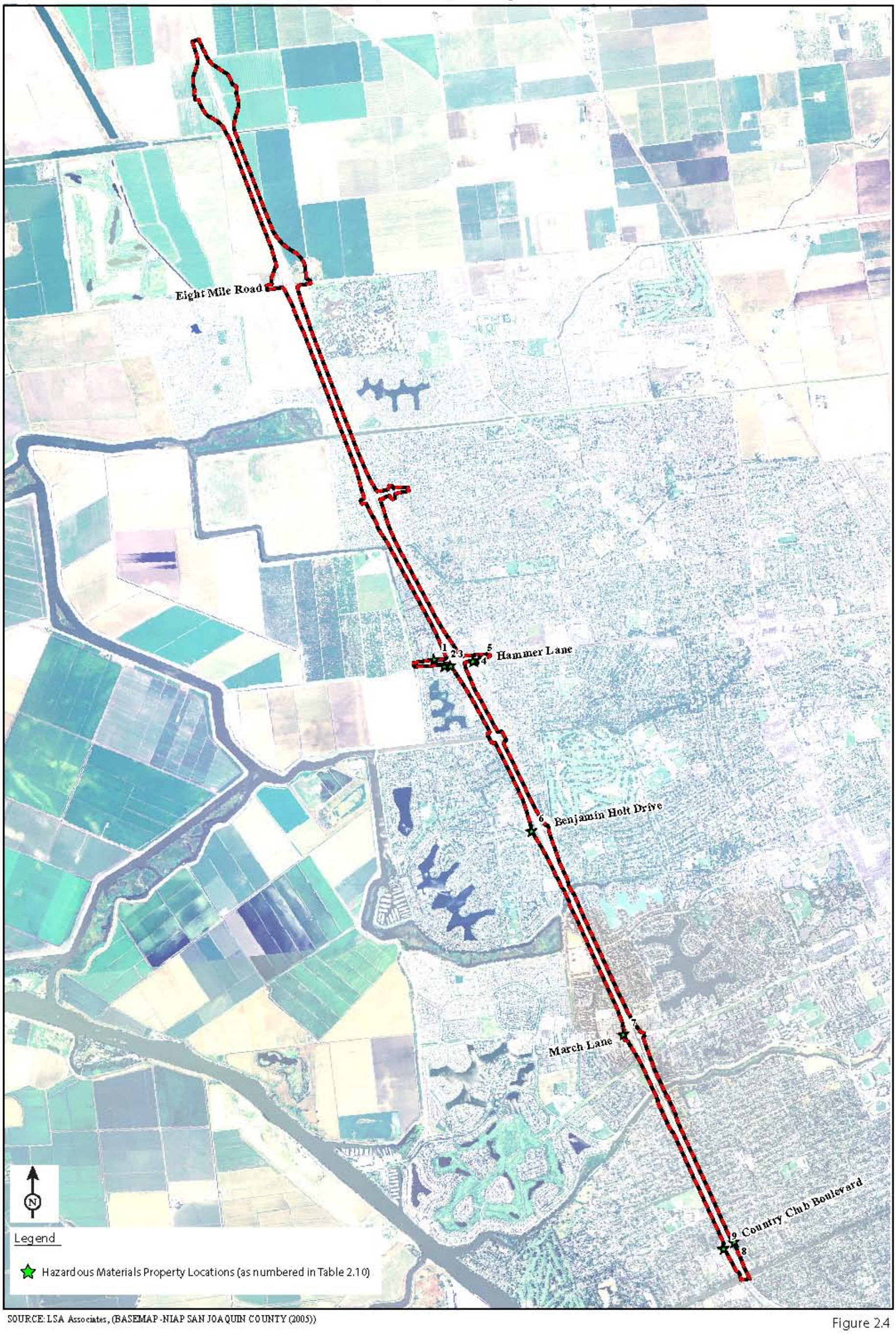
Railroad lines cross Interstate 5 south of the Stockton Channel. Soils next to railroad tracks have typically been impacted with heavy metals, total petroleum hydrocarbons as diesel, fuel oil, and polychlorinated biphenyls. Soils along railroad tracks may be impacted from locomotives (total petroleum hydrocarbons as diesel [i.e., total petroleum hydrocarbons-D]), railroad ties (polynuclear aromatics), or slag ballasts used to set the ties (heavy metals).

Because the predominant past land use of the project area was agricultural, soils in areas that were formerly agricultural likely contain pesticides and herbicides, including arsenic, as a result of historical farming operations.

A storm drain system is located throughout the paved roadway. Although no records of releases/spills of hazardous substances associated with the storm drain system have been identified, it is likely that undocumented releases of hazardous materials may have occurred in the past.

For electrical infrastructure, pole-mounted transformers and pad-mounted transformers occur along the project site. No leaking or soil stains were noted in association with the transformers, but the transformers could contain polychlorinated biphenyls.

The 2005 and 2007 Initial Site Assessments collectively identified nine distinct properties (see Figure 2.4) as containing hazardous materials that could affect the project (see Table 2.11). A Preliminary Site Investigation will be completed before completion of the final environmental document.



SOURCE: LSA Associates, (BASEMAP -NIAP SAN JOAQUIN COUNTY (2005))

Figure 2.4

Hazardous Materials Property Locations

Table 2.11: Hazardous Materials Facilities Identified in Government Records Searches

No.	Facility	Address	Impact to Right-of-Way Acquisition	Chemical Concern Regulatory Status	Potential Impact to Interstate 5 Project
1	Quick Stop	3555 W. Hammer Lane	Low Impact	Gas station facility with underground storage tanks containing petroleum and diesel fuels. This facility was cited for the release of petroleum hydrocarbons to soil and groundwater in 1990. Methyl tertiary-butyl ether was detected as high as 8,400 ug/l. Methyl tertiary-butyl ether concentrations remain in the groundwater above the regulatory levels in on- and off-site wells.	This facility presents a low risk of affecting the Interstate 5 project because the identified contaminants should likely dissipate or attenuate before reaching the project area.
2	Stockton Auto Center Car Wash	3434 Hammer Lane	No Impact	Car wash facility with one underground storage tank. No pending regulatory action or active violations are noted for this facility.	This facility presents no current risk of affecting the Interstate 5 project because no hazardous materials have been released.
3	Landing Shopping Center/Paul's Cleaner's	3422 W. Hammer Lane	Low Impact	Dry cleaner facility that uses 1000 mg/l halogenated organic compounds that are disposed of at a transfer station. A past perchloroethylene spill resulted in perchloroethylene presence in shallow groundwater. The perchloroethylene release does not warrant remediation because identified concentrations are below current drinking water standards.	This facility presents a low risk of affecting the Interstate 5 project because contaminants are in very low concentrations.
4	Arco	3250 Hammer Lane	Low Impact	Gas station facility with underground storage tanks containing petroleum and diesel fuels. A leaking underground storage tank was discovered in 2000. A corrective action plan was prepared and is currently in progress. Monitoring wells detected concentrations of total petroleum hydrocarbonsg, benzene, tolune, Ethylbenzene, xylenes, methyl tertiary-butyl ether, and TBA. However, contamination has not migrated off-site.	This facility presents a low risk of affecting the Interstate 5 project because remediation is controlling the contaminants at this site, and they are unlikely to pose a hazard to the proposed project.

No.	Facility	Address	Impact to Right-of-Way Acquisition	Chemical Concern Regulatory Status	Potential Impact to Interstate 5 Project
5	BP	3202 W. Hammer Lane	Low Impact	Gas station facility with underground storage tanks containing petroleum and diesel fuels. A leaking underground storage tank was discovered in 1993, and methyl tertiary-butyl ether in groundwater was detected at 38 parts per million. Remediation was initiated in 2000 and continues currently.	This facility presents a low risk of affecting the Interstate 5 project due to effective remediation and the direction of groundwater flow.
6	Shell	3011 Benjamin Holt Drive	Moderate Impact	Gas station facility with underground storage tanks containing petroleum and diesel fuels. A leaking underground storage tank was discovered during site closure. Groundwater wells are currently in place adjacent to the proposed project right-of-way.	This facility presents a moderate risk of affecting the Interstate 5 project because contamination could migrate to the proposed project right-of-way.
7	Unocal	2701 March Lane West	Low Impact	Gas station facility with underground storage tanks containing petroleum and diesel fuels. Releases of hydrocarbons into groundwater were discovered during underground storage tank removal.	This facility presents a low risk of affecting the Interstate 5 project based on proposed construction area boundaries. A Regional Water Quality Control Board review indicated that this facility is down gradient of the right-of-way and should not pose an adverse environmental impact.
8	Shell	2575 Country Club Blvd.	Moderate Impact	Gas station facility with underground storage tanks containing petroleum and diesel fuels. Releases of methyl tertiary-butyl ethers and other hydrocarbons were discovered during underground storage tank removal. A new service facility is being built at this site.	This facility presents a moderate risk of affecting the Interstate 5 project because groundwater at this facility is impacted and may affect the project area due to its proximity and up gradient direction.
9	Chevron/USA Petroleum	2705 Country Club Blvd.	Low Impact	Gas station facility with underground storage tanks containing petroleum and diesel fuels. Releases of hydrocarbons have occurred in the past, and are currently being remediated.	This facility presents a low risk of affecting the Interstate 5 project. It should not pose a significant impact because it is down gradient from the project site and it is undergoing remediation.

Avoidance, Minimization, and/or Mitigation Measures

The following is recommended to avoid, minimize, and/or mitigate the construction-related hazardous materials impacts to the proposed project:

- Surface samples of soil should be collected and analyzed for lead within the project area.

- An asbestos-containing materials investigation should be performed by an inspector certified by the Asbestos Hazardous Emergency Response Act under the Toxic Substances Control Act Title II and certified by the California Occupational Safety and Health Agency under State of California rules and regulations (California Code of Regulations, Section 1529). This work should be performed during the design phase.

- In the event that any subsurface structures are encountered during development or excavation on the project site, it should be determined whether or not the structures contain asbestos. If they contain asbestos, they should be removed, handled, transported and disposed of in accordance with local, state, and federal laws and regulations. If suspect materials are encountered, the signatories of the Kleinfelder, Inc. (2005) report should be notified.

- Surveys for lead-based paint should be done before demolition of the structures within the right-of-way. Lead-based paint and asbestos-containing materials should be abated by using a contractor certified to perform such work.

- Soil samples should be taken from the proposed project site and analyzed for pesticides and herbicides.

2.2.6 Air Quality

Regulatory Setting

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its state counterpart is the California Clean Air Act of 1988. These laws set standards for the concentration of air pollutants. At the federal level, these standards are called National Ambient Air Quality Standards. Standards have been established for six

criteria pollutants that have been linked to potential health concerns: carbon monoxide, nitrogen dioxide, ozone, particulate matter, lead, and sulfur dioxide.

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 the 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 is concerned with how well the region is meeting the standards set for carbon monoxide, nitrogen dioxide, ozone, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20 years. Based on the projects included in the Regional Transportation Plan, 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 the San Joaquin Valley Air Pollution Control District and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the Regional Transportation Plan is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the Regional Transportation Plan must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the Regional Transportation Plan, then the proposed project is deemed to meet regional conformity requirements for purposes of the project-level analysis.

Conformity at the project level also requires “hot spot” analysis if an area is in “nonattainment” or “maintenance” for carbon monoxide 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 carbon monoxide or particulate matter analysis performed for National Environmental Policy Act and California Environmental Quality Act purposes.

Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the carbon monoxide 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 carbon monoxide or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Affected Environment

The project corridor extends through the City of Stockton in the San Joaquin Valley Air Basin. The City of Stockton and San Joaquin County are characterized by hot, dry summers and cool winters. Temperatures in the summer months range from 50 to 94 degrees Fahrenheit, and winter months average from 36 to 53 degrees Fahrenheit. The rainy season is typically between November and April, with the average annual rainfall ranging from 8 inches in the southern part of the county to 18 inches in the northern part of the county. Warm temperatures, prevailing winds, and the location of the county within an enclosed valley all play a role in the air quality of the area.

The Interstate 5 North Stockton Corridor Improvements Project was included in the regional emissions analysis done by the San Joaquin Council of Governments for the conforming 2007 Regional Transportation Plan, as amended. The project's design concept and scope have not changed substantially from what was analyzed in the 2007 Regional Transportation Plan, as amended. This analysis found that the plan and, therefore, the individual projects contained in the plan, are conforming projects, and will have air quality impacts consistent with those identified in the state implementation plans for achieving the National Ambient Air Quality Standards. The Federal Highway Administration determined that the Regional Transportation Plan conformed to the State Implementation Plan on January 16, 2008.

An Air Quality Study Report and an Air Quality Conformity Analysis Report were completed for the project in March 2009.

Table 2.12 describes the State and Federal air quality conformity standards. Table 2.13 shows that the project is in a nonattainment area for the federal and state ozone and particulate matter standards. Therefore, a local hot spot analysis for conformity was required. Currently, there is no hot spot procedure for ozone, which is considered to be a regional pollutant. The project is located in an attainment/ maintenance area for the federal carbon monoxide standard.

Table 2.12: State and Federal Conformity Standards

Pollutant	Averaging Time	State Standard	Federal Standard	Health and Atmospheric Effects	Typical Sources
Ozone (O_3)[a]	1 hour 8 hours	0.09 ppm 0.070 ppm	–[b] 0.08 ppm	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include a number of known toxic air contaminants.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG) and nitrogen oxides (NO_x) in the presence of sunlight and heat. Major sources include motor vehicles and other mobile sources, solvent evaporation, and industrial and other combustion processes. Biologically-produced ROG may also contribute.
Carbon monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm[c] 6 ppm	35 ppm 9 ppm –	Asphyxiant. CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable particulate matter (PM10)[a]	24 hours Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 –	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many aerosol and solid compounds are part of PM10.	Dust- and fume-producing industrial and agricultural operations; combustion smoke; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources (wind-blown dust, ocean spray).
Fine particulate matter (PM2.5)[a]	24 hours Annual	– 12 µg/m^3	35 µg/m^3 15 µg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – considered a toxic air contaminant – is in the PM2.5 size range. Many aerosol and solid compounds are part of PM2.5.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical (including photochemical) reactions involving other pollutants including NO_x, sulfur oxides (SO_x), ammonia, and ROG.
Nitrogen dioxide (NO_2)	1 hour Annual	0.25 ppm –	– 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain.	Motor vehicles and other mobile sources; refineries; industrial operations.
Sulfur dioxide (SO_2)	1 hour 3 hours 24 hours Annual	0.25 ppm – 0.04 ppm –	– 0.5 ppm 0.14 ppm 0.030 ppm	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing.
Lead (Pb)[d]	Monthly Quarterly	1.5 µg/m^3 –	– 1.5 µg/m^3	Disturbs gastrointestinal system. Causes anemia,	Primary: lead-based industrial process like batter production

Pollutant	Averaging Time	State Standard	Federal Standard	Health and Atmospheric Effects	Typical Sources
				kidney disease, and neuromuscular and neurological dysfunction. Also considered a toxic air contaminant.	and smelters. Past: lead paint, leaded gasoline. Moderate to high levels of aerially deposited lead from gasoline may still be present in soils along major roads, and can be a problem if large amounts of soil are disturbed.

Sources: California Air Resources Board Ambient Air Quality Standards chart, 05/17/2006 (http://www.arb.ca.gov/aqs/aaqs2.pdf)
Sonoma-Marin Area Rail Transit Draft Air Pollutant Standards and Effects table, November 2005, page 3-52.
U.S. EPA and California Air Resources Board air toxics websites, 05/17/2006

Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

[a] Annual PM10 NAAQS revoked October 2006; was 50 $\mu g/m^3$. 24-hr. PM2.5 NAAQS tightened October 2006; was 65 $\mu g/m^3$.

[b] 12/22/2006 Federal court decision may affect applicability of Federal 1-hour ozone standard. Prior to 6/2005, the 1-hour standard was 0.12 ppm. Case is still in litigation.

[c] Rounding to an integer value is not allowed for the State 8-hour CO standard. A violation occurs at or above 9.05 ppm.

[d] The ARB has identified lead, vinyl chloride, and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the ARB and U.S. EPA have identified various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There is no threshold level of exposure for adverse health effect determined for toxic air contaminants, and control measures may apply at ambient concentrations below any criteria levels specified for these pollutants or the general categories of pollutants to which they belong.

Table 2.13: State and Federal Attainment Status

Pollutant	Federal Standards	State Standards
Ozone (O_3) - 1 hour	No Federal Standard	Nonattainment
Ozone (O_3) - 8 hour	Nonattainment/Serious[a]	Nonattainment
Carbon monoxide CO	Attainment/ Maintenance	Attainment/Unclassified
Respirable particulate matter PM_{10}	Maintenance[b]	Nonattainment
Respirable particulate matter $PM_{2.5}$	Nonattainment[c]	Nonattainment
Nitrogen dioxide NO_2	Attainment/Unclassified	Attainment
Sulfur dioxide (SO_2)	Attainment/Unclassified	Attainment
Lead (Pb)[d]	*No Designation	Attainment

[a] On April 30, 2007 the Governing Board of the San Joaquin Valley Air Pollution Control District voted to request EPA to reclassify the San Joaquin Valley Air Basin as extreme nonattainment for the federal 8-hour ozone standards. The California Air Resources Board, on June 14, 2007, approved this request. This request must be forwarded to EPA by the California Air Resources Board and would become effective upon EPA final rulemaking after a notice and comment process; it is not yet in effect.

[b] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

[c] The Valley is designated nonattainment for the 1997 $PM_{2.5}$ federal standards. EPA designations for the 2006 $PM_{2.5}$ standards will be finalized in December 2009. The District has determined, as of the 2004-06 $PM_{2.5}$ data, that the Valley has attained the 1997 24-Hour $PM_{2.5}$ standard.

Source: San Joaquin Valley Air Pollution Control District, December 2008. www.valleyair.org.

Environmental Consequences

The study used data from two air pollution monitors in Stockton. The Stockton-Hazelton monitor at 1593 E. Hazelton Place in Stockton monitored particulate matter 2.5, particulate matter 10, and carbon monoxide. It is 1.7 miles southeast of the

project. The Stockton Wagner-Holt School monitor at 8776 Brattle Place, 2,000 feet from Interstate 5, monitored particulate matter 10. It is within the northern half of the project boundary.

The California Project-Level Carbon Monoxide Protocol was used to analyze carbon monoxide impacts for the Interstate 5 Improvement Project. (CAL3QHCR can also be used with emission factors per U.S. Environmental Protection Agency's modeling guidance in place of the carbon monoxide protocol.) The hot-spot analysis covered the most congested intersections affected by the project in 2008 and 2035. The ambient air quality effects of traffic emissions were evaluated using the modeling procedures described in the Air Quality Conformity Analysis. The assumptions used in the hot-spot analysis are consistent with those used in the regional emissions analysis.

The modeling results indicated that the total carbon monoxide concentrations would not cause or contribute to any new localized violations of the federal 1-hour or 8-hour carbon monoxide ambient standards.

Federal rules require particulate matter 2.5 and particulate matter 10 hot-spot analyses to be performed for Projects of Air Quality Concern. To determine if a transportation project is a Project of Air Quality Concern, several criteria must be met. The Interstate 5 North Stockton Corridor Improvements Project would affect a facility that is projected to exceed a 155,000 average annual daily traffic count in 2035. Truck counts collected in 2006 indicated diesel trucks represent from 12 percent to 22 percent of traffic during the peak periods; the traffic model assumes approximately 15.5 percent of the average annual daily traffic is diesel truck traffic. Therefore, the project is considered to be a Project of Air Quality Concern.

A qualitative project-level particulate matter 2.5 and particulate matter 10 hot-spot analysis has been conducted to assess whether the project would cause or contribute to any new localized particulate matter 2.5 or particulate matter 10 violations, increase the frequency or severity of any existing violations, or delay timely attainment of the particulate matter 2.5 and particulate matter 10 National Ambient Air Quality Standards.

The project has undergone interagency consultation, which began on January 23, 2009. The Environmental Protection Agency, Federal Highway Administration, and Caltrans concurred that the project is a Project of Air Quality Concern and with the results of the qualitative analysis. The project is not expected to cause or contribute

to, or worsen, any new localized particulate matter 2.5 and particulate matter 10 violations. The project is expected to reduce the severity and number of localized particulate matter 2.5 and particulate matter 10 violations in the project area.

San Joaquin County is not among the counties listed as containing serpentine and ultramafic rock, which may both contain naturally occurring asbestos. Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none. If structures that may contain asbestos are demolished, it is the responsibility of the contractor to comply with the Rules and Regulations of the Air Pollution Control District. Refer to Section 2.2.5 Hazardous Waste Materials for further discussion.

Mobile source air toxics are a subset of the 188 air toxics defined by the Clean Air Act. Mobile source air toxics are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through an 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.

The U.S. Environmental Protection Agency is the lead federal agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of mobile source air toxics. The U.S. Environmental Protection Agency issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources (66 Federal Register 17229 [March 29, 2001]). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, the United States Environmental Protection Agency examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline program, its national low-emission vehicle standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy-duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements.

Between 2000 and 2020, the Federal Highway Administration projects that even with a 64 percent increase in vehicle miles traveled, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent and will reduce on-highway diesel particulate emissions by 87 percent.

In February 2007, the U.S. Environmental Protection Agency issued a final rule to reduce hazardous air pollutants from mobile sources. The final standards will significantly lower emissions of benzene and the other air toxics in three ways: 1) by lowering benzene content in gasoline; 2) by reducing exhaust emissions from passenger vehicles operated at cold temperatures (under 75 degrees); and 3) by reducing emissions that evaporate from, and permeate through, portable fuel containers.

In February 2006, the Federal Highway Administration issued guidance to advise Federal Highway Administration Division offices as to when and how to analyze mobile source air toxics in the National Environmental Policy Act process for highways (Federal Highway Administration, 2006. Interim Guidance on Air Toxic Analysis in National Environmental Policy Act Documents. February 3. Available at http://www.fhwa.dot.gov/environment/airtoxic/020306guidmem.htm.). The guidance is described as interim because mobile source air toxics science is still evolving. This analysis follows the Federal Highway Administration guidance.

The U.S. Environmental Protection Agency is in the process of assessing the risks of various kinds of exposures to these pollutants. The U.S. Environmental Protection Agency Integrated Risk Information System is a database of human health effects that may result from exposure to various substances found in the environment (http://www.epa.gov/iris). The following toxicity information for the six prioritized mobile source air toxics was taken from the Integrated Risk Information System database Weight of Evidence Characterization summaries. This information represents the agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- Benzene is characterized as a known human carcinogen.
- The potential carcinogenicity of acrolein cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- Formaldehyde is a probable human carcinogen, based on limited evidence in humans and sufficient evidence in animals.
- 1,3-butadiene is characterized as carcinogenic to humans by inhalation.

- Acetaldehyde is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.

- Diesel exhaust is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust is the combination of diesel particulate matter and diesel exhaust organic gases. Diesel exhaust also represents chronic respiratory effects, possibly the main noncancer hazard from mobile source air toxics. Prolonged exposures to diesel exhaust may impair pulmonary function and could produce symptoms such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

Mobile source air toxics emission estimates were derived from the University of California at Davis/Caltrans spreadsheet tool (UC Davis-Caltrans Air Quality Project, 2006. *Estimating Mobile Source Air Toxics Emissions. A Step-by-Step Project Analysis Methodology.* December 28.). The highest concentration of all pollutants is in the base year (2006). As shown in Table 2.14, all of the future alternatives (no-build and build), emissions are projected to be lower than present levels in the design year.

Table 2.14: Mobile Source Air Toxic Emissions (grams/day)

	Diesel Particulate Matter	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
2006 (Existing)	63,967	13,440	2,661	9,460	574	22,843
2035 No-Build	12,651	2,743	475	1,556	106	3,932
2035 Mixed-Flow	18,438	4,029	742	1,941	169	5,187
2035 High-Occupancy Vehicle	17,717	3,857	712	1,864	163	4,981

Source: LSA Associates, 2008.

Diesel particulate matter emissions are higher in the existing year compared to all future scenarios. The no-build scenario is about 80 percent lower than existing conditions. The mixed-flow and high-occupancy vehicle lane alternatives result in 71 percent and 72 percent reduction, respectively, over existing conditions. Both build alternatives result in future diesel particulate matter levels that are about 40 percent to 45 percent over the no-build scenario.

Mobile source air toxics emissions are also higher in the existing year compared to all future scenarios. The no-build scenarios are about 80 percent to 83 percent lower than existing conditions. The mixed-flow and high-occupancy vehicle lane alternatives result in 70 percent to 80 percent reductions over existing conditions. Both build alternatives result in future mobile source air toxics levels that range from about 20 percent to 60 percent over the no-build scenario.

The no-build horizon year (2035) emissions are less than the build alternative emissions.

Avoidance, Minimization, and/or Mitigation Measures

The following measure would reduce or minimize air pollutant emissions associated with construction activities: To reduce fugitive dust emissions, the construction contractor would adhere to the requirements of San Joaquin Valley Air Pollution Control District Regulation VIII.

Consistent with Regulation VIII, Fugitive Particulate Matter 10 Prohibitions of the San Joaquin Valley Air Pollution Control District, the following controls are required to be implemented at all construction sites and as specifications for the project:

- All disturbed areas, including storage piles, which are not being actively used for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions using application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.

- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emission using sufficient water or chemical stabilizer/ suppressant.
- Within urban areas, track-out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- Any site with 150 or more vehicle trips per day shall prevent carryout and track-out.

Construction of the project requires the implementation of control measures set forth under Regulation VIII. The following additional control measures would further reduce construction emissions and should be implemented with the project:

- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
- Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.
- Install wind breaks at windward side(s) of construction area.
- Suspend excavation and grading activity when winds exceed 20 miles per hour (regardless of wind speed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation).
- Limit area excavation, grading, and other construction activity at any one time.

The following construction equipment control measures would reduce construction exhaust emissions:

- Properly and routinely maintain all construction equipment, as recommended by the manufacturer manuals, to control exhaust emissions.

- Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling emissions.
- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways.

Compliance with the above standard measures would lessen the fugitive dust (particulate matter 10) and regional emission impact during construction.

2.2.7 Noise and Vibration

Regulatory Setting

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating the effects of highway traffic noise. 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 the California Environmental Quality Act and the National Environmental Policy Act.

California Environmental Quality Act

The California Environmental Quality Act requires a strictly no-build 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 the California Environmental Quality Act, then the act dictates that mitigation measures must be incorporated into the project unless such measures are not feasible. The rest of this section will focus on the National Environmental Policy Act-23 Code of Federal Regulations 772 noise analysis; please see Chapter 3 for further information on noise analysis under the California Environmental Quality Act.

National Environmental Policy Act and 23 Code of Federal Regulations 772

For highway transportation projects with Federal Highway Administration (and Caltrans, as assigned) involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 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 that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the criterion for residences (67 decibels) is lower than the criterion for commercial areas (72 decibels).

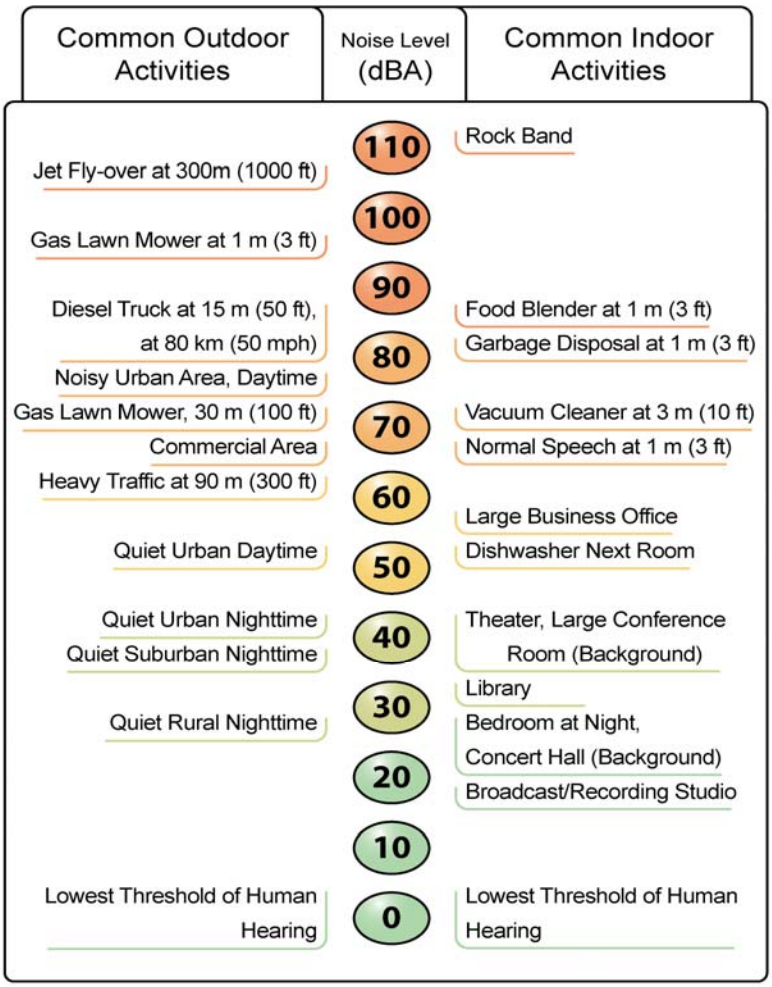
The following table (Table 2.15) lists the noise abatement criteria for use in the National Environmental Policy Act and 23 Code of Federal Regulations 772 analyses. Table 2.16 shows the noise levels of typical activities.

Table 2.15: Activity Categories and Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, A-weighted Noise Level (dBA), Leq(h)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above
D	--	Undeveloped lands
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: Caltrans Traffic Noise Analysis Manual, 1998
A-weighted decibels (dBA) are adjusted to approximate the way humans perceive sound. Leq(h) is the steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual time-varying levels over 1 hour.

Table 2.16: Typical Noise Levels



In accordance with Caltrans *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, October 1998*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12-decibel or more increase) or when the future noise level with the project approaches or exceeds the noise abatement criteria. Approaching the noise abatement criteria is defined as within 1 decibel of the noise abatement criteria.

If it is determined that the project would 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.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5-decibel 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.

Caltrans will also be required to consider the conclusions in the Noise Abatement Decision Report. That document compares the noise abatement benefits with the various social and environmental issues created by the project and the abatement.

Affected Environment

The following analysis is based on the *Interstate 5 North Stockton Corridor Improvements Noise Study Report* completed July 2008 and the *Interstate 5 North Stockton Corridor Improvements Project Noise Abatement Decision Report* completed September 2008, both of which are included in the appendices of this environmental document.

The existing noise environment in the project area is dominated by traffic noise from vehicular traffic on Interstate 5. Noise monitors were placed in strategic locations around the project area to obtain the existing noise levels. The results indicated that existing ambient noise levels at modeled sensitive receptors along the project alignment range from 61.3 dBA to 74.9 dBA L_{eq}. Land uses were also assessed to identify where noise impacts would potentially occur. Single-family and multi-family residences, places of worship, and school outdoor land uses were identified in the project area and were classified under Activity Category B, with a Noise Abatement Criteria of 67 decibels for exterior areas. Existing commercial and industrial areas in the project area were identified as Activity Category C uses with a Noise Abatement Criteria of 72 decibels for exterior areas. For the purposes of the noise study, sensitive receptors were numbered R1 through R189. Soundwalls currently exist along sections of the project site. The locations and heights of these walls were modeled in TNM 2.5 and are shown in Figures 2.5a through 2.5i under the Avoidance, Minimization, or Abatement Measures discussion of this section.

Environmental Consequences Under the National Environmental Policy Act

Noise levels for the existing conditions, No-Build Alternative, build alternatives, and attenuation levels are presented in Tables 2.17 and 2.18 as prescribed under 23 Code of Federal Regulations 772 and the Traffic Noise Analysis Protocol. The predicted noise levels were calculated to predict the design-year (2035) condition, which meets the 20-year planning horizon required to show noise levels 20 years following construction of the project.

Some noise level increase from the corresponding existing noise level would result from operation of the completed project. Of the 189 receptor locations that were modeled in the project area, 129 receptors would approach or exceed the noise abatement criteria under future 2035 build traffic conditions, and as such, noise abatement measures must be considered.

Soundwalls were studied for each affected sensitive receptor location. At each location, five soundwall heights were analyzed: 6, 8, 10, 12, and 14 feet. Section 3 of the noise protocol states that a minimum noise reduction of 5 dBA must be achieved at the affected receivers for the proposed noise abatement measure to be considered feasible. The soundwalls that did not result in at least a 5 dBA reduction for any of the affected modeled receptors were soundwall SW13, ASW3 and ASW4.

Additionally, abatement for certain affected receptors was determined to be infeasible; these included modeled receptor location R175. This receptor represents the apartment property on Fontana Avenue. This receptor location, which has no outdoor active use spaces, with a projected future traffic noise level of 71 dBA $L_{eq(h)}$, would be affected under the activity category E at the 52 dBA L_{eq} noise abatement criterion. Based on the U.S. Environmental Protection Agency's (EPA) Protective Noise Levels (EPA 550/9-79–100, November 1978), with a combination of walls, doors, and windows, standard construction for northern California residential buildings would provide more than 25 dBA in exterior to interior noise reduction with windows closed and 15 dBA or more with windows open. As noted during the noise monitoring field study, this property is currently equipped with window air conditioning systems that would permit windows to be closed for prolonged periods of time, which would reduce traffic noise impacts to meet the interior noise abatement criterion of 52 dBA L_{eq} (i.e., 71 dBA – 25 dBA = 46 dBA).

Table 2.17: Predicted Traffic Noise Levels (dBA Leq)

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	
R1	**ASW1 & 2**	**67** [1]	**70**	**71**	**70**	**69**	**69**	**67**	**66**	NO
R2		65	**67**	**69**	**67** L	**67** L	**67** L	65 L	64	NO
R3	**SW2, 5 & 7**	**73**	**76**	**77**	**77** L	**77** L	**76** L	**76** L	**75**	NO
R4		**68**	**71**	**72**	**72**	**72**	**72**	**72**	**72**	NO
R5		**68**	**70**	**71**	**72**	**71**	**71**	**71**	**71**	NO
R6		**69**	**70**	**72**	**72**	**72**	**70**	**70**	**68**	NO
R7		**67**	**68**	**70**	**70**	**70**	**70**	**70**	**69**	NO
R8		**69**	**71**	**73**	**72**	**71**	**70**	**69**	**67**	YES
R9		**68**	**69**	**71**	**70**	**69**	**69**	**68**	**68**	NO
R10		**68**	**69**	**70**	**69**	**69**	**69**	**68**	**67**	NO
R11		**66**	**67**	**69**	**69**	**69**	**69**	**68**	**66**	NO
R12		64	65	**67**	65	65	65	63	62	YES
R13		65	**66**	**68**	**67**	65	65	65	64	NO
R14		**66**	**67**	**69**	**67**	**66**	65	63	62	YES
R15		60	61	63	62	62	62	60	59	NO
R16		60	61	64	62	62	61	60	59	YES
R17	**SW3, 4 & 6**	**67**	**68**	**69**	**68**	**68**	**68**	**68**	**68**	NO
R18		**68**	**70**	**70**	**69**	**67**	**67**	**67**	**66**	NO
R19		**68**	**69**	**69**	**66**	64	63	63	65	NO
R20		**69**	**71**	**70**	**69**	**66**	63	62	61	YES
R21		64	65	65	63	62	63	62	61	NO
R22		**66**	**67**	**69**	**67**	**66**	65	65	64	YES
R23		**68**	**69**	**69**	**68**	**67**	**67**	**66**	**66**	NO
R24		65	**66**	**66**	64	63	62	60	59	YES

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	
R25	**SW2, 5 & 7**	62	64	**68**	**67**	**67**	**66**	64	63	YES
R26		65	**67**	**69**	**66** L	65	62	61	60	YES
R27		65	**68**	**70**	**67**	**67** L	65 L	63 L	63	YES
R28		56	59	61	60	60	59	56	55	YES
R29		58	60	62	61	61	60	57	57	YES
R30		**67**	**69**	**70**	**68**	**68**	**67**	65	64	YES
R31		**76**	**79**	**80**	**77**	**76**	**75**	**73**	**73**	YES
R32		**70**	**73**	**74**	**72**	**72**	**72**	**70**	**68**	YES
R33		**73**	**76**	**78**	**75**	**74**	**71**	**69**	**68**	YES
R34		61	64	65	63	63	62	61	59	YES
R35		**70**	**73**	**74**	**71**	**70**	**68**	**67**	**66**	YES
R36		**74**	**76**	**77**	**73**	**72**	**71**	**67**	**66**	YES
R37		**75**	**78**	**80**	**75**	**74**	**72**	**69**	**68**	YES
R38		**74**	**77**	**78**	**72**	**71**	**70**	**69**	**68**	YES

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	eq(h)	eq(h)	eq(h)	eq(h)	
R39		**66**	**69**	**70**	**68**	**68**	**66**	62	61	YES
R40		59	62	64	62 L	62 L	61 L	58 L	57	YES
R41		61	**67**	65	63 L	62 L	61 L	58 L	57	YES
R42		**69**	**71**	**73**	**71**	**68**	64	62	61	YES
R43		64	**67**	**68**	**66**	65	64	62	61	YES
R44		**67**	**70**	**72**	**69**	**68**	**67**	65	64	YES
R45		60	62	64	62	62	61	59	58	YES
R46		**68**	**71**	**72**	**70**	**70**	**70**	**67**	**66**	YES
R47		62	64	**66**	63	63	63	61	60	YES
R48		**73**	**76**	**76**	**74**	**74**	**73**	**70**	**69**	YES
R49	**SW3, 4& 6**	**66**	**68**	**69**	**68**	**68**	**67**	65	63	YES
R50		**70**	**73**	**74**	**72**	**71**	**70**	**68**	**66**	YES
R51		**75**	**78**	**78**	**74**	**73**	**72**	**70**	**68**	YES
R52		**69**	**72**	**72**	**69**	**69**	**68**	**67**	64	YES
R53		63	**66**	**66**	65	64	64	63	60	YES
R54		**70**	**72**	**72**	**70**	**69**	**69**	**68**	65	YES
R55		**70**	**73**	**73**	**70**	**70**	**69**	**68**	65	YES
R56		**75**	**78**	**79**	**74**	**73**	**73**	**70**	**68**	YES
R57		**75**	**78**	**78**	**74**	**73**	**72**	**69**	**68**	YES
R58		**67**	**70**	**71**	**71**	**71**	**71**	**70**	**69**	NO
R59		64	**69**	**68**	**67**	**67**	**67**	**67**	**67**	NO
R60		65	**67**	**68**	**67**	**67**	**67**	**66**	**65**	NO

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	$_{eq(h)}$	
R61		64	**69**	**69**	**68**	**67**	65	63	62	NO
R62		**69**	**74**	**75**	**70** L	**69** L	**67** L	65 L	65	YES
R63		59	64	64	62	61	61	59	58	YES
R64		**74**	**79**	**80**	**76**	**73**	**71**	**70**	**69**	YES
R65		64	**69**	**69**	**67**	**67**	**66**	63	62	YES
R66		**72**	**77**	**78**	**74**	**74**	**70**	**68**	**67**	YES
R67		**66**	**72**	**72**	**68**	**68**	**67**	**64**	63	YES
R68		**68**	**74**	**74**	**72**	**71**	**68**	**66**	65	YES
R69		65	**72**	**71**	**68**	**68**	**67**	63	62	YES
R70		57	63	64	60	60	60	57	56	YES
R71		**68**	**74**	**75**	**70**	**68**	**66**	65	64	YES
R72	**SW8**	61	**68**	**69**	**66**	**66**	65	62	61	YES
R73		**70**	**77**	**77**	**72**	**71**	**69**	**68**	**67**	YES
R74		61	**68**	**69**	**67**	**67**	**66**	63	62	YES
R75		65	**72**	**74**	**71**	**70**	**68**	**66**	65	YES
R76		**66**	**73**	**75**	**71**	**71**	**68**	**66**	65	YES
R77		**69**	**76**	**79**	**73**	**70**	**69**	**67**	**66**	YES
R78		63	**70**	**70**	**67**	**67**	**66**	63	62	YES
R79		**70**	**77**	**77**	**73**	**71**	**70**	**69**	**68**	YES
R80		62	**69**	**69**	**66**	**66**	65	63	62	YES
R81		51	57	58	57	57	57	57	56	NO
R82		47	53	54	54	54	53	53	53	NO
R83		**69**	**75**	**75**	**74**	**74**	**74**	**74**	**74**	NO
R84	None	58	64	65	--	--	--	--	--	NO
R85	None	55	61	61	--	--	--	--	--	NO
R86	None	56	62	62	--	--	--	--	--	NO

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	eq(h)	eq(h)	eq(h)	eq(h)	
R87		64	**70**	**70**	**68**	**68**	**67**	**66**	65	YES
R88		65	**71**	**72**	**69** L	**69** L	**67** L	**66** L	**66**	YES
R89		63	**69**	**70**	**68**	**67**	**67**	**66**	64	YES
R90		**70**	**76**	**76**	**73**	**72**	**72**	**69**	**68**	YES
R91		**66**	**72**	**72**	**70**	**69**	**68**	**66**	65	YES
R92		**66**	**73**	**72**	**69**	**67**	64	63	62	YES
R93		59	**66**	**66**	63	63	61	59	58	YES
R94		65	**72**	**72**	**70**	**67**	65	64	63	YES
R95	**SW9**	61	**68**	**70**	**66**	65	63	61	60	YES
R96		60	**67**	**67**	64	64	62	59	58	YES
R97		**68**	**75**	**78**	**73**	**70**	**68**	**67**	**66**	YES
R98		**67**	**74**	**77**	**72**	**70**	**68**	**66**	65	YES
R99		58	65	**66**	65	63	63	61	59	YES
R100		65	**72**	**73**	**70**	**69**	**66**	64	63	YES
R101		53	59	60	59	59	58	57	55	YES
R102		56	62	63	61	61	60	59	58	YES
R103		58	64	65	64	64	63	63	62	NO
R104	Existing Wall 15 &16	62	63	64	--	--	--	--	--	N/A
R105		59	59	60	--	--	--	--	--	N/A
R106	Existing Wall 16	61	61	62	--	--	--	--	--	N/A
R107		63	63	64	--	--	--	--	--	N/A
R108		64	65	64	--	--	--	--	--	N/A
R109		64	64	65	--	--	--	--	--	N/A

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	eq(h)	eq(h)	eq(h)	eq(h)	
R110	**SW11**	63	64	64	63	63	63	62	62	NO
R111		63	64	**66**	64	64	64	63	62	NO
R112		**69**	**70**	**72**	**69**	**69**	**67**	65	64	YES
R113		**68**	**70**	**71**	**69**	**70**	**67**	64	63	YES
R114		63	64	65	62	62	61	57	57	YES
R115		**69**	**71**	**72**	**69**	**70**	**67**	65	64	YES
R116		**69**	**70**	**71**	**69**	**68**	**66**	64	62	YES
R117		61	63	63	62	62	61	58	57	YES
R118		**74**	**75**	**76**	**71**	**70**	**67**	65	64	YES
R119		62	63	64	61	61	60	57	56	YES
R120		**71**	**73**	**74**	**70**	**70**	**67**	65	64	YES
R121		**67**	**69**	**69**	65	65	64	61	61	YES
R122		62	63	64	63	63	63	63	63	NO
R123		**68**	**70**	**70**	**69**	**69**	**68**	**68**	**67**	NO
R124	**SW10**	61	62	63	62	62	62	62	61	NO
R125		**66**	**67**	**67**	64	63	61	60	60	YES
R126		**67**	**69**	**70**	**66**	64	62	62	61	YES
R127		65	**66**	**68**	65	65	63	62	62	YES
R128	Existing Wall 32		**68**	64	--	--	--	--	--	N/A
R129		64	65	**66**	--	--	--	--	--	N/A
R130		62	64	65	--	--	--	--	--	N/A
R131	**SW12**		**71**	**71**	**69**	**67**	65	65	64	YES
R132		62	64	65	63	62	62	59	59	YES
R133		**69**	**71**	**72**	**69**	**67**	65	64	64	YES
R134		**68**	**69**	**71**	**69**	**68**	**67**	**66**	**66**	YES
R135	none	58	59	60	--	--	--	--	--	NO

66

69

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	eq(h)	eq(h)	eq(h)	eq(h)	
R136	**SW14**	63	64	63	63	63	63	63	63	NO
R137		65	**66**	65	65 L	65 L	65 L	65 L	65	NO
R138		**68**	**69**	**68**	**67** L	**67** L	**66** L	**66** L	**66**	NO
R139		**70**	**71**	**72**	**70**	**69**	**69**	**69**	**69**	NO
R140		65	**66**	**66**	65	65	65	64	64	NO
R141	Existing Wall 22	63	64	64	--	--	--	--	--	N/A
R142		62	62	62	--	--	--	--	--	N/A
R143		61	62	62	--	--	--	--	--	N/A
R144		58	58	59	--	--	--	--	--	N/A
R145		62	63	63	--	--	--	--	--	N/A
R146		58	59	59	--	--	--	--	--	N/A
R147		65	**66**	**66**	--	--	--	--	--	N/A
R148		61	62	62	--	--	--	--	--	N/A
R149	Existing Wall 24		**74**	**75**	--	--	--	--	--	N/A
R150		63	63	64	--	--	--	--	--	N/A
R151		**66**	**67**	**67**	--	--	--	--	--	N/A
R152		59	60	61	--	--	--	--	--	N/A
R153		60	62	61	--	--	--	--	--	N/A
R154	EW24 & **ASW3 & 4**	65	**68**	**66**	65	65	65	64	64	NO
R155		**68**	**69**	**69**	**68**	**68**	**67**	**66**	**66**	NO
R156		**66**	**67**	**67**	**66**	65	65	64	63	NO
R157	**SW13**	55	56	56	55	54	54	53	53	NO
R158		**69**	**70**	**69**	**69**	**69**	**69**	**69**	**69**	NO
R159		**67**	**68**	**68**	**67**	**66**	65	65	64	NO
R160		65	**66**	**66**	**66**	**66**	**66**	65	65	NO

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	eq(h)	eq(h)	eq(h)	eq(h)	
R161	Existing Wall 18	64	64	65	--	--	--	--	--	N/A
R162		62	62	62	--	--	--	--	--	N/A
R163		59	59	60	--	--	--	--	--	N/A
R164		61	61	62	--	--	--	--	--	N/A
R165		57	57	58	--	--	--	--	--	N/A
R166		**67**	**68**	**67**	--	--	--	--	--	N/A
R167		63	64	64	--	--	--	--	--	N/A
R168	Existing Wall 20		**70**	**70**	--	--	--	--	--	N/A
R169		63	63	64	--	--	--	--	--	N/A
R170		63	63	64	--	--	--	--	--	N/A
R171		65	**66**	**67**	--	--	--	--	--	N/A
R172		62	63	63	--	--	--	--	--	N/A
R173		**66**	**67**	**67**	--	--	--	--	--	N/A
R174		63	65	65	--	--	--	--	--	N/A
R175	none	**70**	**71**	**71**	--	--	--	--	--	NO
R176	**SW9**	**72**	**77**	**78**	**75**	**73**	**72**	**71**	**71**	YES
R177	**SW2, 5 & 7**		**69**	**72**	**71**	**70**	**70**	**70**	**67**	YES
R178		**66**	**67**	**69**	**68**	**68**	**67**	**66**	65	NO
R179[71]		**68**	**71**	**72**	**71**	**71**	**70**	**70**	**70**	NO
R180	**SW3, 4 & 6**	61	63	64	62	62	60	58	57	YES
R181		58	60	63	61	61	60	58	57	YES
R182	**SW2, 5 & 7**	60	61	**66**	65	64	64	61	60	YES
R183		55	56	61	60	59	59	56	56	YES
R184		56	57	61	60	60	59	57	57	NO
R185	**SW10**	58	59	59	58	58	57	56	55	NO
R186		60	61	62	61	61	61	60	60	NO

68

Receiver	Soundwall Name	Existing Noise Level	Future (2035) No-Project Noise Levels	Future (2035) With Project Noise Levels	With Wall 6 ft High	With Wall 8 ft High	With Wall 10 ft High	With Wall 12 ft High	With Wall 14 ft High	Reasonable and Feasible?
					$L_{eq(h)}$	eq(h)	eq(h)	eq(h)	eq(h)	
R187	Existing Wall 15 &16	60	61	62	--	--	--	--	--	N/A
R188	**SW14**	65	**66**	**66**	64 L	64 L	63 L	61 L	61	YES
R189	**SW1**	**74**	**75**	**76**	**72**	**72**	**69**	**67**	**66**	YES

Source: LSA Associates, Inc. May 2008.

[1] Numbers in Bold indicate noise levels that approach or exceed the Noise Abatement Criteria.

dBA = A-weighted decibel

ft = feet

L_{eq} = Equivalent sound level

Other affected receptors for which abatement was considered to be infeasible include receptors R147, R149 and R151. These modeled receptors represent first-row residential land uses along Plymouth Road between Country Club Boulevard and Telegraph Avenue that are protected by existing soundwalls. The existing soundwalls, EW22 and EW24, are 12 feet high along the shoulder of Interstate 5. These soundwalls stand within 13 feet of the outer travel lane. Therefore, a soundwall of 14 feet or higher was not considered feasible.

Due to topographical constraints, alternative soundwall locations within the right-of-way would not be feasible. Additional soundwalls along the property lines bordering Plymouth Road (residential land uses) would also not be feasible due to required access to properties via driveways and gates from Plymouth Road. In addition, future traffic noise levels at these receptors under no-build conditions would be the same overall to those with the project. Therefore, no further abatement measures where considered for these receptors.

Similar to the receptors above, abatement for the affected modeled receptors R166, R168, R171, and R173, was determined to be infeasible. These receptors represent first-row residential land uses along Ryde Avenue between Country Club Boulevard and Telegraph Avenue that are protected by existing soundwalls. The existing soundwalls, EW18 and EW20, are 12 feet high along the shoulder of Interstate 5. The soundwalls stand within 13 feet of the outer travel lane. Therefore, a soundwall of 14 feet or higher was not considered feasible.

Due to topographical constraints, alternative soundwall locations within the right-of-way would not be feasible. Additional soundwalls along the property lines bordering Ryde Avenue (residential land uses) would also not be feasible due to required access to properties via driveways and gates from Ryde Avenue. In addition, future traffic noise levels at these receptors under no-build conditions would be the same overall to those with the project. Therefore, no further abatement measures where considered for these receptors.

Construction Noise

Two types of short-term noise impacts would occur during project construction: noise from construction crew commutes to and from the site and noise from the construction work itself.

The noise from construction crew commutes and the transport of construction equipment and materials to the project site and would incrementally raise noise levels

on access roads leading to the site. Heavy equipment for grading and construction activities would be moved on site, remain for the duration of each construction phase, and not add to the daily traffic volume in the project vicinity. A high single-event noise exposure potential at a maximum level of 87 dBA L_{max} from trucks passing at 50 feet would also exist. However, the projected construction traffic would be minimal when compared to existing traffic volumes on Interstate 5 and other affected streets, and its associated long-term noise level change would not be perceptible. Therefore, short-term construction-related worker commutes and equipment transport noise impacts would be less than substantial.

Noise is generated during excavation, grading, and roadway construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated and, therefore, the noise levels along the project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

The closest sensitive receptors are 50 feet from the project construction areas. Therefore, these receptor locations may be subject to short-term noise reaching 93 dBA L_{max} generated by construction activities along the project alignment.

Avoidance, Minimization, and/or Abatement Measures

The reasonableness of a soundwall was determined by comparing the estimated cost of building the soundwall against the total reasonable allowance. The total reasonable allowance was determined based on the number of benefited residences multiplied by the reasonable allowance per residence. Construction cost estimates were based on standard masonry block construction. If the estimated soundwall construction cost exceeded the total reasonable allowance, the soundwall was determined not to be reasonable. However, if the estimated soundwall construction cost was within the total reasonable allowance, the soundwall was determined to be reasonable.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of barriers at the locations shown in Figures 2.2a through 2.2i at the respective lengths and heights indicated below. Calculations based on preliminary design data indicate that the barriers determined to be feasible and reasonable would reduce noise levels by 5 to 13 dBA for residences at a total

estimated construction cost of $28,846,386. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision of the noise abatement would be made at completion of the project design and the public involvement processes.

Based on the findings of the Noise Study Report[1] and Noise Abatement Decision Report[2] for this project, the following soundwalls were found to be both feasible and reasonable and are recommended for construction at their specified height. The approximate length and recommended heights of each soundwall are shown in Table 2.18. The locations of all modeled soundwalls are shown in Figures 2.5a through 2.5i and are labeled using the soundwall names shown below in bold.

- **SW1** (12 feet) – This soundwall would stand along the east side of Interstate 5 between the northbound on-ramp of Eight Mile Road and the new proposed northbound off-ramp at Gateway Boulevard to protect future planned multi-family residential land uses in this area.

- **SW2, 5 and 7** (14 feet) – These soundwalls would stand along the east shoulder of Interstate 5 from the southwestern portion of the Oak Grove Regional Park to the Hammer Lane northbound on-ramp to protect existing residential receptors in this area.

- **SW3, 4 and 6** (12 feet) – This soundwall would stand along the western shoulder of Interstate 5 from the Bear Creek overcrossing to the Hammer Lane southbound off-ramp to protect existing residential receptors in this area.

- **SW8** (12 feet) – This soundwall would stand along the eastern shoulder of Interstate 5 from the northbound Hammer Lane off-ramp to the end of the northbound West Benjamin Holt Drive on-ramp to protect existing residential receptors in this area.

- **SW9** (12 feet) –This soundwall would stand along the western shoulder of Interstate 5 from south of the southbound Hammer Lane on-ramps to the

[1] Caltrans. 2008. Interstate 5 North Stockton Corridor Improvements Project Noise Study Report. June.

[2] Caltrans. 2008. Interstate 5 North Stockton Corridor Improvements Project Noise Abatement Decision Report. September.

beginning of the Benjamin Holt Drive off-ramps to protect existing residential receptors in this area.

Table 2.18 Summary of Abatement Information

Soundwall	Height (feet)	Approximate Length (feet)	Noise Attenuation Range dBA	Number of Benefited Residences[1]	Determined to be Feasible?[2]	Determined to be Reasonable?[2]
SW1	12	3221	9	69	Yes	Yes
ASW1	14	722	5	15	Yes	No
ASW2	14	1188	5	15	Yes	No
ASW2-Ext	14	915	NA[3]	NA	NA	NA
SW2	14	1864	5–12	233	Yes	Yes
SW3	12	2323	5–10	223	Yes	Yes
SW4	12	1174	5–10	223	Yes	Yes
SW4-Ext	12	279	NA	NA	NA	NA
SW5	14	1112	5–12	233	Yes	Yes
SW6	12	5902	5–10	223	Yes	Yes
SW7	14	5509	5–12	233	Yes	Yes
SW7-Ext	14	187	NA	NA	NA	NA
SW8	12	4839	5–12	177	Yes	Yes
SW8-Ext	12	646	NA	NA	NA	NA
SW9	12	3451	5–10	121	Yes	Yes
SW9-Ext(1)	12	220	NA	NA	NA	NA
SW9-Ext(2)	12	1526	NA	NA	NA	NA
SW10	12	1644	5–8	60	Yes	Yes
SW10-Ext	12	1132	NA	NA	NA	NA
SW11	12	4344	5–11	153	Yes	Yes
SW12	12	1407	5–8	72	Yes	Yes
SW13	12	906	0-3	NA	No	No
SW13-Ext	12	280	NA	NA	NA	NA
SW14	12	925	5	20	Yes	Yes

Source: LSA Associates, Inc., February 2009.
dBA = A-weighted decibels
ft = feet
[1] Number of residents that are attenuated by 5 dBA or more by the modeled wall.
[2] Feasible and reasonable determination based on Caltrans guidelines as outlined in the Traffic Noise Analysis Protocol (August 2006).
[3] NA = Not applicable as the sound wall was not analyzed or was determined to be not feasible in the analysis of the NSR.

SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

FIGURE 2.5a
Sound Wall Locations

REQUIRED SOUND WALLS

N

NOT TO SCALE

SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

FIGURE 2.5b
Sound Wall Locations

CITY REQUESTED SOUND WALL EXTENSIONS
PROPOSED/ADDITIONAL SOUND WALLS
R2 MODELED RECEPTOR LOCATIONS

NOT TO SCALE

SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

FIGURE 2.5c

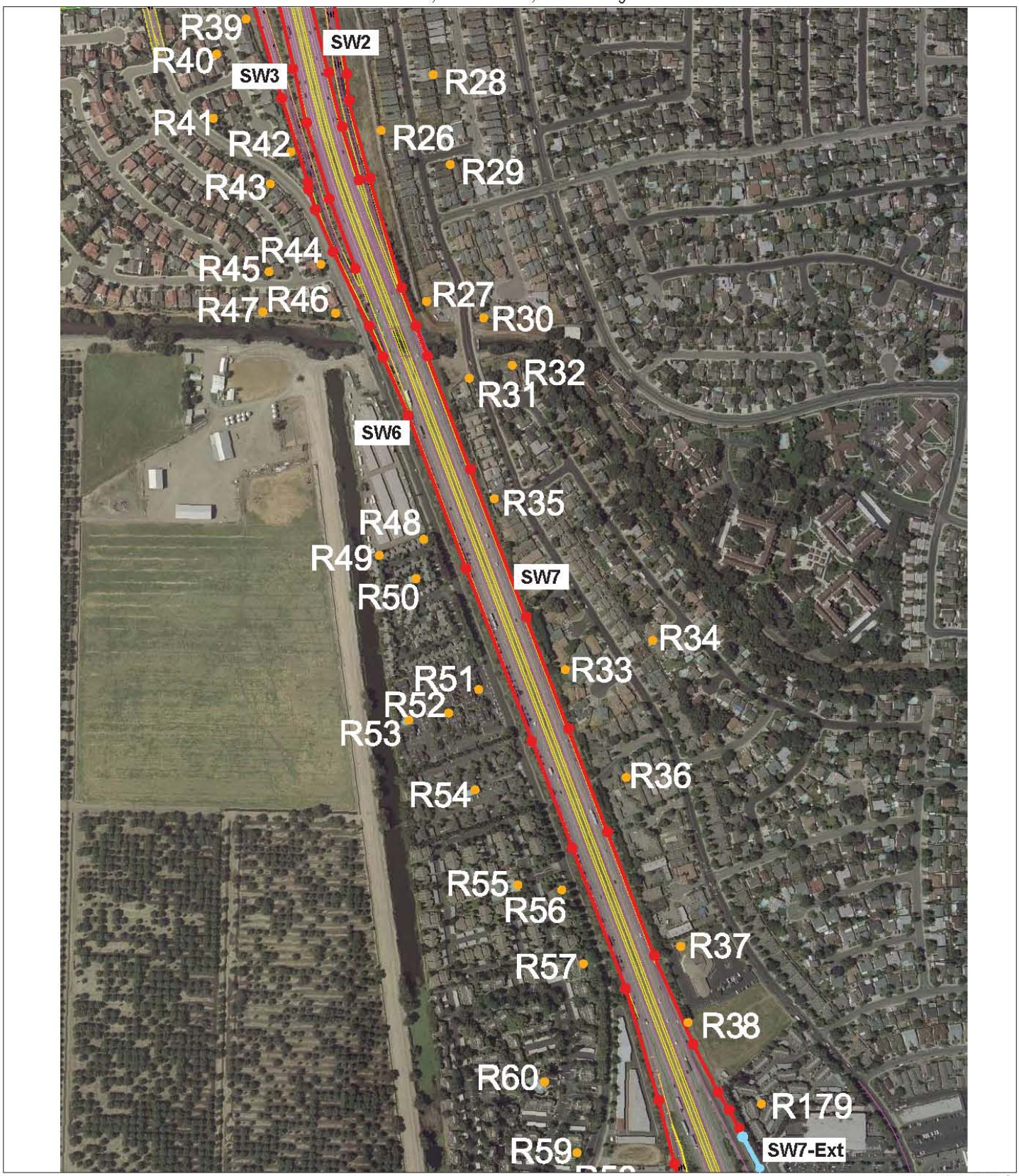
Sound Wall Locations

CITY REQUESTED SOUND WALL EXTENSIONS

PROPOSED/ADDITIONAL SOUND WALLS

R2 MODELED RECEPTOR LOCATIONS

NOT TO SCALE

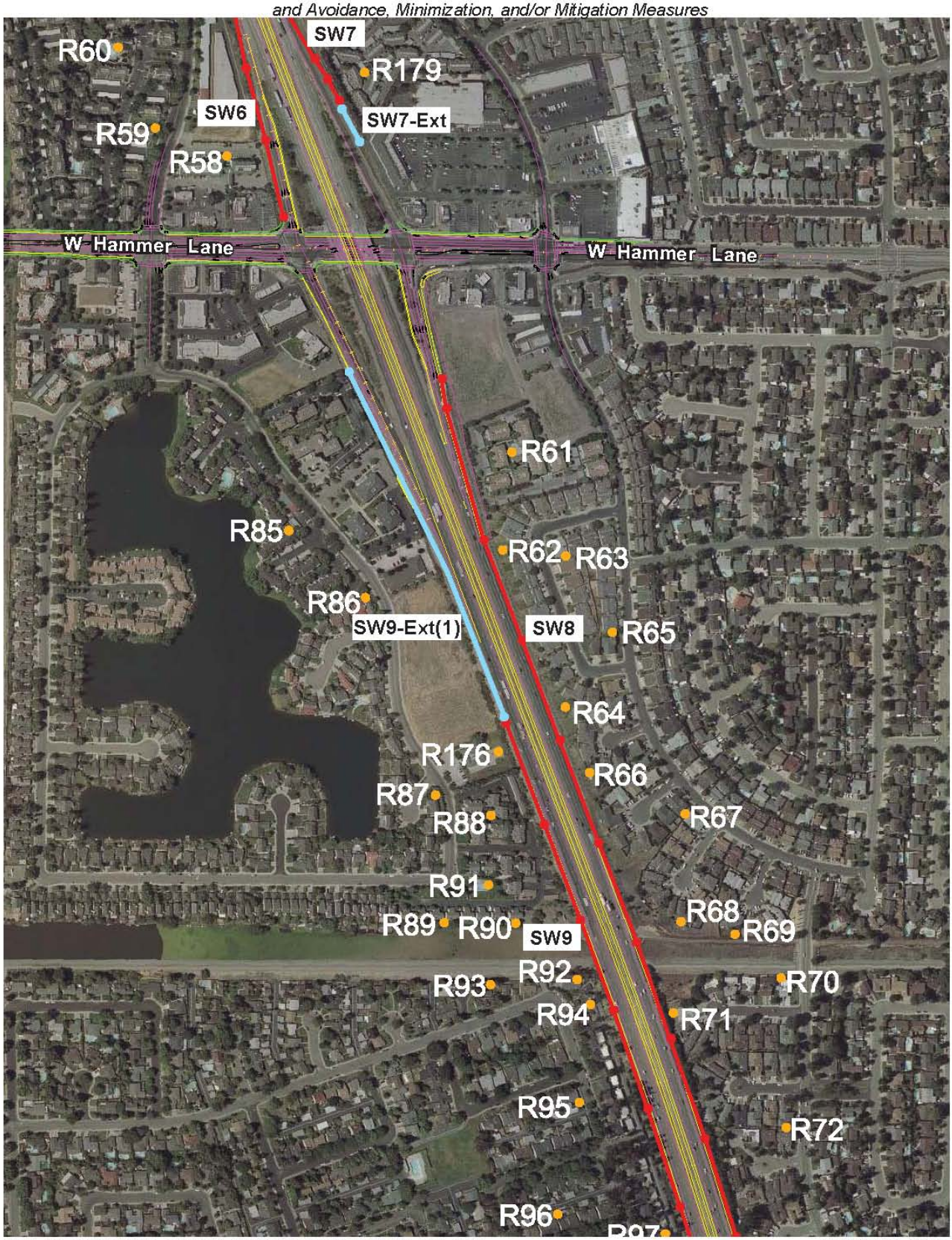


SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

FIGURE 2.5d
Sound Wall Locations

CITY REQUESTED SOUND WALL EXTENSIONS
PROPOSED/ADDITIONAL SOUND WALLS
R2 MODELED RECEPTOR LOCATIONS

NOT TO SCALE



SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

FIGURE 2.5e

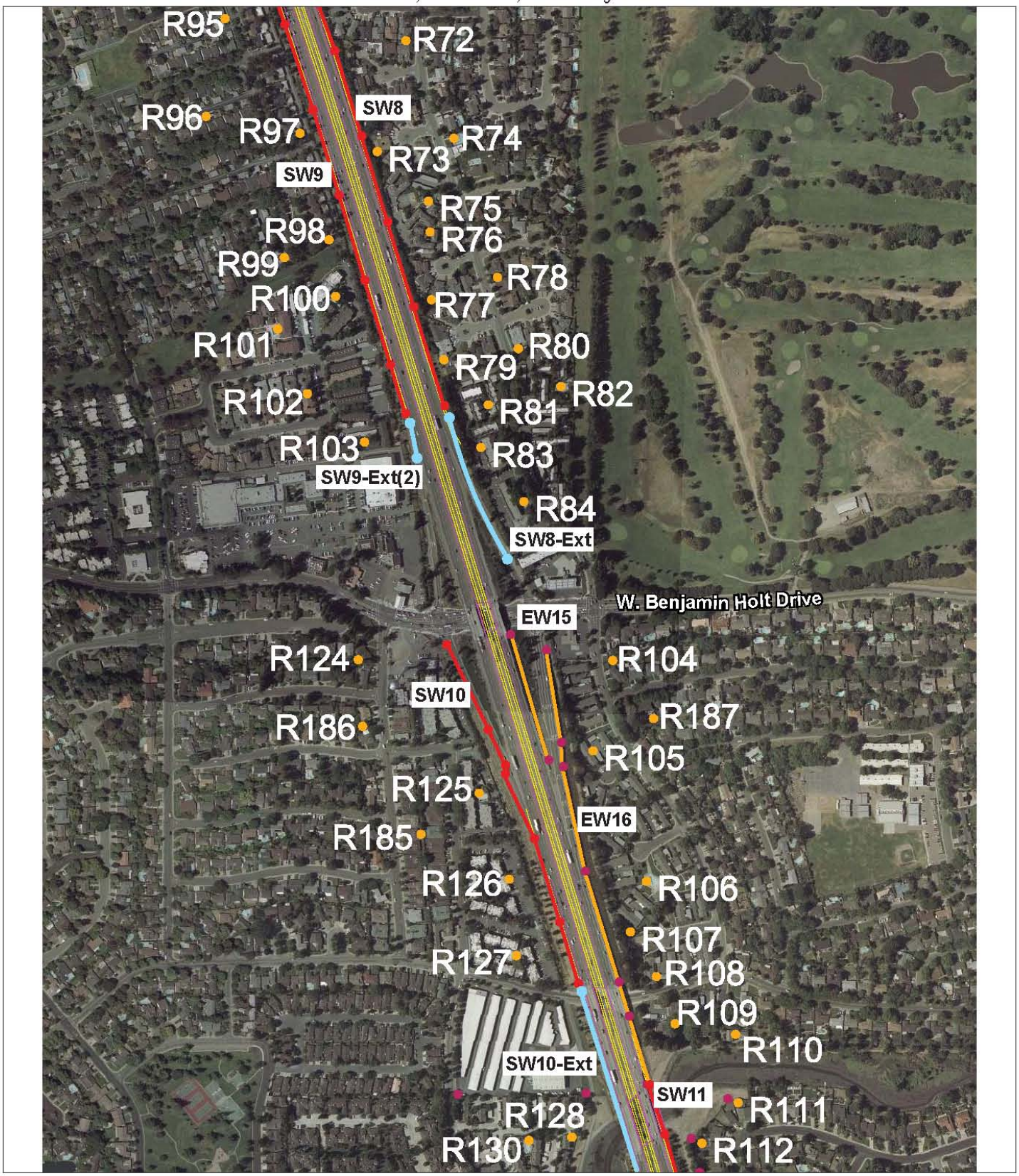
Sound Wall Locations

CITY REQUESTED SOUND WALL EXTENSIONS

PROPOSED/ADDITIONAL SOUND WALLS

R2 MODELED RECEPTOR LOCATIONS

NOT TO SCALE

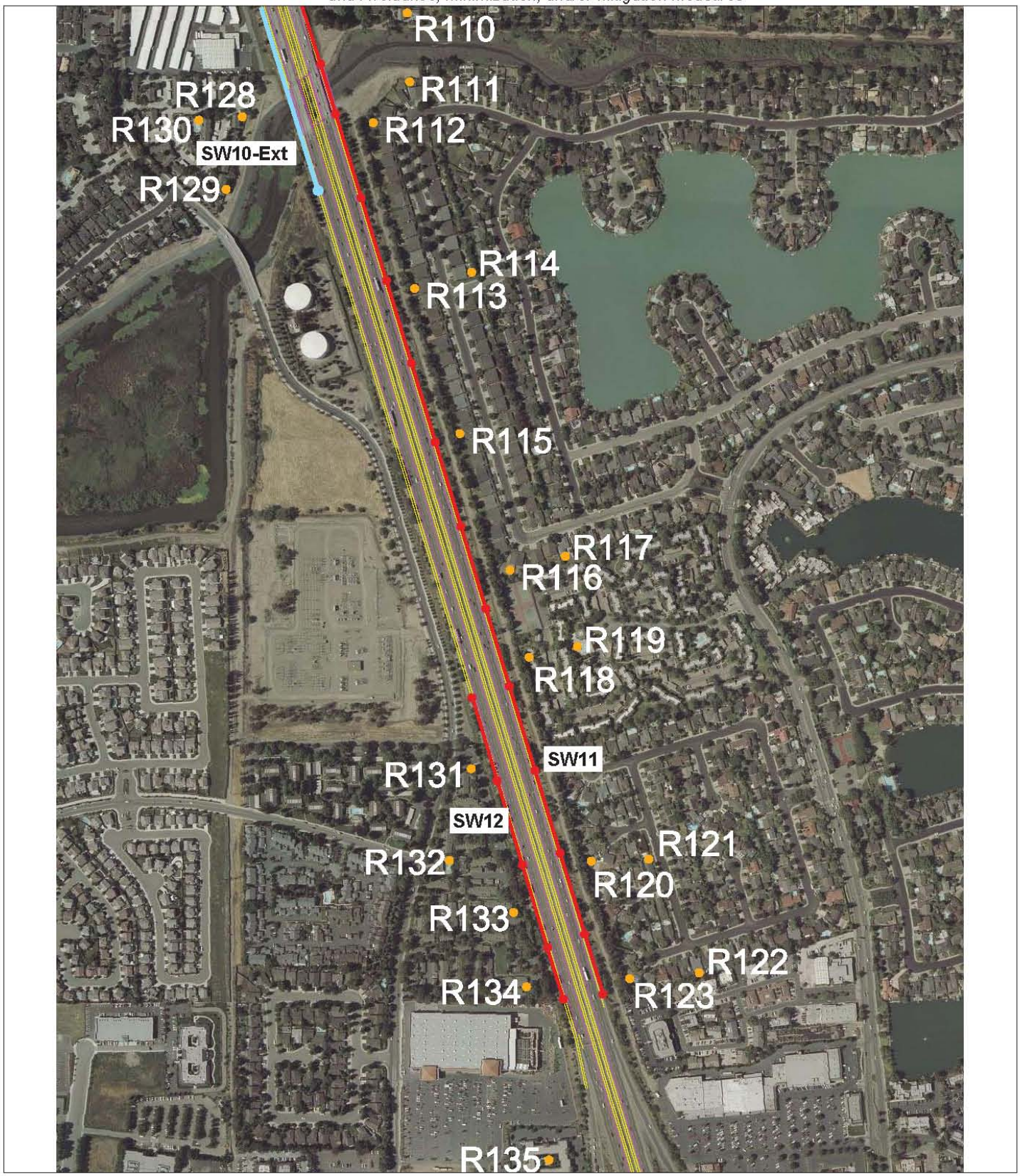


LSA

CITY REQUESTED SOUND WALL EXTENSIONS
PROPOSED/ADDITIONAL SOUND WALLS
EXISTING SOUND WALLS
R2 MODELED RECEPTOR LOCATIONS

NOT TO SCALE

FIGURE 2.5f
Sound Wall Locations



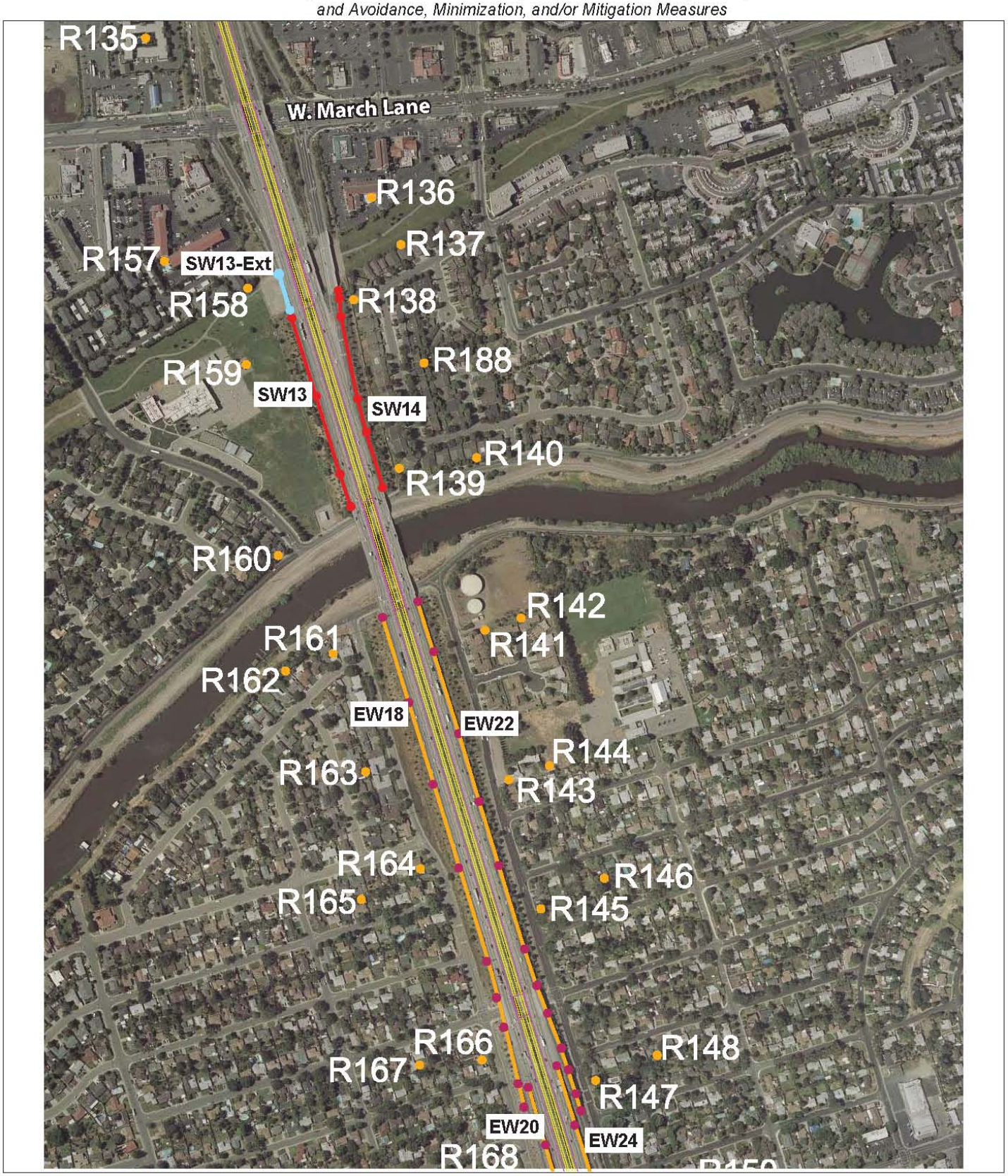
SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

CITY REQUESTED SOUND WALL EXTENSIONS

PROPOSED SOUND WALL

R2 MODELED RECEPTOR LOCATIONS

FIGURE 2.5g
Sound Wall Locations



SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

FIGURE 2.5h

Sound Wall Locations

CITY REQUESTED SOUND WALL EXTENSIONS

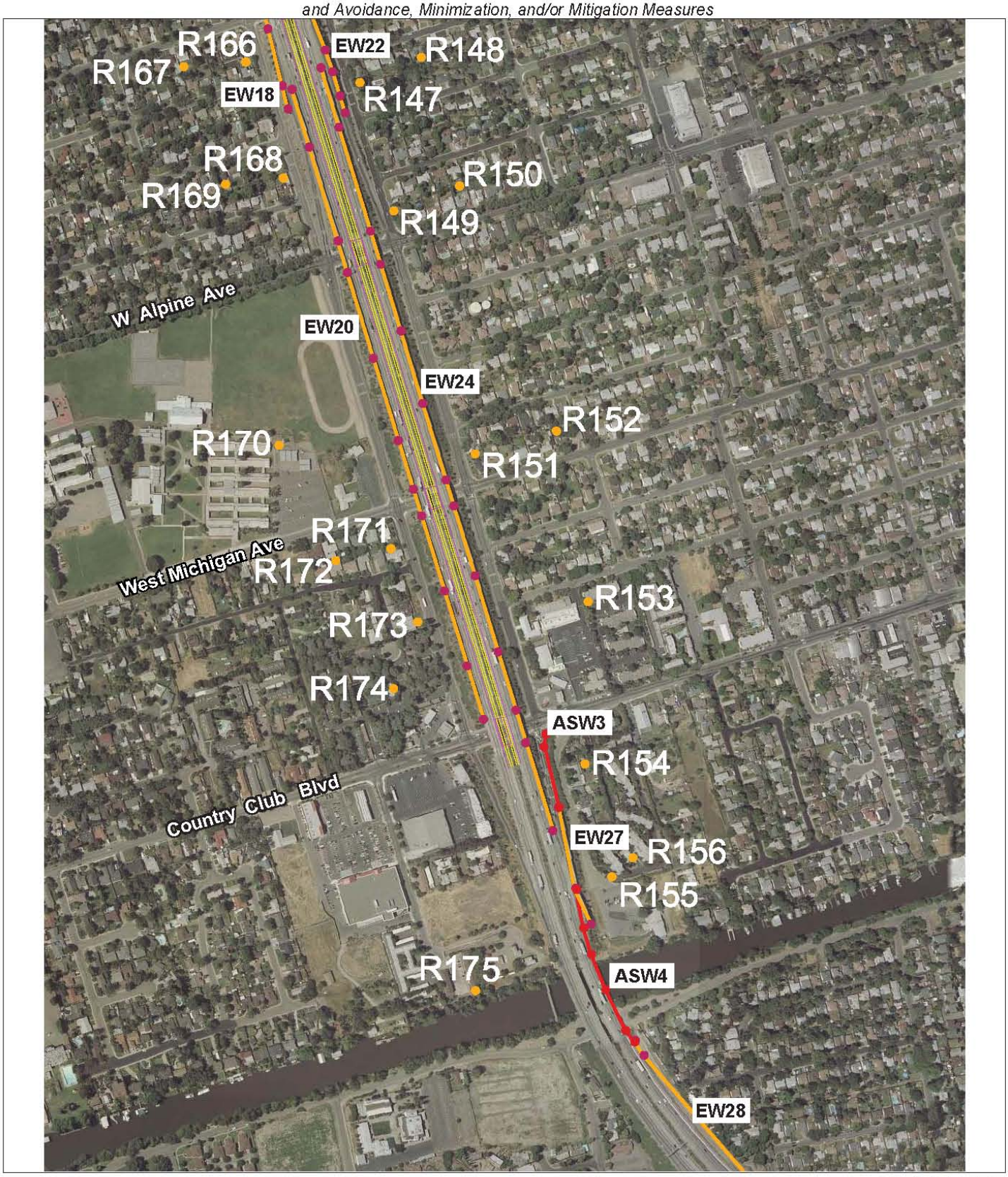
PROPOSED/ADDITIONAL SOUND WALLS

EXISTING SOUND WALLS

R2 MODELED RECEPTOR LOCATIONS

N

NOT TO SCALE



SOURCE: RAJAPPAN & MEYERS CONSULTING ENGINEERS, INC., 2007

FIGURE 2.5i
Sound Wall Locations

N
NOT TO SCALE

PROPOSED/ADDITIONAL SOUND WALLS
EXISTING SOUND WALLS
R2 MODELED RECEPTOR LOCATIONS

- **SW10** (12 feet) –This soundwall would stand along the western shoulder of Interstate 5 from the beginning of the southbound West Benjamin Holt Drive on-ramps to the north edge of the West Swain Road overcrossing to protect existing residential receptors in this area.

- **SW11** (12 feet) –This soundwall would stand along the eastern shoulder of Interstate 5 from the north edge of the Fourteen Mile Slough overcrossing to the end of the northbound March Lane on-ramps to protect existing residential receptors in this area.

- **SW12** (12 feet) – This soundwall would stand along the western shoulder of Interstate 5 from north of the residential land uses on Feather River Drive (just north of March Lane) to the beginning of the southbound March Lane off-ramps to protect existing residential receptors in this area.

- **SW14** (12 feet) – These soundwalls would stand along the eastern shoulder of Interstate 5 from the southern edges of the East Bay Municipal Utility District Aqueduct overcrossing to the northern edge of the Calaveras River overcrossing to protect existing residential receptors in this area.

Based on communication from the City of Stockton Public Works Department,[1] the city has asked that the following soundwalls and extensions of soundwalls be built, as recommended in the Noise Abatement Decision Report. The following heights are recommended for these soundwalls to match the heights of the soundwalls they are extending.

- **ASW1 and 2** (14 feet) – These soundwalls that were modeled in the Noise Study Report were determined to be not reasonable as the estimated construction cost exceeded the calculated total reasonable allowance; however, the City requested that these soundwalls be included to provide additional benefit to Oak Grove Regional Park.

- **ASW2-Ext** (14 feet) – This southern extension of ASW2 was requested by the City so that the entire western boundary of Oak Grove Regional Park would be covered; this includes areas not considered to be areas of frequent human use.

[1] Almassy, Jodi. 2008. Public Works Department, City of Stockton. Email communication titled TECH STUDIES: Interstate 5 Widening/Interchanges (EA10-0G4700). October 21.

- **SW4-Ext** (12 feet) – This northern extension of SW4 over Bear Creek was requested by the City to provide additional benefit to residential land uses represented by modeled receptor locations R17 and R18.

- **SW7-Ext** (14 feet) – This southern extension of SW7 was requested by the City to provide additional benefit to multi-family residential land uses represented by modeled receptor location R179.

- **SW8-Ext** (12 feet) – This southern extension of SW8 was requested by the City to provide additional benefit to multi-family residential land uses represented by modeled receptor locations R81-84.

- **SW9-Ext(1)** (12 feet) – This northern extension of SW9 was requested by the City to provide additional benefit to multi-family residential land uses represented by modeled receptor locations R85-86.

- **SW9-Ext(2)** (12 feet) – This southern extension of SW9 was requested by the City to provide additional benefit to multi-family residential land uses represented by modeled receptor locations R102-103.

- **SW10-Ext** (12 feet) – This southern extension of SW10 was requested by the City to provide additional benefit to multi-family residential land uses represented by modeled receptor locations R128-130.

- **SW13** (12 feet) – This soundwall that was modeled in the Noise Study Report was determined to be not feasible as it would not result in an insertion loss of at least 5 dBA; however, the inclusion of this soundwall was requested by the City in response to past complaints received from the Claudia Landeen School represented by modeled receptor location R159.

- **SW13-Ext** (12 feet) – This northern extension of SW13 was requested by the City to provide additional benefit to multi-family residential land uses represented by modeled receptor locations R157 and R158 and to provide additional benefit to Claudia Landeen School represented by modeled receptor location R159.

Secondary Impacts of Abatement Measures

Based on the analysis of the Noise Abatement Decision Report, all secondary effects of implementation, including biological impacts, water quality, visual impacts,

hazardous waste and cultural resources impacts of the recommended abatement measures were determined to be not substantial. Therefore, no adverse impacts are anticipated to result from the construction of soundwalls as part of the proposed project.

Construction Noise Abatement

During construction of the project, noise from construction activities may intermittently be heard in the area. Construction equipment can generate noise levels ranging from 70 to 90 decibels at a distance of 50 feet; noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels per doubling of distance.

Construction noise is regulated by Caltrans Standard Specifications Section 7-1.0011, "Sound Control Requirements," which states that noise levels generated during construction would comply with applicable local, state, and federal regulations and that all equipment would be fitted with adequate mufflers according to the manufacturer's specifications.

No adverse noise impacts from construction are anticipated because construction would be done in accordance with Caltrans Standard Specifications Section 7-1.011 and applicable local noise standards. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise. Further, implementing the following measures would minimize the temporary noise impacts from construction:

- All equipment would have sound-control devices that are no less effective than those provided on the original equipment. No equipment would have an unmuffled exhaust.
- As directed by Caltrans, the contractor would implement appropriate additional noise mitigation measures including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

2.3 Biological Environment

2.3.1 Natural Communities

Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on natural biological communities, not individual plant or animal species. This section also includes information on wildlife use, corridors, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

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

Affected Environment

A Natural Environment Study for the project was completed in July 2009.

A biological study area including the proposed project footprint and surrounding areas that may be affected by project construction was established after considering the environmental setting and special-status species potentially occurring in the vicinity of the biological study area. For the biological study area, two impact areas must be considered: 1) the area to be directly affected by construction-related activities, and 2) the area outside the immediate construction area that would be indirectly affected.

The biological study area is a highly altered environment, and natural communities have been largely displaced. Over 60 percent of the study area is developed with roadways and other hardscape, and 15 percent of the study area is composed of agricultural lands. Natural communities are limited to a small area of valley oak woodland at the northern end of the study area and aquatic resources associated with rivers and sloughs. Aquatic resources in the biological study area are discussed in Section 2.3.2.

Valley oak woodlands include woodlands varying in density from single valley oak trees (*Quercus lobata*) in open savannah-like grasslands to multiple trees in relatively dense forests. In the biological study area, valley oak woodland is limited to an 8.33-

acre grove in the northeast portion of Interstate 5 and Eight-Mile Road at the northern end of the project. This woodland area, which includes a residence, is the northernmost extension of the much larger (approximately 175-acre) oak woodland that is south of Eight Mile Road within Oak Grove Park.

Valley oak woodland is included as a sensitive community in the California Natural Diversity Database; oak woodlands are also afforded protection under Senate Concurrent Resolution No. 17-Oak Woodlands, legislation that requires state agencies having land use planning duties and responsibilities to assess and determine the effects of their decisions or actions within any oak woodlands containing blue, Engleman, valley, or coast live oak. The measure requires those state agencies to preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where designated oak species are removed from oak woodlands.

Due to the developed nature of the biological study area, the wildlife there is composed of relatively common species that have adapted to human environments. The aquatic and marsh habitats in the area support a variety of water-related wildlife and fish. Stream corridors often support higher wildlife use than surrounding habitats due to the availability of water, cover, food sources, and movement opportunities.

Wildlife corridors typically include vegetation and topography that facilitate the movement of wild animals from one area of suitable habitat to another for foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian (river and stream bank) zones and similar stretches of contiguous habitat. While the biological study area does not include any wildlife movement corridors that would be considered significant on a regional basis, the stream channels that cross the study area are important for local wildlife movement. The highly developed nature of the biological study area amplifies the importance of these corridors, which are likely the only migration routes through this area.

Environmental Consequences

The project would directly affect up to 8.33 acres of valley oak woodland, including removal of 30-40 trees and loss of woodland habitat. Oak woodlands provide habitat for a variety of wildlife including raptors and other nesting birds; the trees also provide roost sites for bats. A number of special-status species are associated with woodland habitats (see Section 2.2.0).

The project would not adversely affect wildlife use or movements. While some displacement of wildlife may occur during construction, most impacts are short term and alternate habitats are available in the immediate vicinity of the project.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented to avoid and minimize impacts to oak woodlands within the biological study area:

- Any mature oak trees that do not require removal for project construction would be preserved and protected; bright orange plastic fencing would be installed around the perimeter of the drip line of any trees to be preserved, and no construction activity would be allowed to encroach within the protected zone.
- Appropriate areas within the limits of the reconstructed interchange at Eight Mile Road would be planted with native valley oaks; plantings would be placed in a random, naturally occurring pattern; trees would not be staked or tied out to the ground.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 United States Code 1344) is the main law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of: hydrophytic (water-soaked) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

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

U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this order states that a federal agency, such as the Federal Highway Administration, and Caltrans when acting under federal agency responsibility, 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 mainly by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved.

Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the California Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required.

California Department of Fish and Game jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality Section 2.2.2 for additional details.

Affected Environment

Aquatic resources within the study area include the seven waterways that flow east to west under the Interstate 5 corridor and one that parallels the corridor. From north to south, these are: Telephone Cut, Bear Creek, Mosher Slough, Mosher Slough lateral

(parallel to Interstate 5), Five Mile Slough, Fourteen Mile Slough, the Calaveras River, and Smith Canal. The biological study area contains 5.38 acres of aquatic resource habitats.

All of these waterways except Smith Canal have related wetland habitat. Telephone Cut and Mosher Slough Lateral support wetlands dominated by the water hyacinth, a species that grows only in water or water-soaked soil; other species include the broad-leaf cattail (*Typha latifolia*) duckweed (*Lemna* sp.), and lady's thumb (*Polygonum persicaria*); all are species that grow in water habitats.

Fringe wetlands (next to the banks) exist along Bear Creek, Mosher Slough, Five Mile Slough, Fourteen Mile Slough, and the Calaveras River. These fringe wetlands are generally narrow bands of vegetation dominated by species such as the broad-leaf cattail, common tule (*Scirpus acutus occidentalis*), dallis grass (*Paspalum dilatatum*), Johnson grass (*Sorghum halepense*) and nutsedge (*Cyperus eragrostis*). Fringe wetlands at Mosher Slough are generally more substantial than at the other bridge crossings. Dense stands of Himalayan blackberry (*Rubus discolor*) dominate this location.

Environmental Consequences

Six classifications of aquatic/wetland habitat may be affected by the proposed project: River and Deepwater Channel; Tributary Stream; Creek; Deadend Slough; Freshwater Emergent Wetland; and Drainage Ditch. These habitats are discussed together because of similar functions and values and similar mitigation requirements.

Direct impacts to aquatic, wetland and riparian habitats would be limited to the new bridge piers to support the widened bridge decks at the Calaveras River, Fourteen Mile Slough, Mosher Slough and Bear Creek and the new parapet and wing walls at Five Mile Slough.

Permanent direct bridge impacts, based on preliminary bridge designs provided by the project engineer, are shown in Table 2.19:

Table 2.19: Direct Impacts to Aquatic, Wetland, and Riparian Habitats

Aquatic Habitat Type	Direct Impact	Shading Impact
River and Deepwater Channel	41 square feet	0.200 acre
Tributary Stream	810 square feet	0.457 acre
Creek	25 square feet	0.113 acre
Freshwater Emergent Wetland	25 square feet	0.086 acre
Total	901 square feet (0.021 acre)	0.856 acre

In addition to direct impacts from placement of piers, indirect shading impacts to these habitats would occur from widening the bridge decks at Calaveras River, Fourteen Mile Slough, Mosher Slough, and Bear Creek. The shading impact is estimated at 0.856 acre.

Further refinement of bridge impacts would occur following completion of final bridge plans and before application of permits.

Other construction impacts include:

- Bridge construction operations within aquatic habitats would use temporary construction trestles. Construction of each temporary trestle is expected to take about two weeks. Access to the trestle for construction equipment would be from the roadway median.
- Excavation for the construction of the wingwall footings at Five Mile Slough would require dewatering of the slough and temporary access into the slough at each end of the culvert.
- Construction of temporary cofferdams and stream diversion would be required for dewatering the area in front of each headwall.
- Temporary shading and general disturbance during construction would affect an additional 2.16 acres of aquatic resources.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures would minimize potential impacts to aquatic, wetland, and riparian habitats occurring in the biological study area:

- All areas temporarily disturbed during project construction would be restored to pre-project conditions.

- Measures consistent with the Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/ Construction_Site_BMPs.pdf]) would be implemented to minimize effects to the wetlands (e.g., siltation, etc.) during construction.

- Emergent and submergent aquatic vegetation would be retained to the maximum extent possible.

- Riparian vegetation would be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, would be cut off at the ground line and the root systems left intact.

The permanent loss of wetland habitats would be compensated for at a 1:1 ratio by one, or two or more, of the following options:

- Payment of appropriate mitigation fee (in lieu fees)
- Dedication of mitigation lands
- Purchase of approved mitigation bank credits
- Development of an alternative mitigation plan

2.3.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service and California Department of Fish and Game share regulatory responsibility for the protection of special-status plant species. Special-status species are selected for protection because they are rare and/or subject to population and habitat declines.

"Special-status" is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the

California Endangered Species Act. See Threatened and Endangered Species, Section 2.3.5, in this document for detailed information on those species.

This section of the document discusses all other special-status plant species, including U.S. Fish and Wildlife Service candidate species and plant species considered rare by the California Native Plant Society.

The regulatory requirements for the Federal Endangered Species Act can be found at United States Code 16, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

Affected Environment

The California Natural Diversity Database and California Native Plant Society records were searched and updated in 2008 (see Appendix F for species lists). Focused surveys for special-status plants were done during spring and summer 2008.

Mason's lilaeopsis (*Lilaeopsis masonii*) is a State-listed rare and California Native Plant Society 1B species. The slough thistle (*Cirsium crassicaule*), delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Sanford's arrowhead (*Sagittaria sanfordii*), and Suisan marsh aster (*Symphyotrichum lentum*) are California Native Plant Society list 1B species; the delta mudwort (*Limosella subulata*), and rose mallow (*Hibiscus lasiocarpus*) are California Native Plant Society list 2 species. Except for Mason's lilaeopsis, these species have no formal state or federal status.

The slough thistle and delta mudwort are annual herbs; Mason's lilaeopsis, rose mallow, delta tule pea, Sanford's arrowhead, and Suisan marsh aster are perennial herbs. All of these plants grow in freshwater marshes, sloughs, and slow-moving water in both natural waterways and agricultural canals.

The California Natural Diversity Database includes records for Mason's lilaeopsis, slough thistle, delta tule pea, Sanford's arrowhead, Suisan marsh aster, and delta mudwort species in the project vicinity. Both early season (April) and late season (July) surveys for special-status plants were done in 2008. The delta tule pea was seen along the Calaveras River at the southern limit of the biological study area during the surveys; results were negative for the other six species.

The waterways within the biological study area provide very little mud-bank habitat suitable for Mason's lilaeopsis or delta mudwort, and it is unlikely that these species occur in the biological study area. The habitat is considered marginal for the other plants in this group due to the high degree of disturbance in the study area.

Environmental Consequences

No impacts to Mason's lilaeopsis, slough thistle, delta mudwort, rose mallow, Sanford's arrowhead, or Suisan marsh are anticipated as these species are not expected to occur in the project area. Although the delta tule pea was found on the bank of the Calaveras River at the edge of the biological study area, all work in this area would be done inside of the existing bridges, well away from the location of the plants. Therefore, the potential for effects to the delta tule pea would be minimal.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures would minimize any potential impacts to special-status plants:

- All areas temporarily disturbed during project construction would be restored to pre-project conditions.

- Measures consistent with the Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/ Construction_Site_BMPs.pdf]) would be implemented to minimize effects to special-status plant species (e.g., siltation, etc.) during construction.

- Emergent and submergent aquatic vegetation would be retained to the maximum extent possible.

- Riparian vegetation would be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, would be cut off at the ground line and the root systems left intact.

- Clearing would be confined to the minimal area necessary to facilitate construction activities. If vegetation-clearing activities require removal within 100 feet of the special-status plant habitat, a qualified biological monitor would be on-site to monitor the clearing activity.

2.3.4 Animal Species

Regulatory Setting

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

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act
- Marine Mammal Protection Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601–1603 of the Fish and Game Code
- Sections 4150 and 4152 of the Fish and Game Code

Affected Environment

The California Natural Diversity Database was searched and updated in 2008 (see Appendix F for species lists). Field studies were subsequently done to evaluate the presence or absence of all special-status animal species that could potentially be found within the biological study area. Species that could potentially occur in the area are listed in Table 2.20.

Table 2.20: Animal Species of Special Concern

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present /Absent	Rationale
Mammals					
Corynorhinus townsendii	Townsend's big-eared bat	CSC	Occurs in a variety of habitats including valley oak savannah, riparian forest, and prairie. Roosts in caves, tunnels, buildings, mines, or other human-made structures, such as bridges. Requires roosting, maternity, and hibernacula sites free from human disturbance.	HP	Potential roosting and foraging habitat is present in the biological study area. Bridges may provide suitable roosting sites, and associated water features may provide suitable forging habitat for this species.
Eumops perotis californicus	Greater western mastiff bat	CSC	Found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	HP	Potential roosting and foraging habitat is present in the biological study area. Bridges may provide suitable roosting sites, and associated water features may provide suitable forging habitat for this species.
Lasiurus blossevilli	Red bat	CSC	Roosts mainly in trees, 2-40 feet above the ground. Feeds over a wide variety of habitats including grasslands, shrub land, open woodland, and croplands.	HP	Potential foraging habitat is present in the biological study area. Broad-leaved trees may provide suitable roosting sites, and associated water features may provide suitable forging habitat for this species.
Birds					
Accipiter cooperi	Cooper's hawk	CSC	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms or river floodplains; also live oaks.	HP	A Cooper's hawk was seen foraging near the project limits during surveys done in November 2007. Marginally suitable foraging and nesting habitat occurs in the biological study area.
Accipiter striatus	Sharp-shinned hawk	CSC	Nests in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffery pine forest. North-facing slopes with plucking perches are critical requirements. Uses all habitats in the winter, except alpine, open prairie, and bare desert.	HP	Marginally suitable winter foraging habitat occurs in the biological study area.
Agelaius tricolor	Tricolored blackbird	CSC, MNBMC	Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry thickets, etc. close to open water. Forages in a variety of habitats	HP	Marginally suitable foraging and nesting habitat occurs along the watercourses in the biological study area.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present /Absent	Rationale
			including pastures, agricultural fields, rice fields, and feedlots.		
Athene cunicularia hypugaea	Western burrowing owl	CSC	Burrow sites in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, depends on burrowing mammals, most notably, California ground squirrel.	HP	Marginally suitable foraging and nesting habitat occurs in the median and other areas of the biological study area.
Buteo regalis	Ferruginous hawk	CSC	Winters in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	HP	Marginally suitable foraging habitat occurs in the median and other areas of the biological study area.
Charadrius montanus	Mountain plover	FPT, CSC	Winters in short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Prefers short vegetation, bare ground and flat topography. Prefers grazed areas and areas with burrowing rodents.	HP	Marginally suitable winter foraging habitat occurs in the median and other portions of the biological study area.
Circus cyanus	Northern harrier	CSC	Nests mostly in emergent wetlands or along rivers or lakes, but may nest in grasslands, grain fields, or on sagebrush flats several miles from water.	HP	Marginally suitable foraging habitat occurs in the median and other portions of the biological study area.
Dendroica petechia brewsteri	Yellow warbler	CSC	Nests in riparian habitats and prefers willows, cottonwoods, aspens, sycamores, and alders for both nesting and foraging. Also nests in montane shrubbery in open conifer forests.	HP	Marginally suitable foraging and nesting habitat occurs along the watercourses in the biological study area.
Elanus leucurus	White-tailed kite	CA FP	Nests on rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodlands. Found in open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	HP	Marginally suitable foraging habitat occurs in the median and other areas of the biological study area.
Falco columbarius	Merlin	CSC	Uncommon winter migrant from September to May. Frequents coastlines, open	HP	Marginally suitable, winter foraging habitat occurs in the median and other areas of the biological study

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present /Absent	Rationale
			grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats. Nests in Alaska and Canada.		area.
Falco mexicanus	Prairie falcon	CSC	Nests on cliffs in dry, open terrain. Forages in open areas including grasslands, rangeland, savannahs, desert scrub, and some agricultural fields.	HP	Marginally suitable winter foraging habitat occurs in the median and other areas of the biological study area.
Icteria virens	Yellow-breasted chat	CSC	California summer nesting resident. Inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low dense riparian consisting of willows, blackberry, and wild grape, and forages within 10 feet of the ground.	HP	Marginally suitable foraging and nesting habitat occurs along the watercourses within the biological study area.
Lanius ludovicianus	Loggerhead shrike	CSC	Nests in broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oases, scrub habitats and washes. Prefers open country for hunting, with perches for scanning and fairly dense shrubs and brush for nesting.	HP	Marginally suitable foraging habitat occurs in the biological study area.
Reptiles					
Actinemys (=Emys) marmorata	Pacific pond turtle	CSC	Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams and irrigation ditches with emergent vegetation and basking sites. Lays eggs in upland habitat consisting of sandy banks or grassy, open fields.	P	Pacific pond turtles were observed in the biological study area during surveys conducted in October and November of 2007. Suitable foraging and nesting habitat present in biological study area.
Fish					
Oncorhynchus tshawytscha	Central Valley fall/late fall-run chinook salmon	FC, CSC	Found in the Sacramento and San Joaquin Rivers and their tributaries.	HP	Watercourses in the biological study area provide suitable habitat for this species.
Pogonichthys macrolepidotus	Sacramento splittail	CSC	Largely confined to the Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and other parts of the Sacramento-San	HP	Watercourses in the biological study area provide suitable habitat for this species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present /Absent	Rationale
			Joaquin estuary. Occurs in slow-moving river sections and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young.		
Spirinchus thaleichthys	Longfin smelt	CSC	Coastal waters near shore, bays, estuaries, and rivers, and landlocked in some lakes. In estuaries, usually found in middle or bottom of water column. Prefers salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	HP	Watercourses in the biological study area provide suitable habitat for this species.

Legend

HP= Habitat Present. Habitat is, or may be present. The species may be present.
P= Present. Species is present.
CH= Project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Federal
FPE = Proposed Endangered
FPT = Proposed Threatened
FC = Candidate
MNBMC = Migratory Non-game Bird of Management Concern

State
California Species of Concern
CA FP = California Fully Protected

Bats

Three special-status bat species could occur in the biological study area: Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), and red bat (*Lasiurus blossevilli*). All three of these bats are California Species of Special Concern. None of these species has any formal federal or state status.

Nesting/Foraging Raptors: Cooper's Hawk and White-tailed Kite

The Cooper's hawk (*Accipiter cooperii*) is a California Species of Concern. The white-tailed kite (*Elanus leucurus*) is classified by the California Department of Fish and Game as fully protected because of population declines. Neither of these species has any formal federal status.

Cooper's hawks breed across southern Canada southward to the southern United States and into central Mexico and winter throughout the United States and Mexico. Cooper's hawks nest and forage in riparian (along rivers and streams) forest and woodland habitats. This small hawk occurs as a year-round resident throughout California, although sightings in San Joaquin County are rare.

White-tailed kites nest and forage in a variety of settings. The species occurs from western Oregon south to northern Baja California. In California, white-tailed kites range throughout the Central Valley, west of the Sierra, and the coast and coastal valleys from Humboldt County south. White-tailed kites build stick nests in the tops of trees and lay eggs from January to June. They forage for small rodents over grassland and open savanna.

Foraging Birds: Northern Harrier, Prairie Falcon, Sharp-Shinned Hawk, Ferruginous Hawk, Merlin, and Mountain Plover

This group includes birds that may forage in the study area, but do not nest there. The northern harrier (*Circus cyanus*) and prairie falcon (*Falco mexicanus*) breed in the region, but not within the study area. The sharp-shinned hawk (*Accipiter striatus*), ferruginous hawk (*Buteo regalis*), merlin (*Falco columbarius*) and mountain plover (*Charadrius montanus*) do not breed in the region (of this subgroup, only the sharp-shinned hawk breeds in California). All of these birds are California Species of Concern. None of these species has any formal state or federal status.

Northern harriers occur in a variety of habitats, including grasslands, grain fields, sagebrush flats, emergent wetlands, and alpine meadows. The species usually nests in emergent wetlands or along rivers or lakes, but may nest in grasslands, grain fields, or

on sagebrush flats. Northern harriers are ground-nesting birds and, therefore, sensitive to disturbances from grazing and agriculture.

The prairie falcon nests on cliffs in dry, open terrain, and forages in open areas such as grasslands, rangeland, savannahs, desert scrub, and agricultural fields.

Sharp-shinned hawks nest in coniferous forests with dense canopy and understory cover. The species is not a common nester in California and is much more abundant as a winter migrant.

Ferruginous hawks breed in open country, primarily prairies, plains and badlands, from eastern Washington and southern Alberta eastward to southwestern Manitoba and eastern South Dakota, southward to Arizona and the panhandle of Texas. The species winters from northern California and southern Nebraska southward to central Mexico.

Merlins breed in open country from open coniferous woodland to prairies and, occasionally, in adjacent suburbs across Alaska and Canada, southward to very northern United States. The species winters in open woodland, grasslands, open cultivated fields, marshes, estuaries, and seacoasts from southern Canada to northern South America.

Mountain plovers breed on open plains from very southern Alberta and Saskatchewan southward to New Mexico and western Texas and winter in short-grass plains and fields, plowed fields, and sandy deserts in the Central Valley of California and eastward along the Mexican border to southern Texas.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is a California Species of Concern and a U.S. Fish and Wildlife Service Migratory Non-game Bird of Management Concern.

Tricolored blackbirds are highly colonial and nomadic, and are largely endemic to the lowlands of California. They prefer to nest in freshwater marshes with dense growths of herbaceous vegetation, such as mustard and thistle. Breeding is highly synchronized, with most pairs in the colony initiating nesting within a few days of each other.

Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is a California Species of Concern. It has no federal status. Burrowing owls occur in warmer valleys, open, dry

grasslands, deserts, and scrublands associated with agriculture and urban areas that support populations of California ground squirrels. Burrowing owls nest below ground, using abandoned burrows of other species, most commonly ground squirrel burrows, and feed on insects and small mammals.

Yellow Warbler and Yellow-Breasted Chat

The yellow warbler (*Dendroica petechia brewsteri*) and yellow-breasted chat (*Icteria virens*) are both California Species of Concern; they have no federal status. These riparian-associated birds were once common in woodland habitats throughout the state, but have declined due to the loss of riparian habitat.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is a California Species of Concern; it has no federal status. The species is considered a common resident and winter visitor in lowlands and foothills throughout California. Loggerhead shrikes prefer open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Highest densities occur in more or less open hardwood and mixed canopy habitats. Loggerhead shrikes often occur in open cropland.

Loggerhead shrikes feed on large insects, small birds, mammals, amphibians, reptiles, fish, carrion, and various other invertebrates. Prey is typically identified from an above-ground perch. Captured prey is often skewered on a thorn, sharp twig, or wire barb. Nests are built in dense shrubs or trees and are usually well concealed.

Pacific Pond Turtle

The Pacific pond turtle (*Actinemys marmorata*) is a California Species of Concern; it has no federal status. This turtle ranges from western Washington State south to northwestern Baja California. The pond turtle is a highly aquatic species, found in ponds, marshes, rivers, streams, and irrigation ditches that typically have rocky or muddy bottoms and are vegetated with aquatic vegetation. Eggs are laid at upland sites, away from the water, from April through August.

Sacramento Splittail and Longfin Smelt

Sacramento splittail (*Pogonichthys macrolepidotus*) and longfin smelt (*Spirinchus thaleichthys*) are California Species of Concern, but have no federal status.

The Sacramento splittail is endemic to California and was once widely distributed in lakes and rivers throughout the Central Valley. The splittail spawns in large sloughs and dead-end sloughs fed by freshwater streams from late January to early June.

Spawning occurs on submerged vegetation in temporarily flooded upland and riparian habitat. Typically, terrestrial shrubs and herbs are preferred over emergent wetland vegetation such as cattails and tules. Shallow edges with submerged vegetation are important habitat elements. The splittail tends to remain in spawning areas, moving downstream as it matures. Although mainly a freshwater species, the splittail can tolerate salinities as high as 10-8 parts per thousand.

The longfin smelt (*Spirinchus thaleichthys*) is a fish of open waters in estuaries that ranges from Monterey Bay northward to Alaska. In California, it has historically been collected from San Francisco Bay, Eel River, Humboldt Bay and Klamath River. The only California collections made in the 1990s were from the Klamath River and San Francisco Bay.

Spawning occurs from November to June, peaking from February to April. The longfin smelt spawns in estuaries in fresh or slightly brackish water over sandy or gravel substrates. Upon hatching, the larvae move into the water column and are transported downstream to brackish water nursery areas in Suisan and San Pablo Bays. Maturity is reached toward the end of its second year.

Central Valley Fall/Late Fall-Run Chinook Salmon

The Central Valley fall/late fall-run chinook salmon (*Oncorhynchus tshawytscha*) is a federal candidate for listing and a California Species of Concern.

Salmon are an anadromous fish that spends part of its life cycle in freshwater and part in saltwater. This species spawns in small, freshwater streams where the young remain from one to several years before migrating to the ocean to feed and grow. Adults return to their natal streams to spawn and complete their life cycle. Salmon require clean, cold, well-oxygenated streams for spawning. Spawning streams must have a substrate of gravel or small cobble to provide safe incubation sites for the eggs. This species occurs throughout portions of the Sacramento and San Joaquin Rivers and their tributaries.

Portions of the biological study area lie in Essential Fish Habitat for the Central Valley fall/late fall-run chinook salmon. Impacts to Essential Fish Habitat for Pacific salmon species are regulated under the Magnuson-Stevens Fishery Conservation and Management Act.

Environmental Consequences

Bats

Project construction may reduce or temporarily eliminate access to roost sites in bridge structures. The project would not remove any existing structures and, in fact, would add several new structures, so there should be no permanent loss of roost sites associated with structures. The project would also remove some large trees that may provide roost sites. Potential foraging habitat for bats is abundant in the region, and the project would not substantially reduce bat foraging habitat. With preconstruction surveys described under Avoidance and Minimization Measures, there should be no effect to special-status bats.

Nesting/Foraging Raptors: Cooper's Hawk and White-tailed Kite

The project would remove up to 8.3 acres of valley oak woodland habitat that may be used by Cooper's hawks or white-tailed kites. The project would also eliminate up to 58 acres of agricultural lands that provide foraging habitat for white-tailed kites. There is a substantial amount of potential nesting habitat for these species in the general vicinity, including the 175-acre Oak Grove Park immediately east of the biological study area and White Slough Wildlife Area just north of the project area. Foraging habitat associated with agricultural lands is abundant in the area. With the preconstruction survey described under Avoidance and Minimization Measures, there should be no adverse effect to nesting raptors.

Foraging Birds: Northern Harrier, Prairie Falcon, Sharp-Shinned Hawk, Ferruginous Hawk, Merlin, and Mountain Plover

The project would eliminate up to 58 acres of agricultural lands that provide potential foraging habitat for the northern harrier, prairie falcon, sharp-shinned hawk, ferruginous hawk, merlin, and mountain plover. Foraging habitat associated with agricultural lands is abundant in the area. Nesting habitat for these bird species would not be affected by the project.

Tricolored Blackbird

The project would affect up to 0.086 acre of freshwater emergent wetland that may be used by nesting tricolored blackbirds. Up to 58 acres of potential foraging habitat associated with agricultural lands would also be affected. The loss of a small area of potential nesting habitat would not adversely affect this species, and foraging habitat associated with agricultural lands is abundant in the area. With the preconstruction survey described under Avoidance and Minimization Measures, there should be no effect to nesting tricolored blackbirds.

Burrowing Owl

The project would eliminate up to 58 acres agricultural lands that provide potential foraging habitat and about 5 acres of potential nesting habitat for burrowing owls. Foraging habitat associated with agricultural lands is abundant in the area. With the preconstruction surveys and other measures described under Avoidance and Minimization Measures, there should be no direct effect to nesting or wintering burrowing owls. However, displacement from burrows may indirectly affect owls.

Yellow Warbler and Yellow-Breasted Chat

No impacts to yellow warblers and yellow-breasted chats are anticipated as these species are not expected to occur in the project area.

Loggerhead Shrike

The project would eliminate up to 8.3 acres of oak woodland and 53 acres of row and field crops that may be used by loggerhead shrikes for nesting or foraging. There is a substantial amount of potential nesting and foraging habitat for this species in the general area, including the 175-acre Oak Grove Park immediately east of the biological study area, White Slough Wildlife Area just north of the project area, and numerous agricultural fields. With the preconstruction survey described under Avoidance and Minimization Measures, there should be no direct effect to nesting loggerhead shrikes.

Pacific Pond Turtle

The project would result in the permanent loss of 0.021 acre of aquatic habitat suitable for Pacific pond turtles. Habitat degradation during construction activities due to noise, physical disturbance and reduced water quality would affect up to 2.16 acres of additional habitat. Increased shading due to expanded bridge decks (up to 0.856 acre combined at all bridge locations) may also adversely affect pond turtles. There is an abundance of similar aquatic habitat in the area that may be used by pond turtles. Basking areas and upland nesting areas would not be affected by the project. With the preconstruction survey and other measures described under Avoidance and Minimization Measures, there should be no adverse effect to pond turtles.

Sacramento Splittail and Longfin Smelt

The project would result in the permanent loss of 0.021 acre of aquatic habitat suitable for the Sacramento splittail and longfin smelt. Habitat degradation during construction activities due to noise, physical disturbance and reduced water quality would affect up to 2.16 acres of additional habitat. Increased shading due to expanded

bridge decks (up to 0.856 acre combined at all bridge locations) should not adversely affect these species. There is an abundance of similar aquatic habitat in the area that may be used by the Sacramento splittail and longfin smelt. With the preconstruction survey and other measures described under Avoidance and Minimization Measures, there should be no adverse effect to these special-status fish species.

Central Valley Fall/Late Fall-Run Chinook Salmon

The project would directly affect up to 141 square feet of aquatic habitat suitable for Central Valley fall/late fall-run chinook salmon. Waterways considered suitable habitat for steelhead trout and salmon include Bear Creek, Mosher Slough, and the Calaveras River. This area is also considered Essential Fish Habitat for this species. Habitat degradation may also occur during construction activities due to noise, physical disturbance, and reduced water quality; however, salmon are unlikely to be present in the study area during construction. Increased shading due to expanded bridge decks (up to 0.5 acre combined at all bridge locations) should not adversely affect this species and may improve habitat for salmonids through lowered water temperature. With the preconstruction survey and other measures described under Avoidance and Minimization Measures, there should be no adverse effect to Central Valley fall/late fall-run chinook salmon or Essential Fish Habitat.

Avoidance, Minimization, and/or Mitigation Measures

Bats

The following avoidance and minimization measures would minimize any potential impacts to special-status bats:

- All potential roost trees (20 inches diameter at breast height or greater) to be removed for project construction would be surveyed by a qualified biologist to determine if any trees can be excluded as suitable bat roosts due to the lack of suitable structural characteristics. If any trees can be excluded as bat roosts, removal of these trees would not be subject to the seasonal restrictions given below.

- All potential roost trees, including snags, within the project impact area would be removed between September 1 and October 14, or between February 16 and April Removal of trees during these periods would avoid impacts to any bats occurring in the biological study area during the normal breeding season (April 15 to August 30) and winter torpor (October 15 to February 15). Removal would occur as follows:

  - Prior to removal of the potential roost site trees, smaller trees and brush from the area near the potential roost tree would be removed to expose bats potentially using the roost tree to the sounds and vibrations of equipment. These activities would be done on at least two consecutive days before the roost tree is removed.

  - Equipment and vehicles would not be operated under potential roost trees, while nearby trees and brush are being removed, to prevent exhaust fumes from filling roost cavities.

- A preconstruction bat survey of all structures to be affected by the project would be started before project construction. If bats or bat sign are detected, the following measures would be implemented:

  - Bats would be evicted from the bridge structures from February 15 to April 1, under the direction of a qualified bat biologist. Eviction and exclusion structures would be left in place until bridge demolition is complete.

  - To avoid impacts to flying bats roosting in bridge structures, demolition would occur only after bats have been evicted from or caused to abandon the bridge roost, and only as directed by a qualified bat biologist possessing a Memorandum of Understanding with the California Department of Fish and Game.

- If active roost sites are identified in trees or structures that would be permanently affected by the project, a plan for replacement of lost roost sites would be prepared by a qualified bat biologist and approved by the Caltrans before project implementation. The plan would provide for permanent replacement of lost roost sites within permanently protected woodland or riparian habitat.

Nesting/Foraging Raptors: Cooper's Hawk and White-tailed Kite

The following avoidance and minimization measures would minimize any potential impacts to Cooper's hawks and white-tailed kites:

- Removal of nesting habitat for raptors and migratory birds would be timed to avoid the nesting season (February 1 to September 1).

- If vegetation removal and/or project construction occurs during the nesting season for raptors and migratory birds, preconstruction surveys would be done by a qualified biologist approved by Caltrans. The surveys would cover all areas of suitable nesting habitat within 500 feet of the project activity and be done within 14 days before starting project activity. The surveys would be valid for one construction season. If no active nests are found, no further mitigation would be required.

- If nesting birds are found within the areas to be affected by the project, the nest and a 100-foot buffer area (200 feet for raptors) around the nest would be protected and maintained until the biologist determines that young have fledged and/or the nests are no longer active. The buffer area would be delineated with orange snow fencing. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.

Tricolored Blackbird

The following avoidance and minimization measures would minimize any potential impacts to tricolored blackbirds:

- A preconstruction survey for nesting tricolored blackbirds would be done in the biological study area and vicinity by a qualified biologist. If nesting tricolored blackbirds are found within the biological study area, the following measure would be implemented:

    - A setback of 500 feet from colonial nesting areas would be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are

known to be occupied. Setbacks would be marked by brightly colored temporary fencing.

Burrowing Owl

The following avoidance and minimization measures would minimize any potential impacts to burrowing owls:

- A preconstruction survey for nesting burrowing owls would be done in the biological study area and vicinity by a qualified biologist. If nesting burrowing owls are found within the biological study area, the following measures would be implemented:
    - During the non-breeding season (September 1 through January 31), any burrowing owls occupying the project site should be evicted from the project site by passive relocation as described in the California Department of Fish and Game's Staff Report on Burrowing Owls (October 1995).
    - During the breeding season (February 1 through August 31), occupied burrows must not be disturbed and would be provided with a 250-feet protective buffer until and unless the Technical Advisory Committee, with the concurrence of the Permitting Agencies' representatives on the Technical Advisory Committee, or unless a qualified biologist approved by the Permitting Agencies, verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed.

Loggerhead Shrike

The following avoidance and minimization measures would minimize any potential impacts to loggerhead shrikes:

- A preconstruction survey for nesting loggerhead shrikes would be done in the biological study area and vicinity by a qualified biologist. If nesting loggerhead shrikes are found within the biological study area, the following measure would be implemented:

- A setback of 100 feet from the nesting area would be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are known to be occupied. Setbacks would be marked by brightly colored temporary fencing.

Pacific Pond Turtle

The following avoidance and minimization measures would minimize any potential impacts to Pacific pond turtles:

- A focused survey for Pacific pond turtles would be done by a qualified biologist before any disturbance of suitable aquatic habitat. If pond turtles are found, a mitigation plan would be prepared, submitted to California Department of Fish and Game for approval, and implemented before starting any project activities that may affect pond turtles. The mitigation plan would address relocating pond turtles to suitable habitat outside of project impact areas, exclusion of turtles from impact areas, and long-term enhancement of pond turtle habitat.

- If nesting areas for pond turtles are identified, a buffer area of 300 feet would be established between the nesting site (which may be immediately adjacent to wetlands or extend up to 400 feet away from wetland areas in uplands) and the wetland located near the nesting site. These buffers would be indicated by temporary fencing if construction has or will begin before nesting periods are ended (the period from egg laying to emergence of hatchlings is normally April to November).

Sacramento Splittail and Longfin Smelt

The following avoidance and minimization measures would minimize any potential impacts to the Sacramento splittail and longfin smelt:

- All areas temporarily disturbed during project construction would be restored to pre-project conditions.

- Measures consistent with the current Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/ Construction_Site_BMPs.pdf]) would be implemented to minimize effects to the Sacramento splittail and longfin smelt (e.g., siltation, etc.) during construction.

- Emergent and submergent aquatic vegetation would be retained to the maximum extent possible.

- Riparian vegetation would be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, would be cut off at the ground line and the root systems left intact.

Central Valley Fall/Late Fall-Run Chinook Salmon

The following measures would be implemented to minimize possible project effects to the Central Valley fall-run chinook salmon and salmon essential fish habitat.

- All in-water work associated with the proposed project would be carried out between July 1 and November 1.

- All areas temporarily disturbed during project construction would be restored to pre-project conditions.

- Measures consistent with the current Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/ Construction_Site_BMPs.pdf]) would be implemented to minimize effects to Central Valley fall/late fall-run Chinook salmon (e.g., siltation, etc.) during construction.

- Emergent and submergent aquatic vegetation would be retained to the maximum extent possible.

- Riparian vegetation would be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, would be cut off at the ground line and the root systems left intact.

2.3.5 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 United States Code, Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, and Caltrans as assigned, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species.

The outcome of consultation under Section 7 is a Biological Opinion or an incidental take statement. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Game is the agency responsible for implementing the California Endangered Species Act.

Section 2081 of the Fish and Game Code prohibits take of any species determined to be an endangered species or a threatened species. "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the California Department of Fish and Game.

For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Game may also

authorize impacts to the California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Affected Environment

Based on a review of agency species lists and database records (Appendix F), the Swainson's hawk, giant garter snake, delta smelt, and Central Valley steelhead trout have the potential to be found within the project impact area as indicated in Table 2.21.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is a state threatened species and a U.S. Fish and Wildlife Service Migratory Non-game Bird of Management Concern. It has no formal federal status.

Table 2.21: Rare, Threatened and Endangered Species

Common Name	Scientific Name	Status	Habitat Present/ Absent	Evaluation of Effect
Swainson's hawk	*Buteo swainsoni*	State Threatened	Present	Suitable foraging and nesting habitat occurs in the study area.
Giant garter snake	*Thamnophis gigas*	Federally Threatened State Threatened	Present	Watercourses in the study area provide suitable aquatic habitat for this species; suitable upland habitat is limited.
Delta smelt	*Hypomesus transpacificus*	Federally Threatened State Threatened	Present	Marginal spawning habitat is present in waterways within study area.
Central Valley steelhead trout	*Oncorhynchus mykiss irideus*	Federally Threatened	Present	Watercourses in the study area provide suitable habitat for this species.

Swainson's hawks are long-distance migrants, wintering mainly in South America, and returning north to breed. In California, Swainson's hawks occur in the northeastern portion of the state, in the Great Basin Province, and in the Central Valley. They return to the Central Valley in mid-March, and begin migrating south in August. Nests are built in the tops of large trees, mainly those associated with riparian habitats. These hawks are known to forage up to 10 miles from their nest sites.

Giant Garter Snake

The giant garter snake (*Thamnophis gigas*) is a federally and state listed threatened species. Its current range extends from Fresno County, north through the Central Valley to near Gridley, Butte County. The U.S. Fish and Wildlife Service recognizes

13 separate populations of giant garter snake, the closest being Caldoni Marsh (also known as the White Slough Wildlife Area) just north of the biological study area.

The giant garter snake lives near freshwater marshes, ponds, and slow-moving streams with dense aquatic vegetation. It prefers water depths of at least 1 foot. Still or slow-moving waters with pools deeper than 30 inches containing emergent vegetation and overhanging tree canopy are considered optimal habitat for this species.

Delta Smelt

The delta smelt (*Hypomesus transpacificus*) is a federal and state threatened species. The delta smelt is endemic to the upper Sacramento-San Joaquin estuary, but this species has been found as far upstream in the Sacramento River as the mouth of the Feather River and as far as Mossdale on the San Joaquin River (San Joaquin Multi-Species Habitat Conservation and Open Space Plan 2000). Adults tend to congregate in the mixing zone, where incoming saltwater mixes with outgoing freshwater. The species has a wide tolerance for salinity levels, which vary annually in the delta depending on freshwater inflows. This fish tends to concentrate in areas with salinities around 2 parts per thousand. Following winters with high precipitation, the species' distribution is normally very broad.

Spawning typically occurs from December to July in most years. Spawning occurs in fresh water, primarily in sloughs and shallow edge waters of channels in the upper delta. Young delta smelt are flushed by currents to downstream nursery areas. Delta smelt are essentially an annual species with some individuals living two years.

Central Valley Steelhead Trout

The Central Valley steelhead trout (*Oncorhynchus mykiss irideus*) is a federally threatened species; it has no state status.

The steelhead trout is an anadromous fish that spends part of its life cycle in freshwater and part in saltwater. This species spawns in small, freshwater streams where the young remain from one to several years before migrating to the ocean to feed and grow. Adults return to their natal streams to spawn and complete their life cycle. The steelhead trout requires clean, cold, well-oxygenated streams for spawning. Spawning streams must have a substrate of gravel or small cobble to provide safe incubation sites for the eggs. This species occurs throughout portions of the Sacramento and San Joaquin Rivers and their tributaries.

Environmental Consequences

Swainson's Hawk

The project would eliminate up to 58 acres of agricultural lands that provide potential foraging habitat for Swainson's hawks. The project would also affect up to 8.3 acres of valley oak woodland that provides potential nesting habitat. There are numerous nesting records for Swainson's hawks near the biological study area, although nesting in the project impact area is considered unlikely.

There is a substantial amount of potential nesting habitat for Swainson's hawks in the general vicinity, including the 175-acre Oak Grove Park immediately east of the biological study area and White Slough Wildlife Area about 3 miles north of the project area. Foraging habitat associated with agricultural lands is abundant in the area.

With implementation of the avoidance and minimization measures described below, the project should not adversely affect Swainson's hawks. Because Swainson's hawks are not likely to be directly affected by the project, no take authorization is required from the California Department of Fish and Game pursuant to the California Endangered Species Act.

Giant Garter Snake

Waterways crossing the biological study area and adjacent levees constitute potential habitat for the giant garter snake. Due to the proximity of a known population and availability of suitable habitat within the biological study area, the giant garter snake can be presumed to occur in the area. Project impacts include permanent loss of 0.08 acre of aquatic habitat due to placement of piers, 0.06 acre of shading impacts within the open median, and up to 1.47 acres of temporary habitat degradation during construction activities due to noise from pile driving, physical disturbance, and reduced water quality. Upland habitat in the biological study area is considered unsuitable for giant garter snakes due to the highly developed nature of the area. (The U.S. Fish and Wildlife Service is requiring the evaluation of ruderal upland areas within 200 feet of suitable aquatic habitat as potential habitat for giant garter snakes.)

Caltrans, as the designated federal lead agency, determined that the proposed project may affect and is likely to adversely affect the giant garter snake and initiated Section 7 consultation with the U.S. Fish and Wildlife Service regarding potential effects to the giant garter snake in February 2009. Although presence of giant garter snakes in the biological study area is presumed based on the availability of suitable habitat,

with implementation of the preconstruction survey, project work windows, and other measures described under Avoidance and Minimization Measures, there should be minimal effects from the project to giant garter snakes.

For the giant garter snake, as of March 3, 2010, the United States Fish and Wildlife Service has determined that it will append the project to the Programmatic Biological Opinion on the Effects of Small Highway Projects on the Threatened Giant Garter Snake in Butte, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo and Yuba Counties, California issued January 24, 2005. It has been determined that the avoidance, minimization, and compensatory measures included in the project would be adequate to offset potential impacts to this species and that no additional measures would be included as a result of consultation.

Because the giant garter snake is also state listed, Caltrans would need to seek authorization from the California Department of Fish and Game for incidental take of giant garter snakes during construction activities. This may be through a separate 2081 Permit or through a 2080.1 Consistency Determination.

Delta Smelt

The watercourses in the biological study area provide suitable spawning habitat for the delta smelt. There are no records of this species in the project area in the California Natural Diversity Database; however, since suitable habitat is present, these species could occur in the project area.

The biological study area lies at the eastern end of designated critical habitat for the delta smelt, and all of the waterways in the biological study area are within designated critical habitat for this species.

Project impacts include permanent loss of 0.734 acre of aquatic habitat due to placement of piers and shading as well as 1.47 acres of temporary habitat degradation during construction activities due to noise from pile driving, physical disturbance, and reduced water quality.

Caltrans, as the designated federal lead agency, determined that the proposed project may affect and is likely to adversely affect the delta smelt and initiated Section 7 consultation with the United States Fish and Wildlife Service regarding potential effects to the delta smelt in February 2009. On March 3, 2010, the United States Fish and Wildlife Service issued a Biological Opinion with appropriate avoidance and minimization measures to assure adequate protection and compensation for this

species. Although presence of the delta smelt in the biological study area is presumed based on the availability of suitable habitat, with implementation of project work windows and other measures described under Avoidance and Minimization Measures, there should be minimal effects from the project to the delta smelt.

Because the delta smelt is also state listed, Caltrans would need to seek authorization from the California Department of Fish and Game for incidental take of the delta smelt during construction activities. This may be through a separate 2081 Permit or through a 2080.1 Consistency Determination.

Central Valley Steelhead Trout

The watercourses in the biological study area provide marginally suitable migration habitat for the Central Valley steelhead trout; this area is not suitable natal rearing or spawning habitat for this species. The Calaveras River is within designated critical habitat for the Central Valley steelhead trout.

The project would directly affect 141 square feet of aquatic habitat suitable for steelhead (waterways considered suitable habitat for steelhead and salmon include Bear Creek, Mosher Slough, and the Calaveras River) and up to 2.16 acres of temporary habitat degradation during construction activities due to noise from pile driving, physical disturbance, and reduced water quality, although this species is unlikely to be present in the area during construction. Increased shading due to expanded bridge decks (up to 0.5 acre combined at all bridge locations) should not adversely affect steelhead trout and may improve habitat for salmonids through lowered water temperature.

Caltrans, as the designated federal lead agency, determined that the proposed project may affect but is not likely to adversely affect the Central Valley steelhead trout or designated critical habitat and initiated Section 7 consultation with the National Marine Fisheries Service regarding potential effects to the Central Valley steelhead trout in February 2009. Caltrans received a letter of concurrence that the project is not likely to adversely affect Central Valley steelhead trout or critical habitat in April 2009.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance, minimization, and mitigation measures have been proposed for offsetting project effects to state and federally listed spies.

As noted in the above discussions, Section 7 consultation has been completed for the giant garter snake, delta smelt, and Central Valley steelhead trout. Additional information regarding consultation on federal and state listed species is presented in Chapter 4 Comments and Coordination, Section 4.1 Public Agencies.

Swainson's Hawk

The following avoidance and minimization measures would minimize any potential impacts to Swainson's hawks:

- If possible, all trees that would be affected by project construction would be removed during the non-nesting season (between September 16 and February 28).

- At least 14 days before the start of construction, a survey for nesting Swainson's hawks would be done in the biological study area and within a 0.25-mile radius by a qualified biologist. The survey area may be decreased due to property access constraints, etc.

- If nesting Swainson's hawks are found within 0.25 mile of the biological study area, a qualified biologist would evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria would include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the construction site, and line of sight between the nest and the construction site.

- The California Department of Fish and Game would be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities.

    - If work is allowed to proceed, at a minimum, a qualified biologist would be on-site during construction activities during the nesting season to monitor nesting activity. The monitor would have the authority to stop work if it is determined the project is adversely affecting nesting activities.

Giant Garter Snake

The following "Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake Habitat" would be implemented:

- Avoid construction activities within 200 feet from the banks of giant garter snake aquatic habitat. Confine movement of heavy equipment to existing roadways to minimize habitat disturbance.

- To avoid disturbance, construction activity within the habitat is typically done between May 1 and October 1. This is the active period for giant garter snakes and direct mortality is lessened because snakes are expected to actively move and avoid danger. Between October 2 and April 30, contact the Service's Sacramento Fish and Wildlife Office to determine if additional measures are necessary to minimize and avoid take. Based on consultation with United States Fish and Wildlife Service and additional mitigation (1.163 conservation credits) proposed by Caltrans, the work window for this project is defined as July 1 to November 1.

- Confine clearing to the minimal area necessary to facilitate construction activities. Flag and designate avoided giant garter snake habitat within or adjacent to the project area as Environmentally Sensitive Areas. These areas would be avoided by all construction personnel.

- Construction personnel should receive Service-approved worker environmental awareness training. Awareness training may be given by biologists who have experience in giant garter snake natural history. This training instructs workers to recognize giant garter snakes and their habitat(s).

- Twenty-four hours before construction activities, the biological study area would be surveyed for giant garter snakes. Survey of the biological study area would be repeated if a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during construction, activities would stop until appropriate corrective measures have been completed or it has been determined that the snake would not be harmed. Report any sightings and any incidental take to the Service immediately by telephone at (916) 414-6600.

- Any dewatered habitat should remain dry for at least 15 consecutive days after April 15 and before excavating or filling of the dewatered habitat.

- After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions. Restoration work may include such activities as replanting

species removed from banks or replanting emergent vegetation in the active channel.

- Follow the conservation measures in the following table to minimize the effects of loss and disturbance of habitat on giant garter snakes. Replacement ratios are based on the acreage and on the duration of disturbance.

Summary of Giant Garter Snake Conservation Measures

Level	Effects: Duration*	Effects: Acres	Conservation Measure: Compensation
Level 1	1 season	Would not exceed 20 and temporary	Restoration
Level 2	2 seasons	Would not exceed 20 and temporary	Restoration plus 1:1 replacement
Level 3	More than 2 seasons and temporary	Would not exceed 20 and temporary	3:1 Replacement (or restoration plus 2:1 replacement)
	Permanent loss	Would not exceed 3 acres total giant garter snake habitat AND Less than 1 acre aquatic habitat	3:1 Replacement

** A season is defined as the calendar year period between May 1 and October 1, the active period for giant garter snake when death is less likely to occur.*

Giant garter snake habitat includes 2 acres of surrounding upland habitat for every 1 acre of aquatic habitat. The 2 acres of upland habitat also may be defined as 218 linear feet of bankside habitat, which incorporates adjacent uplands to a width of 200 feet from the edge of each bank. Each acre of created aquatic habitat should be supported by 2 acres of surrounding upland habitat. Compensation may include creating upland refuges and winter refuges for the giant garter snake that are above the 100-year floodplain.

The project would result in less than 20 acres of temporary impacts to giant garter snake habitat lasting one or two seasons. The project would not result in a net permanent loss of giant garter snake habitat. Due to these factors, it was determined that the project would qualify as Level 1 or Level 2 impacts, depending on project duration. Following project completion, the impacts would be mitigated by restoration or restoration plus 1:1 replacement of giant garter snake habitat.

- Following project completion, all areas temporarily disturbed during construction would be restored following the "Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat" outlined below:

    - Restore giant garter snake habitat, including minimizing impacts of project activities to the existing habitat, including using silt fencing, designating environmentally sensitive areas, using protective mats, preventing runoff, and providing worker awareness training. Measures to minimize impacts are outlined above.

    - Remove all construction debris and stockpiled materials.

    - Regrade area to preexisting contour, or a contour that would improve restoration potential of the site.

    - Replant and hydroseed the restoration area. Recommended plantings consist of a) wetland emergents, b) low-growing cover on or adjacent to banks, and c) upland plantings/hydroseeding mix to encourage use by other wildlife. Riparian plantings are not appropriate because shading may result in lack of basking sites. Native plantings are encouraged except where nonnatives would provide additional values to wildlife habitat and would not become invasive in native communities. The applicant should obtain cuttings, plantings, plugs, or seeds, from local sources wherever possible. The applicant should attempt to restore conditions similar to that of adjacent or nearby habitats.

        - Emergent wetland plants recommended for giant garter snake habitat are California bulrush (*Scirpus californicus*), cattail (*Typha* spp.), and water primrose. Additional wetland plantings may include common tule (*Scirpus acutus*), Baltic rush (*Juncus balticus*), or duckweed.

        - Cover species on or adjacent to the bank may include California blackberry (*Rubus californica*), or wild grape, along with the hydroseeding mix recommended below.

        - Upland plantings/hydroseeding mix: disturbed soil surfaces such as levee slopes should be hydroseeded to prevent erosion.

> The Service recommends a mix of at least 20-40 percent native grass seeds [such as annual fescue (*Vulpia* spp.), California brome (*Bromus carinatus*), blue wildrye (*Elymus glaucus*), and needle grass (*Nassella* spp.), 2-10 percent native forb seeds, 5 percent rose clover (*Trifolium hirtum*), and 5 percent alfalfa (*Medicago sativa*). Approximately 40-68 percent of the mixture may be non-aggressive European annual grasses [such as wild oats (*Avena sativa*), wheat (*Triticum* sp.), and barley (*Hordeum vulgare*)]. The hydroseed mix would not include aggressive non-native grasses, such as perennial ryegrass (*Lolium perenne*), cheatgrass (*Bromus tectorum*), fescue (*Festuca* spp.), giant reed (*Arundo donax*), medusa-head (*Taeniatherum caput-medusae*), or Pampas grass (*Cortaderia selloana*). No endophyte-infected grasses would be included in the mix. Mixes of 100 percent native grasses and forbs may also be used, and are encouraged.

It is likely that the project would be completed in one season, but a second season may be required. If the project is completed in one season, giant garter snake habitat replacement would not be required for temporary impacts. If the project requires a second construction season, giant garter snake habitat replacement would be required at a 1:1 ratio for 1.47 acres of temporary impacts in addition to habitat restoration. Replacement of 0.08 acre of giant garter snake habitat at a 3:1 ratio would be satisfied through purchase of 0.24 acre of credits from a U.S. Fish and Wildlife Service-approved compensation bank and would be completed before onset of the second construction season.

In addition to the above measures, the following avoidance and minimization measures would also be implemented:

- If the project would be completed in two seasons, in November, following the first construction season, all areas temporarily disturbed during construction (e.g., equipment storage and access areas) would be reseeded with erosion control seeding consisting of a sterile, non-proliferating grass species such as cereal barley or regreen. The seed mix would not include any fertilizers or chemicals.

- Measures consistent with the current Caltrans' Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf]) would be implemented to minimize effects to giant garter snake (e.g., siltation, etc.) during construction.

- A Water Pollution Control Program would be prepared by the contractor in accordance with typical provisions associated with a Regional General Permit for Construction Activities (on file with the Central Valley Regional Water Quality Control Board). The Water Pollution Control Program would contain a Spill Response Plan with instructions and procedures for reporting spills, the use and location of spill containment equipment, and the use and location of spill collection materials.

Delta Smelt

The following avoidance and minimization measures would minimize any potential impacts to the delta smelt:

- August 1 through November 1 is the seasonal work window suggested by the U.S. Fish and Wildlife Service to minimize effects to the delta smelt. Based on consultation with United States Fish and Wildlife Service, the in water work window for this project is defined as July 1 to November 1.

- All areas temporarily disturbed during project construction would be restored to pre-project conditions.

- Measures consistent with the current Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/ Construction_Site_BMPs.pdf]) would be implemented to minimize effects to delta smelt (e.g., siltation, etc.) during construction.

- Emergent and submergent aquatic vegetation would be retained to the maximum extent possible.

- Riparian vegetation would be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, would be cut off at the ground line and the root systems left intact.

- Prior to groundbreaking, Caltrans will contribute $88,080 to the Delta Smelt Conservation Fund to offset project effects to 0.716 acre of delta smelt habitat. These funds will be used to purchase conservation bank credits.

Central Valley Steelhead Trout

The following measures would be implemented to minimize possible project effects to the Central Valley steelhead trout or Central Valley steelhead trout critical habitat.

- All in-water work associated with the proposed project would be done between July 1 and November 1.

- Protective fencing will be placed to keep construction activities and vehicles from impacting riparian vegetation adjacent to the project site. Any biologically sensitive areas temporarily disturbed during construction would be reseeded with appropriate erosion control grass species.

- All areas temporarily disturbed during project construction would be restored to pre-project conditions.

- Measures consistent with the current Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/ Construction_Site_BMPs.pdf]) would be implemented to minimize effects to Central Valley steelhead trout (e.g., siltation, etc.) during construction.

- During any bridge demolition work, a tarp or other approved method would be used below the bridge to prevent debris and foreign materials from falling into waterways. The tarp would be left in place until demolition is complete.

- Emergent and submergent aquatic vegetation would be retained to the maximum extent possible.

- Riparian vegetation would be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, would be cut off at the ground line and the root systems left intact.

2.3.6 Invasive Species

Regulatory Setting

On February 3, 1999, President Bill 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." Federal Highway Administration 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 National Environmental Policy Act analysis for a proposed project.

Affected Environment

The following invasive species are present in the project impact area:

Yellow Star-thistle

The yellow star-thistle is an exotic, invasive species widely distributed in the Central Valley and adjacent foothills of California. It is currently spreading into the mountainous regions of the Sierra Nevada and Coast Ranges. The California Department of Food and Agriculture estimated this weed covers over 12 million acres in California. It is toxic to horses and is avoided by most grazers. The yellow star-thistle is a serious nuisance on recreational lands and poses a major threat to biodiversity in native ecosystems. Throughout the biological study area, this species is found in the Caltrans right-of-way.

Giant Water Reed

The giant water reed is a perennial, reed-like grass that grows up to 26 feet tall. Its creeping fibrous roots penetrate deeply into the soil. Giant water reed, a native of Mediterranean countries, has escaped cultivation in California to become established in ditches, streams, and seeps in arid and cismontane regions. It tolerates a wide variety of ecological conditions and is reported to flourish in all types of soils, from heavy clays to loose sands and gravelly soils. It can spread from the water's edge up the banks and far beyond the zone previously occupied by riparian woody vegetation.

Environmental Consequences

Project activities have the potential to cause or promote the introduction or spread of invasive species.

Avoidance, Minimization, and/or Mitigation Measures

In compliance with the Executive Order on Invasive Species, and subsequent guidance from the Federal Highway Administration, the landscape and erosion control included in the project would not use species listed as noxious weeds. In areas of particular sensitivity, extra precautions would be taken if invasive species were found in or next to the construction area. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

To control the spread of invasive species either to or from the project area, the following measures would be included in the construction contract special provisions:

- All earth-moving equipment to be used during project construction would be thoroughly cleaned before arriving on the project site.
- All seeding equipment (i.e., Hydroseed trucks) would be thoroughly rinsed at least three times before seeding work is begun.
- To avoid spreading any non-native invasive species already existing on-site to off-site areas, all equipment would be thoroughly cleaned before leaving the site.

2.4 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

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

project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act Guidelines Section 15130 describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under the California Environmental Quality Act can be found in Section 15355 of the California Environmental Quality Act Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations, Section 1508.7 of the Council on Environmental Quality regulations.

Impacts to project-specific resources have been discussed throughout this chapter. Section 2.1 Human Environment described potential environmental impacts in Land Use, Growth, Farmlands/Timberlands, Community Impacts, Utilities, and Transportation. Section 2.2 Physical Environmental addressed potential impacts to Visual/Aesthetics, Cultural Resources, Hydrology and Floodplains, Water Quality, Geology, Paleontology, Hazardous Materials, Air Quality, and Noise. Section 2.3 Biological Environment described potential impacts to Natural Communities, Wetlands, Plant Species, Animal Species, Threatened and Endangered Species, and Invasive Species.

Based on these analyses, it was determined that the following resources may be cumulatively affected by the proposed project:

- Farmlands/Timberlands
- Visual/Aesthetics
- Water Quality
- Air Quality
- Noise
- Natural Communities
- Wetlands and Other waters
- Threatened and Endangered Species

Global climate change was not included in this cumulative analysis. Climate change is by its very nature a cumulative impact and is discussed separately in Section 3.2.6.

Affected Environment

Table 2.22 explains each of the above resources and the area studied for the purpose of the cumulative impact analysis.

Table 2.22: Resource Area Considered for Cumulative Impacts Analysis

Resource	Area Studied
Farmlands/Timberlands	Interstate 5 corridor (1-mile radius) from Charter Way/Martin Luther King Jr. Boulevard (south) to Turner Road (north)
Visual/Aesthetics	Interstate 5 corridor (1-mile radius) from Charter Way/Martin Luther King Jr. Boulevard (south) to Turner Road (north)
Water Quality	San Joaquin Delta Watershed
Air Quality	San Joaquin Valley Air Pollution Control District regulatory boundary
Noise	Interstate 5 corridor (adjacent developments) from Charter Way/ Martin Luther King Jr. Boulevard (south) to Turner Road (north)
Natural Communities	The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan area
Wetlands and Other Waters	The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan area
Threatened and Endangered Species	The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan area for covered species and the San Joaquin and Sacramento Rivers and their tributaries for anadromous fish

Table 2.23 summarizes the proposed development in the Interstate 5 area that may contribute to cumulative impacts for the proposed project. This table includes recently built projects and reasonably foreseeable future projects that would potentially affect the same resources as the proposed project. Table 2.22 also identifies resources that the project may affect. This list was compiled from various sources, including the City of Stockton 2035 General Plan and local knowledge of the project area.

Table 2.23: Projects Evaluated for Cumulative Impacts Analysis

Development/Project	Development Units/Project Description
Riverwalk	113 residential units on 10 acres
Moss Garden	359 residential units on 50 acres
Windstone	66 residential units on 8 acres
Little John Creek	853 residential units on 151 acres
North Stockton Projects	2,503 residential units on 393 acres
Seabreeze I & II	249 residential units on 50 acres
Montego I & II	347 residential units on 82 acres
Mariana Estates	73 residential units on 25 acres
Riverbend and Riverbend West	584 residential units on 168 acres
Cornerstone II	186 residential units on 14 acres
Simbad Estates	28 residential units on 5 acres
Silver Springs/Gold Springs	305 residential units on 96 acres
Cannery Park	1,100 residential units on 450 acres
Westlake Villages (SPW)	2,630 residential units on 680 acres
Malisa Manor	16 residential units on 4 acres
Charlotte's Oaks	105 residential units on 15 acres
Crystal Bay	1,343 residential units on 174 acres
Dama Estates	17 residential units on 3 acres
Old Oak Estates	62 residential units on 14 acres
Calaveras Estates #3	77 residential units on 13 acres
Tuscany Cove	14 residential units on 4 acres

Development/Project	Development Units/Project Description
Tidewater Crossing	2,365 residential units on 265 acres
Mariposa Lakes	10,514 residential units on 1,510 acres
North Stockton Gateway	7,302 residential units on 2,223 acres
Sanctuary	7,070 residential units on 1,093 acres
South Stockton Six-Lane Project on State Route 99	Widening and road improvements between Arch Road and State Route 4 on State Route 99
Interstate 5/French Camp Road Interchange and Sperry Road Extension Project	Widening and road improvements at the Interstate 5/French Camp Interchange and extension of Sperry Road

Environmental Consequences

Farmlands/Timberlands

A 1-mile radius around the Interstate 5 corridor from Charter Way/Martin Luther King Jr. Boulevard (south) to Turner Road (north) was used to evaluate the potential for significant cumulative effects. The farmland impact analysis concluded that the proposed project would result in no significant impacts under California Environmental Quality Act to prime farmland, farmland of statewide importance, or regional importance. In additional, no substantial impacts to any property held under a Williamson Act contract was found. As such, the proposed project would not have cumulatively considerable impacts to farmlands.

Visual/Aesthetics

Developments next to Interstate 5 from Charter Way/Martin Luther King Jr. Boulevard (south) to Turner Road (north) were used to evaluate the potential for significant cumulative effects. The proposed project would not substantially degrade the total visual experience for the highway user along the route. The regional landscape currently consists of an urbanized environment with similar features to those proposed by the project. Additionally, the proposed improvements are added to an already-existing freeway infrastructure. Only the introduction of the Otto Drive and Gateway interchanges are new prominent features. The existing view quality would be affected by this change; however, it would not be substantially degraded by the proposed project. With mitigation measures, the proposed project would not have cumulatively considerable impacts to visual/aesthetic resources.

Water Quality

The San Joaquin watershed was used as the study area for the cumulative water quality impacts analysis. The water quality impact analysis concluded that the proposed project would not substantially affect water quality. All of the projects listed in Table 2.23 have the potential to affect water quality both on a temporary basis

during construction and on a permanent basis. The addition of impervious surfaces, which would occur from most of those projects, would increase the amount of stormwater runoff as well as introduce new sources of pollutants that, if transported to surface water bodies of water, could degrade water quality. With mitigation measures, the proposed project would not have cumulatively considerable impacts to water quality.

Air Quality

Developments within the jurisdiction of the San Joaquin Valley Air Pollution Control District were studied for cumulative impacts to air quality. For the pollutant particulate matter 10, a 1-mile radius around the Interstate 5 North Stockton Improvement Project was used as the study area. A project is not eligible for federal funds unless it is found to be in conformance with the applicable State Implementation Plan. The proposed project is included in the State Transportation Improvement Program that is considered to be in conformance with the State Implementation Plan. With mitigation measures, the proposed project would not have cumulatively considerable impacts to air quality.

Noise

Developments next to the Interstate 5 corridor from Charter Way/Martin Luther King Jr. Boulevard (south to Turner Road (north) were used to evaluate the potential for significant cumulative effects. The noise impact analysis concluded that the proposed project would result in no significant impacts, under California Environmental Quality Act, to sensitive noise receptors along Interstate 5 after mitigation was implemented. This mitigation is primarily through the construction of new soundwalls along the Interstate 5 corridor. With mitigation measures, the proposed project would not have cumulatively considerable impacts to noise.

Biological Resources

Natural Communities

The biological study area for the Interstate 5 North Stockton Corridor Improvements Project is a highly altered environment, and natural communities have been largely displaced. Over 60 percent of the study area is developed and consists of roadways and other hardscape, and 15 percent of the biological study area is composed of agricultural lands. Natural communities are limited to a small area (8.3 acres) of valley oak woodland at the northern end of the biological study area and about 5.3 acres of aquatic resources associated with rivers and sloughs.

With the avoidance and minimization measures and mitigation described in Chapter 2, the Interstate 5 North Stockton Corridor Improvements project would not contribute to significant cumulative effects to natural communities.

Wetlands

The Interstate 5 North Stockton Corridor Improvements Project has a very minor effect to wetlands (0.021 acre) that would be fully mitigated at a 1:1 ratio. The project would not substantially contribute to cumulative effects to wetlands.

Threatened/Endangered Species

Effects to threatened and endangered species resulting from the Interstate 5 North Stockton Corridor Improvements project, as described in Section 2.3.5, are relatively minor and fully mitigated in accordance with state and/or federal resource agency requirements. With mitigation measures, the project would not have cumulatively considerable impacts to wetlands.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance under the California Environmental Quality Act

The proposed project is a joint project by the Caltrans and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act and the National Environmental Policy Act. The Federal Highway Administration's responsibility for environmental review, consultation, and any other action required in accordance with the National Environmental Policy Act and other applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 United States Code 327. Caltrans is the lead agency under the California Environmental Quality Act and the National Environmental Policy Act.

One of the main differences between the National Environmental Policy Act and the California Environmental Quality Act is the way significance is determined.

Under the National Environmental Policy Act, significance is used to determine whether an Environmental Impact Statement, or some lower level of documentation, will be required. The National Environmental Policy Act requires that an Environmental Impact Statement be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under the California Environmental Quality Act may not be of sufficient magnitude to be determined significant under the National Environmental Policy Act. Under the National Environmental Policy Act, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. The National Environmental Policy Act does not require that a determination of significant impacts be stated in the environmental documents.

The California Environmental Quality Act, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and

ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible.

In addition, the California Environmental Quality Act Guidelines list a number of mandatory findings of significance, which also require the preparation of an Environmental Impact Report. There are no types of actions under the National Environmental Policy Act that parallel the findings of mandatory significance under the California Environmental Quality Act.

This chapter discusses the effects of this project and California Environmental Quality Act significance.

3.2 Discussion of Significant Impacts

3.2.1 Less than Significant Effects of the Proposed Project

The following impacts would have a less than significant effect on the environment:

- Land Use
- Growth
- Farmlands
- Traffic and Transportation
- Energy

3.2.2 Significant Environmental Effects of the Proposed Project

The following impacts would have a significant effect on the environment without mitigation:

- Air Quality
- Community Impacts
- Utilities/Emergency Services
- Visual/Aesthetics
- Water Quality and Storm Water Runoff
- Geology/Soils/Seismic/Topography
- Paleontology

- Hazardous Waste or Materials
- Biology
- Noise

Noise Under the California Environmental Quality Act

When determining whether a noise impact is significant under the California Environmental Quality Act, the baseline noise level is compared to the build noise level. Under the California Environmental Quality Act, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected and the absolute noise level.

The only time the noise abatement criteria apply under the California Environmental Quality Act is when classrooms could be affected by the proposed project. If noise levels in public or private elementary or secondary school classrooms would exceed 52 dBA $L_{eq(h)}$ as a result of a freeway project, Caltrans would provide noise abatement to reduce classroom noise to 52 dBA $L_{eq(h)}$ or less. If the classroom noise exceeds the criterion of 52 dBA $L_{eq(h)}$ before and after the project, Caltrans would provide noise abatement to reduce classroom noise to the pre-project noise levels.

Based on the Environmental Protection Agency's Protective Noise Levels (EPA 550/9-79–100, November 1978), with a combination of walls, doors, and windows, standard construction for northern California buildings built to state standards would provide approximately 15 dBA in exterior to interior noise reduction with windows open and 25 dBA or more with windows closed.

As observed at the time of the noise monitoring, all of these school uses have a form of mechanical ventilation, such as air conditioning systems, which would permit windows to remain closed for a prolonged period of time. The traffic noise modeling results indicate that four receptors representing school land uses would experience traffic noise levels under future (2035) build conditions that would exceed the interior noise abatement criterion of 52 dBA $L_{eq(h)}$ with windows closed (i.e., 78 dBA – 22 dBA = 56 dBA). The results of the soundwall analysis indicated that with implementation of the feasible soundwalls that are proposed as part of this project, these traffic noise levels would be reduced so that none of these schools would experience traffic noise levels that would cause an exceedance of the interior noise abatement criterion of 52 dBA $L_{eq(h)}$ (i.e., 71 dBA – 22 dBA = 49 dBA).

Impacts under the California Environmental Quality Act are also determined by the significance criteria of the local regulatory agency. In the City of Stockton, significant noise increases are determined by whether the project would result in a perceptible increase in traffic noise levels above those that would occur without the project. An increase of 3 dBA is considered to be barely perceptible in an outdoor environment. Therefore, for purposes of this analysis, an increase in noise levels of more than 3 dBA as a result of project implementation would constitute a significant impact.

Noise levels for the existing conditions, No-Build Alternative, and Build alternatives are presented in Table 3.1. Of the 189 receptor locations that were modeled in the project area, 81 receptors would experience an increase in traffic noise levels of greater than 3 dBA under future 2035 build traffic conditions compared to existing conditions. These affected sensitive receptor locations are identified in Table 3.1 by a "Yes" in the "Impacted Under CEQA?" column. For these affected receivers, noise mitigation measures must be considered.

As described in the noise impact analysis in Section 2.2.7 of this Environmental Impact Report, soundwalls were analyzed for each affected sensitive receptor location. The results of the modeled soundwalls are shown in Table 2.17. Based on these modeled results, construction of the following soundwalls at the indicated corresponding heights would reduce all significant increases in traffic noise levels (increases of more than 3 dBA) at the following identified affected modeled sensitive receptor locations to less-than-significant levels:

- **ASW1 and 2** (14 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R1 and R2.

- **ASW2-Ext** (14 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R3 and R4.

- **SW2, 5 and 7** (14 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R3, R4, R8, R16, R25, R26–29, R31–35, R37, R38, R179, and R182–184.

- **SW3, 4 and 6** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise

impacts for affected receptor locations R39–47, R50, R56, R58–59, and R181.

- **SW8** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor location R61–62, 64–69, 71–80, and 83.

- **SW8-Ext** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor location R81-84.

- **SW9** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor location R87–100, and 176.

- **SW9-Ext(2)** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor location R102-103.

Implementation of these soundwalls, at the recommended locations, heights, and lengths indicated in Section 2.2.7 of this Environmental Impact Report, would reduce all significant increases in traffic noise levels associated with implementation of the proposed project to less-than-significant levels.

Table 3.1: Predicted Traffic Noise Levels (dBA Leq)

Rec No.	Location	Type of Land Use	Existing Noise Level	Future (2035) No Project Noise Levels	Future (2035) Plus Project Noise Levels	Change from Existing Level	Impacted Under CEQA?
R1	Oak Grove Regional Park	Recreation	67	70	71	4	Yes
R2	Oak Grove Regional Park	Recreation	65	67	69	4	Yes
R3	Black Butte Circle	Residential	73	76	77	4	Yes
R4	Black Butte Circle	Residential	68	71	72	4	Yes
R5	Black Butte Circle	Residential	68	70	71	3	No
R6	Black Butte Circle	Residential	69	70	72	3	No
R7	Black Butte Circle	Residential	67	68	70	3	No
R8	Black Butte Circle	Residential	69	71	73	4	Yes
R9	Black Butte Circle	Residential	68	69	71	3	No
R10	Black Butte Circle	Residential	68	69	70	2	No
R11	Black Butte Circle	Residential	66	67	69	3	No
R12	Windemere Way	Residential	64	65	67	3	No
R13	Northridge Way	Residential	65	66	68	3	No
R14	Northridge Way	Residential	66	67	69	3	No
R15	Northridge Way	Residential	60	61	63	3	No
R16	Northridge Way	Residential	60	61	64	4	Yes
R17	Curlew Street	Residential	67	68	69	2	No
R18	Twin Creeks Avenue	Residential	68	70	70	2	No
R19	Twin Creeks Avenue	Residential	68	69	69	1	No
R20	Twin Creeks Avenue	Residential	69	71	70	1	No
R21	Twin Creeks Avenue	Residential	64	65	65	1	No
R22	Twin Creeks Avenue	Residential	66	67	69	3	No
R23	Twin Creeks Avenue	Residential	68	69	69	1	No
R24	Twin Creeks Avenue	Residential	65	66	66	1	No
R25	Otto Drive	Residential	62	64	68	6	Yes
R26	Kelley Drive	Residential	65	67	69	4	Yes
R27	Kelley Drive	Residential	65	68	70	5	Yes
R28	Kelley Drive	Residential	56	59	61	5	Yes
R29	Kelley Drive	Residential	58	60	62	4	Yes
R30	Darby Court	Residential	67	69	70	3	No
R31	Kelley Drive	Residential	76	79	80	4	Yes
R32	W Creek Drive	Residential	70	73	74	4	Yes
R33	Charleston Court	Residential	73	76	78	5	Yes
R34	W Creek Drive	Residential	61	64	65	4	Yes
R35	Kelley Drive	Residential	70	73	74	4	Yes
R36	Roanoke Court	Residential	74	76	77	3	No
R37	Kelley Drive	Church	75	78	80	5	Yes
R38	Kelley Drive	Church	74	77	78	4	Yes
R39	Blackswain Place	Residential	66	69	70	4	Yes
R40	Blackswain Place	Residential	59	62	64	5	Yes
R41	Blackswain Place	Residential	61	67	65	4	Yes
R42	Blackswain Place	Residential	69	71	73	4	Yes
R43	Mariners Drive	Residential	64	67	68	4	Yes
R44	Mariners Drive	Residential	67	70	72	5	Yes
R45	White Water Lane	Residential	60	62	64	4	Yes
R46	Sturgeon Road	Residential	68	71	72	4	Yes
R47	Sturgeon Road	Residential	62	64	66	4	Yes
R48	Mariners Drive	Residential	73	76	76	3	No

Rec No.	Location	Type of Land Use	Existing Noise Level	Future (2035) No Project Noise Levels	Future (2035) Plus Project Noise Levels	Change from Existing Level	Impacted Under CEQA?
R49	Mariners Drive	Residential	66	68	69	3	No
R50	Mariners Drive	Residential	70	73	74	4	Yes
R51	Mariners Drive	Residential	75	78	78	3	No
R52	Mariners Drive	Residential	69	72	72	3	No
R53	Mariners Drive	Residential	63	66	66	3	No
R54	Mariners Drive	Residential	70	72	72	2	No
R55	Mariners Drive	Residential	70	73	73	3	No
R56	Mariners Drive	Residential	75	78	79	4	Yes
R57	Mariners Drive	Residential	75	78	78	3	No
R58	Mariners Drive	Hotel	67	70	71	4	Yes
R59	Mariners Drive	Residential	64	69	68	4	Yes
R60	Mariners Drive	Residential	65	67	68	3	No
R61	Kelley Drive	Residential	64	69	69	5	Yes
R62	Karlsburg Circle	Residential	69	74	75	6	Yes
R63	Karlsburg Circle	Residential	59	64	64	5	Yes
R64	Karlsburg Circle	Residential	74	79	80	6	Yes
R65	Kelley Drive	Residential	64	69	69	5	Yes
R66	Kelley Drive	Residential	72	77	78	6	Yes
R67	Warwick Court	Residential	66	72	72	6	Yes
R68	Kelley Court	Residential	68	74	74	6	Yes
R69	Kelley Drive	Residential	65	72	71	6	Yes
R70	Plymouth Court	Residential	57	63	64	7	Yes
R71	Plymouth Court	Residential	68	74	75	7	Yes
R72	Plymouth Road	Residential	61	68	69	8	Yes
R73	Garrison Court	Residential	70	77	77	7	Yes
R74	Plymouth Road	Residential	61	68	69	8	Yes
R75	Plymouth Road	Residential	65	72	74	9	Yes
R76	Plymouth Road	Residential	66	73	75	9	Yes
R77	Milroy Court	Residential	69	76	79	10	Yes
R78	Plymouth Road	Residential	63	70	70	7	Yes
R79	Cushing Court	Residential	70	77	77	7	Yes
R80	Plymouth Road	Residential	62	69	69	7	Yes
R81	Plymouth Road	Residential	51	57	58	7	Yes
R82	Plymouth Road	Residential	47	53	54	7	Yes
R83	Plymouth Road	Residential	69	75	75	6	Yes
R84	Plymouth Road	Residential	58	64	65	7	Yes
R85	Shoreline Drive	Residential	55	61	61	6	Yes
R86	Shoreline Drive	Residential	56	62	62	6	Yes
R87	Shoreline Drive	Residential	64	70	70	6	Yes
R88	Shoreline Drive	Residential	65	71	72	7	Yes
R89	Shoreline Drive	Residential	63	69	70	7	Yes
R90	Shoreline Drive	Residential	70	76	76	6	Yes
R91	Shoreline Drive	Residential	66	72	72	6	Yes
R92	Allegheny Place	Residential	66	73	72	6	Yes
R93	Five Mile Drive	Residential	59	66	66	7	Yes
R94	Allegheny Place	Residential	65	72	72	7	Yes
R95	Allegheny Place	Residential	61	68	70	9	Yes
R96	Annapolis Quay Circle	Residential	60	67	67	7	Yes
R97	Allegheny Place	Residential	68	75	78	10	Yes
R98	Allegheny Place	Residential	67	74	77	10	Yes
R99	Butler Court	Residential	58	65	66	8	Yes
R100	Blue Ridge Circle	Residential	65	72	73	8	Yes
R101	Blue Ridge Circle	Residential	53	59	60	7	Yes

Rec No.	Location	Type of Land Use	Existing Noise Level	Future (2035) No Project Noise Levels	Future (2035) Plus Project Noise Levels	Change from Existing Level	Impacted Under CEQA?
R102	Blue Ridge Circle	Residential	56	62	63	7	Yes
R103	Blue Ridge Circle	Residential	58	64	65	7	Yes
R104	Plymouth Road	Residential	62	63	64	2	No
R105	Plymouth Road	Residential	59	59	60	1	No
R106	Prentiss Court	Residential	61	61	62	1	No
R107	Fisher Court	Residential	63	63	64	1	No
R108	Fisher Court	Residential	64	65	64	0	No
R109	W Swain Road	Residential	64	64	65	1	No
R110	W Swain Road	Residential	63	64	64	1	No
R111	Canyon Creek Drive	Residential	63	64	66	3	No
R112	Brush Creek Drive	Residential	69	70	72	3	No
R113	Brush Creek Drive	Residential	68	70	71	3	No
R114	Brush Creek Drive	Residential	63	64	65	2	No
R115	Brush Creek Drive	Residential	69	71	72	3	No
R116	Brush Creek Drive	Residential	69	70	71	2	No
R117	Grizzly Hollow Way	Residential	61	63	63	2	No
R118	Quail Lake Drive	Residential	74	75	76	2	No
R119	Quail Lake Drive	Residential	62	63	64	2	No
R120	Lost Creek Court	Residential	71	73	74	3	No
R121	Rock Creek Court	Residential	67	69	69	2	No
R122	Twin Lakes Court	Residential	62	63	64	2	No
R123	Twin Lakes Court	Residential	68	70	70	2	No
R124	Gingsby Place	Residential	61	62	63	2	No
R125	Morgan Place	Residential	66	67	67	1	No
R126	Morgan Place	Residential	67	69	70	3	No
R127	Morgan Place	Residential	65	66	68	3	No
R128	Morgan Place	Residential	62	63	64	2	No
R129	Morgan Place	Residential	64	65	66	2	No
R130	Morgan Place	Residential	62	64	65	3	No
R131	Feather River Drive	Residential	69	71	71	2	No
R132	Feather River Drive	Residential	62	64	65	3	No
R133	Feather River Drive	Residential	69	71	72	3	No
R134	Feather River Drive	Residential	68	69	71	3	No
R135	W March Lane	Hotel	58	59	60	2	No
R136	W March Lane	Hotel	63	64	63	0	No
R137	Grand Canal Boulevard	Residential	65	66	65	0	No
R138	Lanza Lane	Residential	68	69	68	0	No
R139	Lanza Lane	Residential	70	71	72	2	No
R140	Michaelangelo Drive	Residential	65	66	66	1	No
R141	Plymouth Road	Residential	63	64	64	1	No
R142	Towery Court	Recreation	62	62	62	0	No
R143	Plymouth Road	Residential	61	62	62	1	No
R144	Plymouth Road	Residential	58	58	59	1	No
R145	Plymouth Road	Residential	62	63	63	1	No
R146	De Ovan Avenue	Residential	58	59	59	1	No
R147	Plymouth Road	Residential	65	66	66	1	No
R148	Inman Avenue	Residential	61	62	62	1	No
R149	Plymouth Road	Residential	74	74	75	1	No
R150	W Euclid Avenue	Residential	63	63	64	1	No
R151	Plymouth Road	Residential	66	67	67	1	No
R152	Michigan Avenue	Residential	59	60	61	2	No
R153	Oxford Way	Residential	60	62	61	1	No

Rec No.	Location	Type of Land Use	Existing Noise Level	Future (2035) No Project Noise Levels	Future (2035) Plus Project Noise Levels	Change from Existing Level	Impacted Under CEQA?
R154	Plymouth Road	Residential	65	68	66	1	No
R155	Plymouth Road	Residential	68	69	69	1	No
R156	Plymouth Road	Residential	66	67	67	1	No
R157	W March Lane	Hotel	55	56	56	1	No
R158	Feather River Drive	Residential	69	70	69	0	No
R159	Feather River Drive	School	67	68	68	1	No
R160	Feather River Drive	Residential	65	66	66	1	No
R161	Calariva Drive	Residential	64	64	65	1	No
R162	Calariva Drive	Residential	62	62	62	0	No
R163	Stiles Place	Residential	59	59	60	1	No
R164	Del Rio Drive	Residential	61	61	62	1	No
R165	Del Rio Drive	Residential	57	57	58	1	No
R166	Inman Avenue	Residential	67	68	67	0	No
R167	Telegraph Avenue	Residential	63	64	64	1	No
R168	W Euclid Avenue	Residential	71	70	70	-1	No
R169	Princeton Avenue	Residential	63	63	64	1	No
R170	Michigan Avenue	School	63	63	64	1	No
R171	Bristol Avenue	Residential	65	66	67	2	No
R172	Bristol Avenue	Residential	62	63	63	1	No
R173	Warren Avenue	Residential	66	67	67	1	No
R174	Country Club Boulevard	Residential	63	65	65	2	No
R175	Fontana Avenue	Residential	70	71	71	1	No
R176	Shoreline Drive	School	72	77	78	6	Yes
R177	Christa McAuliffe Middle School	School	68	69	72	4	Yes
R178	Christa McAuliffe Middle School	School	66	67	69	3	No
R179	Kelley Drive	Residential	68	71	72	4	Yes
R180	Salmon Point	Residential	61	63	64	3	No
R181	Twin Creeks Avenue	Residential	58	60	63	5	Yes
R182	Northridge Way	Residential	60	61	66	6	Yes
R183	Northridge Way	Residential	55	56	61	6	Yes
R184	Northridge Way	Residential	56	57	61	5	Yes
R185	Gingsby Place	Residential	58	59	59	1	No
R186	Gingsby Place	Recreation	60	61	62	2	No
R187	Sheridan Way	Residential	60	61	62	2	No
R188	Lanza Lane	Residential	65	66	66	1	No
R189	North of Eight Mile Road	Future Residential	74	75	76	2	No

Source: LSA Associates, Inc. 2009.
dBA = A-weighted decibel
L_{eq} = Equivalent Sound Level

Avoidance, Minimization, and Mitigation

Implementation of the following soundwalls, at the recommended locations, heights, and lengths indicated in Table 2.18 and Figures 2.2a through 2.2i of this Environmental Impact Report, would reduce all significant increases in traffic noise levels associated with implementation of the proposed project to less-than-significant levels.

- **ASW1 and 2** (14 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R1 and R2.

- **ASW2-Ext** (14 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R3 and R4.

- **SW2, 5 and 7** (14 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R3, R4, R8, R16, R25, R26–29, R31–35, R37, R38, R179, and R182–184.

- **SW3, 4 and 6** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R39–47, R50, R56, R58–59, and R181.

- **SW8** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R61–62, 64–69, 71–80, and 83.

- **SW8-Ext** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R81-R84.

- **SW9** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R87–100, and 176.

- **SW9-Ext(2)** (12 feet) – Inclusion of these soundwalls would be required to reduce the California Environmental Quality Act-identified traffic noise impacts for affected receptor locations R102-103.

3.2.3 Unavoidable Significant Environmental Effects

None.

3.2.4 Significant Irreversible Environmental Changes

None.

3.2.5 Growth-Inducing Impacts

Growth-inducing impacts are addressed under Growth in Section 2.1.2.

3.2.6 Climate Change Under the California Environmental Quality Act

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 emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of greenhouse gas related to human activity that include carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1, 1, 1, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493, California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board to develop and implement regulations to reduce automobile and light-truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, to enact the standards California needed a waiver from the U.S. Environmental Protection Agency. The waiver was denied by U.S. Environmental Protection Agency 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 U.S. Environmental Protection Agency will reconsider its decision regarding the denial of

California's waiver. On May 18, 2009, President Barack Obama announced the enactment of a 35.5-mile-per-gallon fuel economy standard for automobiles and light-duty trucks that will take effect in 2012. This standard is the same standard that was proposed by California, and so the California waiver request has been shelved.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this executive order is to reduce California's greenhouse gas 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 Assembly Bill 32, the Global Warming Solutions Act of 2006. Assembly Bill 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that California Air Resources Board 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 Assembly Bill 32, including the recommendations made by the state's Climate Action Team.

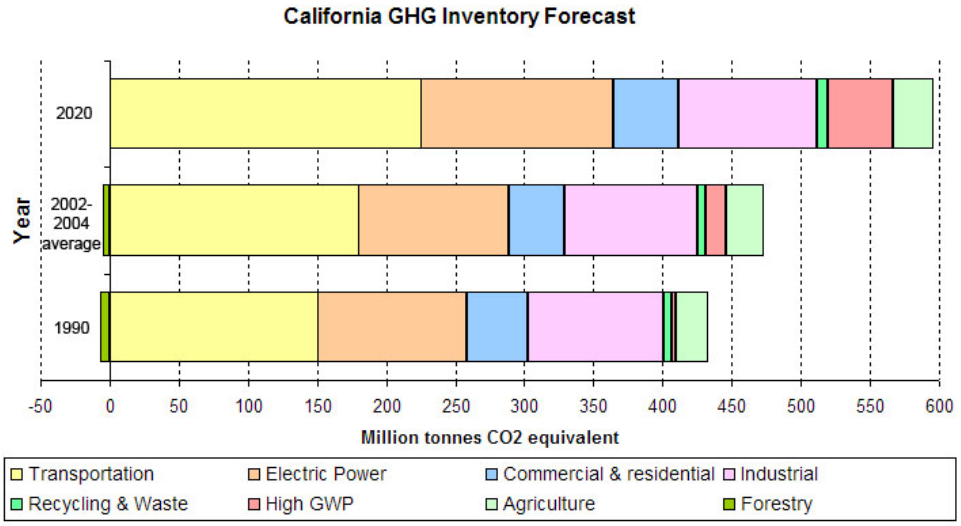
With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and greenhouse gas reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing greenhouse gas emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency to regulate greenhouse gas as a pollutant under the Clean Air Act (Massachusetts vs. Environmental Protection Agency et al., 549 United States 497 (2007). The court ruled that greenhouse gas does fit within the Clean Air Act's definition of a pollutant, and that the U.S. Environmental Protection Agency does have the authority to regulate greenhouse gas. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

According to Recommendations by the Association of Environmental Professionals on How to Analyze greenhouse gas Emissions and Global Climate change in California Environmental Quality Act Documents (March 5, 2007), an individual project does not generate enough greenhouse gas 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 greenhouse gas. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See California Environmental Quality Act 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, California Air Resources Board recently released an updated version of the greenhouse gas inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total greenhouse gas emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.



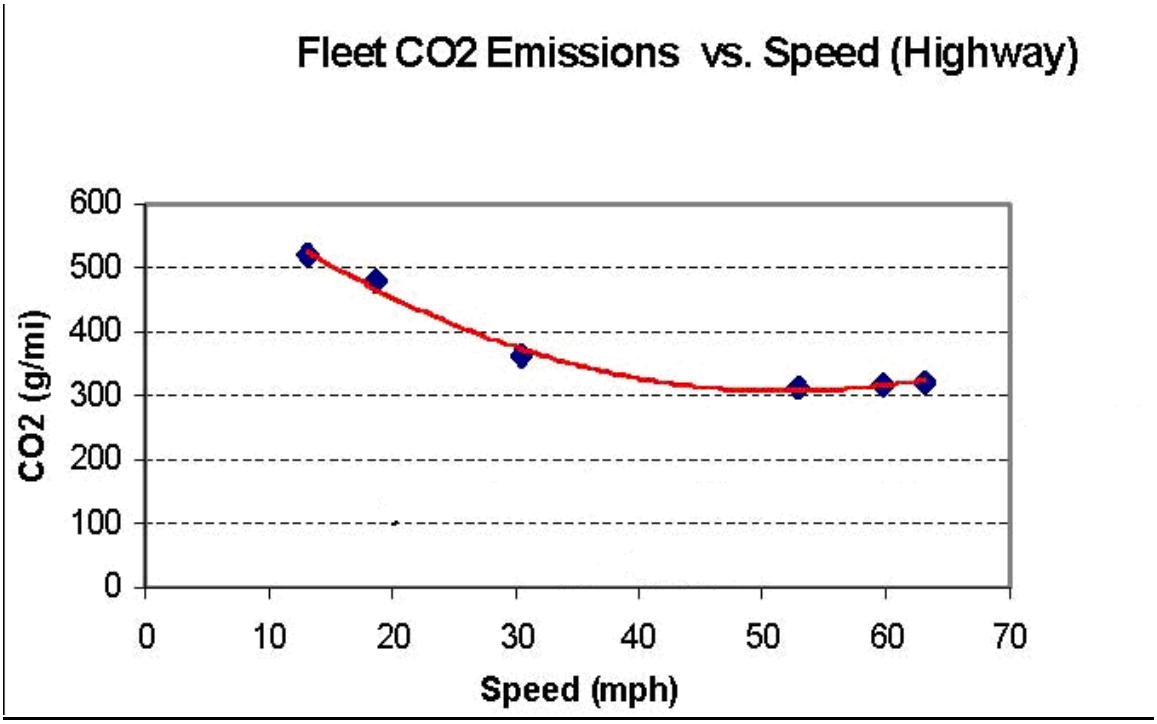
Source : http://www.arb.ca.gov/cc/inventory/data/forecast.htm

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

Project Analysis

According to *Recommendations by the Association of Environmental Professionals on How to Analyze Greenhouse Gas Emissions and Global Climate Change in California Environmental Quality Act Documents*, an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases.

One of the main strategies in Caltrans' Climate Action Program to reduce greenhouse gas 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 (0-25 miles per hour) and speeds over 55 miles per hour. Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in greenhouse gas emissions.



Assembly Bill 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as Air Resources Board works to implement Assembly Bill 1493 and help achieve the targets set forth in Assembly Bill 32. Many of the strategies Caltrans is using to help

meet the targets in Assembly Bill 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $107 billion in transportation funding during the next decade.

As shown on the figure below, the California Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in greenhouse gas emissions. The California Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The California 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.

As part of the Caltrans Climate Action Program, Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans 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. However, it is important to note that the control of the fuel economy standards is held by the U.S. Environmental Protection Agency and Air Resources Board.

Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California at Davis. The table provided below summarizes Caltrans' and statewide efforts that Caltrans is implementing to reduce greenhouse gas emissions. For more detailed information about each strategy, please see Climate Action Program at Caltrans (December 2006).

The traffic analysis prepared for the project identified that several segments currently operate at level of service "E" or "F." The results of the 2035 traffic analysis indicate that, without any improvements, operations would worsen substantially on Interstate 5, with the total number of freeway segments operating at level of service "E" and "F" increasing from six segments under existing conditions to 19 segments under projected future conditions.

For the mainline build alternatives, the 2035 traffic analysis indicates that levels of service improve significantly when compared with the no-build alternative. Levels of service in the afternoon peak hour period improve in the northbound direction for Alternative 1 (mixed-flow). For Alternative 2 (high-occupancy vehicle) in the afternoon peak hour, the mixed-flow lanes show some improvement, while traffic analysis shows the inside high-occupancy vehicle lane would further improve level of service.

Strategy	Program	Partnership	Method/Process	Estimated Carbon Dioxide Savings (MMT) 2010	2020
Smart Land Use	IGR	Lead: Caltrans Partner: Local Governments	Review and seek to mitigate development proposals	Not Estimated	**Not Estimated**
	Planning Grants	Lead: Caltrans Partner: Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	**Not Estimated**
	Regional Plans and Blueprint Planning	Lead: Regional Agencies Partner: Caltrans	Regional plans and application process	0.975	**7.8**
Operational Improvements and Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Lead: Caltrans Partner: Regions	State ITS; Congestion Management Plan	.007	**2.17**
Mainstream Energy and greenhouse gas into Plans and Projects	Office of Policy Analysis & Research; Division of Env. Analysis	Interdepartmental effort	Policy establishment, guidelines, technical assistance	Not Estimated	**Not Estimated**
Educational and Information Program	Office of Policy Analysis & Research	Partner: Interdepartmental, CalEPA, California Air Resources Board, CEC	Analytical report, data collection, publication, workshops, outreach	Not Estimated	**Not Estimated**
Fleet Greening and Fuel Diversification	Division of Equipment	Department of General Services	Fleet Replacement B20 B100	0.0045	**0.0065** **0.45** **.0225**
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team	Energy Conservation Opportunities	0.117	**.34**
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	**3.6**
Goods Movement	Office of Goods Movement	CalEPA, California Air Resources Board, BT&H, MPOs	Goods Movement Action Plan	Not Estimated	**Not Estimated**
Total				2.72	18.67

MMT: Million Metric Tons

The proposed project would relieve traffic congestion, improve the flow of traffic, and increase capacity by doing the following:

- Increase capacity by widening the mainline from six lanes to eight lanes to reduce delay (congestion)
- Improve traffic operations
- Add auxiliary lanes
- Reconfigure ramps

Quantitative Analysis

Emission factors 2007 was used to analyze to carbon dioxide emissions related to the No-Build Alternative and the two build (mixed-flow and high-occupancy vehicle lane) alternatives (see Table 3.2). The analysis used traffic data, including updated vehicle miles traveled and speeds related to 2035 build-out of the City of Stockton General Plan. The emission factors model runs show that the carbon dioxide emissions from both of the build alternatives are less than the No-Build Alternative.

Table 3.2: 2035 Regional Carbon Dioxide Emissions Summary (tons per day)

	No-Build	Mixed-Flow	High-Occupancy Vehicle
Carbon Dioxide	9.56	9.40	9.37

Source: LSA Associates, Inc., 2008.

California Environmental Quality Act Conclusion

Since the emission factors model shows that the carbon dioxide emissions from the build alternatives are less than the no-build and the baseline (California Environmental Quality Act Guideline 15064.7-baseline is the physical conditions that exist at the time the notice of preparation is published), there is substantial evidence in the record to conclude that the project's contribution to climate change is not cumulatively considerable and the project has a less than significant environmental effect on climate change.

The project is included in the San Joaquin County Regional Transportation Plan and the Federal Transportation Improvement Program. Associated conformity analysis

was adopted by the San Joaquin Council of Governments and approved by the Federal Highway Administration and the Federal Transit Administration.

Caltrans recognizes the concern that carbon dioxide emissions have an effect on for climate change. However, modeling and gauging the impacts associated with an increase in greenhouse gas emission levels, including carbon dioxide, at the project level is not currently possible. No federal, state, or regional regulatory agency has provided methodology or criteria for greenhouse gas emissions and climate change impact analysis. Therefore, Caltrans is unable to provide a scientific- or regulatory-based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, 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), 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, Natural 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
- Range of uncertainty in selected sea level rise projections
- 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
- 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 system and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

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 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.

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

Avoidance, Minimization, and/or Mitigation Measures

Caltrans continues to be actively involved on the Governor's Climate Action Team as the Air Resources Board works to implement Assembly Bills 1493 and 32. As part of the Climate Action Program at Caltrans (December 2006), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, 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 and light and heavy-duty trucks. However, it is important to note that control of fuel economy standards is held by the U.S. Environmental Protection Agency and the Air Resources Board. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California at Davis.

3.3 Mitigation Measures for Significant Impacts under the California Environmental Quality Act

Mitigation Measures for Community Impacts

The Caltrans Relocation Assistance Program would reduce impacts as benefits are provided to relocate residences and businesses. A range of benefits is available; some include finding comparable replacement housing and paying for costs associated with moving. Details are identified at the time property is acquired.

With implementation of the Caltrans Relocation Assistance Program, no substantial impact to persons, businesses, or property access would result from construction of the project. All parties would be treated in a fair and equal manner as prescribed by Caltrans policy, the Federal Uniform Relocations Assistance and Real property Acquisitions Policies Act of 1970 (as amended), Title 49-Code of Federal Regulations-Part 24, and Title VI of the Civil Rights Act (42 US Code 2000d, et seq.). See Caltrans' Title VI Policy Statement in Appendix C.

Mitigation Measures for Utilities/Emergency Services

For a discussion of mitigation measures for Utilities/Emergency Services, see Section 2.1.5.

Mitigation Measures for Visual/Aesthetics

For a discussion of mitigation measures for Visual/Aesthetics, see Section 2.1.7.

Mitigation Measures for Cultural Resources

For a discussion of mitigation measures for Cultural Resources, see Section 2.1.8.

Mitigation Measures for Water Quality and Stormwater Runoff

For a discussion of mitigation measures for Water Quality and Storm Water Runoff, see Section 2.2.2.

Mitigation Measures for Geology/Soils/Seismic/Topography

For a discussion of mitigation measures for Geology/Soils/Seismic/Topography, see Section 2.2.3.

Mitigation Measures for Paleontology

For a discussion of mitigation measures for Paleontology, see Section 2.2.4.

Mitigation Measures for Hazardous Waste and Materials

For a discussion of mitigation measures for Hazardous Waste and Materials, see Section 2.2.5.

Mitigation Measures for Air Quality

For a discussion of mitigation measures for Air Quality, see Section 2.2.6.

Mitigation Measures for Noise and Vibration

For a discussion of mitigation measures for Noise and Vibration, see Section 2.2.7.

Mitigation Measures for Biology

For a discussion of mitigation measures for Biology, see Section 2.3.

Chapter 4 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, public meetings, and informal communication with the public, businesses, and interested parties as studies were being conducted.

On December 23, 2009, the 45-day public review period was initiated at the State Clearinghouse. Officially, the review period ended on February 8, 2010. All comment letters received are included in the Final Environmental Impact Report. Responses are provided for each comment letter.

On October 14, 2009, Caltrans held a public hearing and received testimony from members of the public (one member from the public provided public testimony). Comments expressed during the hearing (i.e., meeting minutes) are included in the Final Environmental Impact Report, and responses are provided.

Responses to the circulated document and public hearing are shown in this section, which has been added since the draft was circulated. Elsewhere throughout this document, a line in the margin indicates where changes have been made since the draft document.

This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

4.1 Public Agencies

San Joaquin County-Public Works Department

Much of the northwest side of the project area is in San Joaquin County's jurisdiction. The county has consistently provided input to ensure there are minimal impacts to local residents and business owners. For those roadways under county jurisdiction, coordination of traffic staging, temporary closures and detours would be provided during construction of improvements.

City of Stockton-Public Works Department

Most of the project sits in the City of Stockton's jurisdiction, and the entire project is included in the city's General Plan Study area. The city has provided input to ensure minimal impacts to residents and business owners. The city has also been actively involved to ensure that any changes would not affect its commitments to the local community.

California Regional Water Quality Control Board

The Regional Water Quality Control Board was consulted for concurrence on the revegetation plan. Consultation continues as the 401 Permit is acquired later in the project development process.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers was consulted for concurrence on the jurisdictional waters determination; concurrence was received on August 7, 2009. Consultation continues as the 404 Permit is acquired later in the project development process.

U.S. Fish and Wildlife Service

Caltrans coordinated with the Service to determine federally listed threatened and endangered species in the project area and initiated consultation with the Service under Section 7 of the Endangered Species Act for potential effects to federal listed species. Details on Caltrans' determinations of potential effects to listed species and the status of consultation are presented in Section 2.3.5.

California Department of Fish and Game

Caltrans coordinated with the Department of Fish and Game to determine state listed special-status species in the project area and to participate in field surveys. Consultation continues as the 1602 Permit is acquired later in the project development process. A Section 2081 Incidental Take Permit or Section 2080.1 Consistency Determination for Threatened and Endangered Species will be needed.

National Marine Fisheries Service

The National Marine Fisheries Service was consulted for potential impacts to special-status species, specifically fish passage. Caltrans initiated consultation with the National Marine Fisheries Service under Section 7 of the Endangered Species Act for potential effects to federal listed species. Details on Caltrans' determinations of potential effects to listed species and the status of consultation are presented in Section 2.3.5.

San Joaquin Council of Governments – Model Coordination Committee

Caltrans coordinates with this committee for air quality conformity. The following committee members provided comment: U.S. Environmental Protection Agency, Federal Highway Administration, Caltrans Headquarters, San Joaquin Council of Governments, and San Joaquin Valley Air Pollution Control District.

4.2 Public Outreach

Historical Resources Consultation

On January 2 and March 17, 2008, letters describing the project and maps showing the Area of Potential Effects were sent to the Native American representatives on the contact list provided by the Native American Heritage Commission. The letters requested any information or concerns they might have regarding the proposed project.

On January 7, 2008, a response was received from Katherine Perez of the Northern Valley Yokut Tribe. She recommended that a tribe member and a qualified archaeologist monitor ground-disturbing construction due to sensitivity of the proposed project, especially near the sloughs.

No other responses to the letters were received. Two weeks after the letters were sent, follow-up contacts were made.

- Matthew Franklin, Chairperson, Ione Band of Miwok Indians: On February 13, 2008, the Ione Band of Miwok Indians receptionist said that Ms. Billie Blue Elliston is the current head of the Heritage Cultural Committee and should be contacted in lieu of Mr. Franklin.

- Heritage Cultural Committee, Ione Band of Miwok Indians: On February 13, 2008, a follow-up email was sent to Ms. Billie Blue Elliston, describing the project and requesting Ms. Elliston to respond with any information or concerns regarding cultural resources within the proposed project. No response has been received to date.

On December 17, 2007, a letter describing the project and maps showing the proposed project were sent to the Native American Historical Commission in Sacramento asking the commission to review its Sacred Lands File for any Native American cultural resources that might be affected by the proposed project. Also requested were the names of Native Americans who might have information or

concerns about the proposed project. Ms. Debbie Pilas-Treadway, Environmental Specialist III, replied in a fax dated December 28, 2007, that a review of the Sacred Lands File did not indicate any "Native American cultural resources in the immediate project area." Ms. Pilas-Treadway also provided a list of Native American contacts.

On March 3, 2008, another letter was sent to the Native American Historical Commission describing the project, with maps showing an adjusted proposed project that included the additional two miles south to Charter Way. Ms. Pilas-Treadway replied in a fax dated March 13, 2008 that a review of the Sacred Lands File did not indicate any "Native American cultural resources in the immediate project area." Ms. Pilas-Treadway also provided a list of Native American contacts.

On December 17, 2007 and March 3, 2008, letters describing the project and maps showing the proposed project were sent to Mr. Tod Ruhstaller, Director of the Haggin Museum, and Ms. Debbie Scott, Collections Manager of the San Joaquin County Historical Society & Museum, requesting any information or concerns they might have regarding the proposed project. No responses to the letters were received. Follow-up telephone calls were made:

- Tod Ruhstaller, Director, Haggin Museum: On February 13, 2008, a voice mail message was left asking Mr. Ruhstaller to respond with any information or concerns regarding cultural resources within the proposed project. No response has been received to date.

- Debbie Scott, Collections Manager, San Joaquin County Historical Society & Museum: During a February 13, 2008, telephone call, Ms. Scott stated she had reviewed the letter and maps pertaining to the project and had no concerns.

First Public Meeting

The first public meeting was held on January 23, 2008 to inform all interested parties about the project. The purpose of the meeting was to present the project alternatives and obtain input from local agencies, businesses, organizations, and the public.

Approximately 71 people signed in at the door. The meeting was held as an open house. This format allowed members of the public to hear a detailed overview of the project by the project manager, review maps and other exhibits, and ask questions of and direct comments to members of the project team. Below is a brief summary of the written comments and questions received at the public information meeting.

- What considerations are there for future projected traffic increases, and what plans are there to increase regional transit options? A soundwall is needed to reduce road noise within Oak Grove Regional Park.

- Building a soundwall on the east side of the interstate is imperative and should be curved inward toward Quail Lakes.

- Regarding the new interchange at Otto Drive, soundwalls are a must, additional lanes are needed from Estate Drive eastward, and consideration should be given to a combination of elevated Interstate 5 and sub-level Otto Drive to eliminate the extremes of either option.

- The northbound soundwall should start an additional 300 meters down the northbound on-ramp or be angled with less height, so that the noise levels will not increase on the east side of the freeway.

- This project should be completed as soon as possible! Soundwalls are a must north to Eight Mile Road, Loop exits at Eight Mile Road and North Gateway are not desirable.

- The soundwall should be completed from the Monte Diablo on-ramp to the Country Club off-ramp as originally envisioned.

Below is a brief summary of the comments that were dictated to a stenographer at the public information meeting:

- Property owners have been told in the past that if the lanes are going to be widened, the area would be eligible for soundwall funding and that soundwalls would be built. Concern was expressed that a soundwall would be built along the southbound lane only, which would create noise bouncing back into the Quail Lakes neighborhood. A soundwall should be built from March Lane up to Benjamin Holt and the canal at Ben Holt.

- Concern was expressed that although soundwalls are planned on the east side of the freeway that businesses in the Quail Lakes area would object to the lack of visibility.

- An Otto Drive interchange could promote crime in the Otto Drive area.

- Funding should be assured for not only the highway widening but for the soundwalls, because noise levels are likely to otherwise increase and result in a neighborhood with decreased property values.

- A mass transportation system such as rail is needed. An interchange at Otto Drive is not needed. There should be an alternative way for people to travel locally outside of an interstate freeway.

- Connecting neighborhoods under or over the freeway will negatively impact some neighborhoods, increase crime, increase traffic, and decrease property values. Once it is open, the bridge on Trinity will also increase traffic and create more of a mess.

- A soundwall is imperative at least from Ben Holt to Eight Mile Road, especially on the east side. A soundwall would also improve the environment at Oak Grove Regional Park.

- It is about time that funding became available for this project. The noise is atrocious and should be addressed with soundwalls that extend at least between Ben Holt and Hammer Lane. Drainage off the freeway should also be addressed. Criminal activity has taken place on the Caltrans property in the freeway right-of-way, which has become a raceway, allowing people to cut through the fence, break into cars, and rob tenants in the apartment next to the freeway, as well as nearby houses.

Below is a brief summary of the comments that were received on the telephone and e-mail hotlines:

- Requests for general information about the project

- Concern about eminent domain

- Need for the project and for road improvements in general

- Opposition to carpool lanes

- Need to repair the existing roadway

- Need for soundwalls, particularly to protect Claudia Landeen Elementary School and the Quail Lakes residential areas

- Safety concerns with no barrier between Claudia Landeen Elementary School and the freeway

- Need for public transportation
- Support for HOV lanes
- Concern about quality of life issues in the Otto Drive neighborhood
- Need for frontage roads from Eight Mile Road north to the new Gateway intersection
- Concern about inefficiencies, budget overruns, project processes, and delays

Public Hearing

A public hearing was held on October 14, 2009. The purpose of the meeting was to present the draft Environmental Impact Report/Environmental Assessment and obtain input from local agencies, businesses, organizations, and the public.

Approximately 77 people signed in at the door including representatives from the City of Stockton, San Joaquin Council of Governments, San Joaquin County Public Works, Caltrans, and elected officials. The meeting was held as an open house. This format allowed members of the public to hear a detailed overview of the project by the project manager, review maps and other exhibits, and ask questions of and direct comments to members of the project team. Written, oral, and email comments are addressed below under the next Section Comments and Responses. Attendees were encouraged to submit their comments on the Draft Environmental Impact Report at a public comment station with blank comment sheets and pens. Attendees could also dictate their comments to a court reporter. Below is a brief summary of the questions received at the public information hearing.

Requests for sound walls to abate noise and opposition to car pool/diamond lanes were the primary concerns expressed at the Public Hearing. Concerns were also expressed about the proposed Otto Drive Interchange and potential effects on Otto Drive. Support for the proposed Otto Drive Interchange was also expressed, as well as general acknowledgement of the need and support for the proposed project overall. Several persons asked that truck lanes be restricted. Several persons asked that the project have beautification elements.

The following are transcriptions of the comments submitted at the Public Hearing:

- The on-ramp from Benjamin Holt Drive south onto I-5 is currently dangerous as a merge lane. Will the project address this?

- I don't believe the # of cars on I-5 is enough to justify a car pool lane – even during peak hours. You can always stripe for car pool later, if needed. I would rather see a truck lane, if such a lane exists in our country. I feel N. Gateway would not be necessary for many, many years. I've heard "growth" development is on hold during our "housing crisis." Otto Drive is most likely unnecessary as well. Hopefully, your studies show otherwise to avoid huge waste of $'s. Stockton does need another "easy" connector between I-5 and Hwy 99 out north.

- The Gateway Interchange is a road to nowhere. It should not be built with public funds since it benefits only 2 private developers. I was told by Council of Governments and Caltrans personnel that it would not be built unless the developer paid for it and that there is no current plan to build it.

- The bridge going over the Calaveras River does not have high enough fence over the bridge area. Teenagers climb from the river edge to roadway. There is a small shoulder on the bridge. There is a major concern that a car would run over a child on the bridge. I have seen children on the east side of the bridge.

- I'm glad to see the addition of the soundwalls along east side of I-5 near Bear Creek. The freeway there is very loud at night. Many residents complain about the noise. Also, I can't wait for the Otto Road interchange; it will help my commute.

- During school morning – noon afternoon, long waits required to get on Thornton Road from Otto. What planning is Stockton doing to handle large volume of traffic coming from I-5 using Otto exit?? Currently, Otto is a quiet residential drive and near Thornton Road handles traffic from Angel, August Way and traffic from large population to the north??

- Soundwall issue: Southbound at Ben Holt exit, the soundwall is shown short of the commercial /residential interface. In order to control pedestrian (illegal) access to I-5 and to control highway noise for the adjacent residential units that wall should extend south along the offramp 150'+. New work at 8 Mile Drive: This interchange has been in use for a number of years now. New signs should make it clear that northbound traffic headed west to Park West Shopping Center should take the second exit at 8-Mile Rd. There is no easy way to recover if a vehicle takes the eastbound exit. Finally, I would strongly discourage any diamond lanes through urban Stockton. North of future North Gateway interchange, it is (presently) not as critical, the tradeoff of slow congested traffic with increased pollution, slow speeds and low speed truck noise simply isn't worth the marginal potential increase of efficiency. Along the section between Country Club Blvd. and 8 Mile Drive, the freeway is heavily used for local traffic. Fighting trucks during heavy congestion will be simply made worse by the addition of a diamond lane.

- Some of my fellow board members are against the Otto Drive interchange as are some of our homeowners. I know this has been in the works for over 10 years and nothing will change this. But is there any way I can let these fellow board members

and homeowners know that this is good? I think it is great as it will help traffic flow and make it easier for evacuation or medical responses. Anything you can send me would be beneficial.

- Don't feel carpool lanes are needed at this time. Would like to see an expressway or something in the north area (a Hammer area). Would like to see the lights timed so one can drive Hammer and not have it take a half hr to get from 5 to 99.

Below is a brief summary of the comments that were dictated to a court reporter at the Public Hearing.

- Shows general support for the project and for sound walls, a need to improve off-ramps at Benjamin Holt Drive, the need to consider "complete streets design" for arterial streets to accommodate other modes of transportation other than the automobile.

- A suggestion to terminate the project at Eight Mile Road and to consider the environmental impacts generally.

- Questions about whether Otto Drive would be in a flood zone, whether it would be a truck route, and the speed limit on Otto Drive.

- A question about traffic metering lights.

- Concern about carpool lanes restricting commuters; praise for the charts and presentation; and a vote for alternative #1.

Below is a brief summary of Anonymous Comments Listed on Caltrans Public Participation Title VI Cards:

- Very well organized. Great visuals. Lots of helpful staff. Well done. Move the project forward Asap. Stockton needs this project!!

- If there is a published "start time," it would be nice if it actually starts within 10 minutes. The exhibits were excellent and the personnel available to answer questions were knowledgeable and helpful.

- Presentation of photos and info was very good.
- I would prefer Op5. 1 for the new lanes—mixed flow. For one thing, trucks already take up 2 lanes.

- Big rigs are a big concern. They are many, huge – long, travel close together and speeding. Often, I find it difficult to merge onto the freeway at March Lane going North.

- Repaving was mentioned between Country Club and March Lane, but I think it is bad all the way to the Crosstown Freeway.

- One last thought: Designate the new left lanes for the big rigs—or better yet, 1 for l. lane with no passing allowed.

- The proposed plans will hopefully improve the image of Stockton with these positive improvements. I totally support these plans.

- Nice presentation – good visuals. I would vote for alternative 1 – mixed flow operation. I disapprove of spending all the money for improvements as described and then limiting access (even during peak-use hours) to people who do not have the ability or need to carpool. Make all lanes accessible to everyone! Especially during peak hours.

- Very good charts and presentation. Could not get the coffee to come out. Put tracking lights at all intersections from Downing to Gateway. Set new rules for car pool – example – Counter going from Tracy to Lodi – allow one person per car.

- Prefer "No" car pool lane.

- Project is great! I approve of the design and ideas.

- Excellent graphics – very clear as to what is going to be done. One way to take some traffic off of I-5 is to force the City to complete the north-south corridor west of I-5 by connecting Feather River to Ryde Avenue via a bridge over the Calaveras River (it seems that it was to be paid for by Grupe as part of the Brookside deal) and a bridge over 5 Mile Slough.

  Below is a brief summary of the comments that were received on the telephone and e-mail hotlines:

- A freeway wall controlling some of this traffic noise on the west side of I-5 between Benjamin Holt Drive and Hammer lane seems appropriate and needed.
- I am hopeful that part of the project will include a plan for beautifying I-5. Other cities along the I-5corridor have found a way to preserve an attractive view of their city; I am really hoping Stockton will do the same.

- Opposition to Otto Drive Interchange in Stockton CA I-5 Expansion.

- Request for copy of document to be sent to City of Lodi for review.

- Extension of sound walls between the Country Club Exit and the March Lane exit needed. Why is North Gateway Blvd. interchange being built when there is no current development in that area and future development (of that scale) is not certain?

- Request for plans for the area between Benjamin Holt Drive and March Lane.

- Something needs to be done in this area on the Pershing Off Ramp. Dangerous driving conditions due to the merging of traffic from travelers exiting the freeway and entering the freeway at that location.

- Request that the project extend soundwalls on the east side of I-5 north of Country Club.

- Opposition to building the Otto Drive interchange because of the potential impact to the Twin Creek Estates development.

- Opposition to development of the area west of I-5.

Comments and Responses

The section that follows includes the comment letters submitted at the public hearing, by various public agencies and private parties, and the responses to those comments. Commenters on the Draft Environmental Impact Report/Environmental Assessment for the Interstate 5 North Stockton Corridor Improvements project are listed as follows:

State Clearing House

State Clearing House Letter (February 9, 2010)

Public Hearing Comments

Public Hearing Comments, (October 14, 2009)

Anonymous Public Meeting Comments, (October 14, 2009)

Anthony Dorn, private party (October 13, 2009)

Charles Eibling, private party, (October 14, 2009)

W. C. Nahorn, private party, (October 14, 2009)

Jamie Cole, private party, (October 14, 2009)

Anonymous Resident, private party (October 14, 2009)

David Baird, private party, (October 14, 2009)

Anonymous, private party, (October 14, 2009)

Anthony Fornos, private party (October 14, 2009)

Karen Kleinert, private party, (October 14, 2009)

State Agency

California Department of Fish and Game, State Agency, (January 11, 2010)

California Transportation Commission, State Agency, (January 12, 2010)

Central Valley Flood Protection Board, State Agency, (October 27, 2009)

Local Agency

City of Lodi, Public Agency (email November 12, 2009)

Non Profit Organization

Lodi District Chamber of Commerce, Non Profit Organization (email November 12, 2009)

Private Party

Harry Osell, private party, (email October 2, 2009)

Dan Brady, private party, (email October 4, 2009)

Nancy McPherson, private party, (email October 6, 2009)

Patricia Voss, private party, (email October 6, 2009)

Duane Cissna, private party, (October 7, 2009)

Richard Edelstein, private party (October 8, 2009)

Stan Strassburg, private party (October 9, 2009)

Terrence Van Oss, private party, (email October 11, 2009)

Chris Sandoval, private party (email October 15, 2009)

Lawrence A. Nordstrom, private party (email October 16, 2009)

Shirley and Frank Bills, private party (email October 22, 2009)

Jack Richardson, private party (email October 24, 2009)

Marianne McCarroll, private party (email October 28, 2009)

Veronica Belasco, private party, (October 2009)

Mary Webb, private party (email November 01, 2009)

Pat Sloan, private party (email November 07, 2009)

Donna Lester, private party (email November 12, 2009)

Each comment letter will have the comment(s) called out in the margin with a side bar and a code. The letters in the code are some abbreviation of the person/agency responsible for the letter and the number is to notate each comment. For example a code like AR-1 would stand for Anonymous Resident – comment 1. These codes will then correspond with the following response to comment page, where the response will have the same code as the comment in the letter above.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANI
DIRECTOR

February 9, 2010

Gail Miller
California Department of Transportation, District 10
1976 E Charter Way/Martin Luther King Jr. Blvd
Stockton, CA 95205

Subject: I-5 North Stockton Corridor Improvements
SCH#: 2008102101

Dear Gail Miller:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on February 8, 2010, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

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

Sincerely,

Scott Morgan
Acting Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2008102101
Project Title I-5 North Stockton Corridor Improvements
Lead Agency Caltrans #10

Type EIR Draft EIR

Description In the Central to North Stockton area widening is proposed to the I-5 freeway on the inside median increasing the freeway geometry from 6 to 8 lanes between Country Club Boulevard and the proposed North Gateway Boulevard interchange. Inside widening would accommodate mixed flow lanes (Alternative 1) or HOV lanes (Alternative 2). If alternative 2 is selected the existing inside lane wuld be converted to and HOV lane between Charter Way and County Club Boulevard. Improvements to four interchanges are also proposed including Hammer Lane (existing), Otto Drive (proposed), Eight Mile Road (existing), and North Gateway Bouldvard (proposed). Between interchanges auxillary lanes are also proposed to the outside of the mainline. In selected locations noise barriers are proposed as a project feature

Lead Agency Contact

Name Gail Miller
Agency California Department of Transportation, District 10
Phone (559) 243-8274 **Fax**
email gail_miller@dot ca.gov
Address 1976 E. Charter Way/Martin Luther King Jr.
City Blvd. **State** CA **Zip** 95205
Stockton

Project Location

County San Joaquin
City Stockton
Region
Lat / Long
Cross Streets From 0 2 miles south of Charter Way/Martin Luther King Jr. Blvd to 1 8 miles north of 8 Mile Rd
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways Interstate 5, SR 99, SR4
Airports
Railways
Waterways Smith Canal, Bear Creek, Calaveras River, and 14 mile, 5 mile & Mosher Slough
Schools Bear Creek High School
Land Use Freeway. General Plan Designation- Freeway Zoning-Freeway

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual; Geologic/Seismic

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 2; Delta Protection Commission; Office of Historic Preservation; Department of Parks and Recreation; Central Valley Flood Protection Board; Department of Water Resources; California Highway Patrol; Air Resources Board, Transportation Projects; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

Date Received 12/23/2009 **Start of Review** 12/23/2009 **End of Review** 02/08/2010

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

Comments from the Public Hearing for the Draft Environmental Document

October 14, 2009

Anonymous Comments from Public Hearing

The following comments (marked "PC") were collected at the public hearing., but were written on cards intended for comments on the format of the meeting itself, not for official comments on the project. These cards had no space for commenters to identify themselves. Although no names can be attributed to any of these submissions, they have been included in this document in an effort to address all concerns or questions.

PC A

Meeting Comments: If there is a published "start time" it would be nice if it actually starts within 10 minutes. The exhibits were excellent and the personnel available to answer questions were knowledgable and helpful

A-2

Recommendations: _____

Thank you for your participation.

PC B

Meeting Comments: Very well organized – Great visuals – lots of helpful staff – well done –

B-1

Recommendations: Move the project forward ASAP – Stockton needs this project!!

B-2

Thank you for your participation.

Meeting Comments: PC C

Presentation & photos & info was very good.

Recommendations:

1. I would prefer Opt. 1 for the new lanes — mixed flow. For one thing, trucks already take up 2 lanes. C-1
2. Big Rigs are a big concern — they are many, huge-long, travel close together and speeding. After, I find it difficult to merge on to the freeway at March Lane going North.
3. Repaving was mentioned ~~from~~ between Country Club & March Lane, but I think it is bad all the way to the Crosstown Freeway, C-2
4. One last thought: Designate the new left lanes for the Big Rigs — or better yet, 1 far L. lane with no passing allowed C-3

Thank you for your participation.

PC D

Meeting Comments: The proposed plans will hopefully improve the image of Stockton with there positive improvements. I totally support these plans.

D-1

Recommendations:

Thank you for your participation.

Meeting Comments:

PC E

nice presentation - good visuals

E-1 I would vote for alternative 1 - mixed flow operation. I disapprove of spending all the money for improvements as described and then limiting access (even during peak-use hours) to people who do not have the ability or need to carpool.

Recommendations:

E-2 Make all lanes accessable to everyone! especially during peak hours.

Thank you for your participation.

PC F

Meeting Comments: Very Good Charts + presentation

Could not get the Coffee To come out 

Recommendations: Put Tracking lights at all intersections from Downing To Gate Way F-1

Set New rules for Car Pool - Example - Coomter going from Truck To body allow one person per car F-2

Thank you for your participation.

Meeting Comments:

PC G Prefer "NO" Car Pool Lane G-1

Recommendations:

Thank you for your participation.

PC H

Meeting Comments: Project IS great! I approve of the design and ideas.

H-1

Recommendations: _____

Thank you for your participation.

PC I

Meeting Comments: EXCELLENT GRAPHICS - VERY CLEAR AS TO WHAT IS GOING TO BE DONE

Recommendations: ONE WAY TO TAKE SOME TRAFFIC OFF OF I-5 IS TO FORCE THE CITY TO COMPLETE THE NORTH-SOUTH CORRIDOR WEST OF I-5 BY CONNECTING FEATHER RIVER TO RYDE AVE VIA A BRIDGE OVER THE CALAVERAS RIVER (IT SEEMS THAT IT WAS TO BE PAID FOR BY GRUPE AS PART OF THE BROOKSIDE DEAL) AND A BRIDGE OVER 5 MILE SLOUGH

I-1

Thank you for your participation.

Public Hearing Comments, (October 14, 2009)

Response

PC A-1: Thank you for your comment.

PC B-1: Thank you for your comment in support of the presentation.

PC B-2: Thank you for your comment in support of the project.

PC C-1: Thank you for your comment.

PC C-2: Additional freeway lanes provided by the proposed project should reduce traffic volumes and allow appropriate distance for entering motorists to merge from March Lane onto Interstate 5. Paving south of Country Club Boulevard (the southern project limit) is not part of the project.

PC C-3: The purpose of truck-only lanes is to separate trucks from other mixed-flow traffic to enhance safety and/or stabilize traffic flow. In February 2001, the Southern California Association of Governments completed a feasibility study report on exclusive lanes for commercial trucks. Trucks were defined as vehicles having three or more axles. The study included a literature review which revealed that exclusive truck lanes were the most plausible for congested highways where three factors exist: 1) truck volumes exceed 30 percent of the vehicle mix, 2) peak hour volumes exceed 1,800 vehicles per lane-hour, and 3) off-peak volumes exceed 1,200 vehicles per lane-hour. The percentage of truck volumes on Interstate 5 is well below the 30 percent of the vehicle mix minimum, and therefore, separate truck-only lane facilities are not a consideration for Interstate 5 through the project area.

PC D-1: Thank you for your comment in support of the project.

PC E-1: Thank you for your comment.

PC E-2: Two build alternatives were evaluated as part of the project. One includes a "carpool" lane and one does not. Your comments as well as comments from others were considered during the process to choosing a preferred alternative. Please see section 1.2.4, Identification of the Preferred Alternative for further information on the selection of the preferred alternative.

PC F-1: Thank you for your comment. Tracking lights (in-pavement lights for vehicles to track their turns at ramp intersections) were not included as part of the

proposed project as they are not typically necessary at local four-way intersections. None of the intersections included as part of the proposed project met the geometric requirements for tracking lights, so they were deemed unnecessary for the proposed project. Similarly, none of the proposed interchange improvements warrant tracking lights that might otherwise be required due to unusual geometric lane design.

PC F-2: See response to comment E-2.

PC G-1: Thank you for your comment, please refer to the response to comment E-2.

PC H-1: Thank you for your comment in support of the project.

PC I-1: Thank you for your comment. The commenter has suggested that the City provide another north-south arterial to relieve traffic west of Interstate 5. However, such an arterial is not included in the City's General Plan. The project as currently proposed will provide adequate north-south transportation service along the Interstate 5 corridor to accommodate forecast traffic volumes through year 2035.

INTERSTATE 5 North Stockton Improvement Project

Comment Sheet

Name (Please print): Anthony Dorn **Date:** 10-13-09

Mailing address: P.O. Box 690705, Stockton, CA 95269

Resident, Business, Organization, etc.: 3509 Deseret Dr, Stockton, CA

Phone: (209) 955-7553 **Email:** adorn@dot.ca.gov

Comments: I'm glad to see the addition of the soundwalls along east side of I-5 near Bear Creek. The freeway there is very loud at night. Many residents complain about the noise. Also I can't wait for the Otto Road interchange; it will help my commute. AD-1

Public Information Coordinator
P.O. Box 773
Stockton, CA 95201-0773
(209) 464-8707, ext. 101 Fax (209) 942-3080
email: hotline@buethecommunications.com

Anthony Dorn, private party (October 13, 2009)

Response AD-1: Thank you for your comment in support of the project.

RECEIVED OCT 16 2009

Comment Sheet

Name (Please print): Charles Ebling **Date:** 10/14/09

Mailing address: 9620 Augusta Way Stockton Ca

Resident, Business, Organization, etc.: Resident for 23yrs.

Phone: 209-476-1324 ✓ **Email:**

Comments: During School Morning - Noon Afternoon long Waits required to get on Thornton Road from Otto.

What planning is Stockton doing to handle large volume of traffic coming from I-5 using Otto Exit??

Currently Otto is a quiet residential drive and near Thornton Rd handles Traffic from Angel, Augusta Way + Traffic from Large Population to the North??

CE-1

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(209) 464-8707, ext. 101 Fax (209) 942-3080
email: hotline@buethecommunications.com

Charles Eibling, private party, (October 14, 2009)

Response CE-1: The Interstate 5/Otto Drive interchange is needed to accommodate the traffic demands forecast for this area through the year 2035 at an acceptable level of traffic service. The new interchange will serve the traffic demand generated by forecast traffic volumes from current and future development. This interchange represents an important component of the City's circulation network and will improve traffic conditions and accessibility in the immediate area as well as adjacent interchanges. Significant improvements are anticipated to the traffic congestion currently occurring at the Hammer Lane Interchange. In addition, the City is also planning on widening and adding traffic signals to the intersections of Otto Drive with Mariners Drive, Bancroft Way, and Estate Drive to accommodate traffic to and from the Interstate 5/Otto Drive interchange.

Comment Sheet

Name (Please print): Wm C. Nahora IV **Date:** 10/14/09

Mailing address: P.O. Box 7743

Resident, Business, Organization, etc.:

Phone: 209 474-0200 **Email:**

Comments: 1. Don't feel carpool lane are needed at this time. WN-1

2. Would like to see an expressway or something in the north area (a Hammer area). Would like to see the lights timed so one can drive Hammer & not have it take a half hr to get from 5 to 99. WN-2

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email: hotline@buethecommunications.com

W. C. Nahorn, private party (October 14, 2009)

Response WN-1: Two build alternatives were evaluated as part of the project. One includes a "carpool" lane and one does not. Your comments as well as the comments of others were considered during the process of choosing a preferred alternative. After comparing and weighing the benefits and impacts of both of the feasible alternatives, Caltrans identified Alternative 2, the Mainline High-Occupancy Vehicle/Carpool Lanes Alternative as the preferred alternative, because the project meets the purpose and need, because it is consistent with adopted programs and policies of the San Joaquin Council of Governments, Caltrans, and the City of Stockton, because it provides the best person carrying capacity of the corridor, and because it provides superior reduction in air quality emissions. Please see section 1.2.4, Identification of the Preferred Alternative for further information on the selection of the preferred alternative.

Response WN-2: This project focuses primarily on the mainline improvements and four interchanges (two existing interchanges to be modified, and two new interchanges to be added). While some local roadway improvements are needed as they directly relate to the mainline/interchange improvements, the project does not address local roadways other than those within the project limits.

Comment Sheet

Name (Please print): Jamie Cole **Date:** 10/14/09

Mailing address: 2874 Calaviva Dr Stockton Ca 95204

Resident, Business, Organization, etc.:

Phone: 209 463-6737 **Email:**

Comments: The Bridge going over the Calaveras Rive does not have high enough fence over the bridge area. teenager Climb from the rive edge to Roadway. There is a Small Shoulder on the bridge. There is a major Concern that a Car would run over a Child on the bridge.

I have seen Children on the East side of the bridge JC-1

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email: hotline@buethecommunications.com

Jamie Cole, private party (October 14, 2009)

Response JC-1: There are currently no measures that can absolutely prevent children from accessing the bridge. With this project we have included soundwalls where possible which could act as a barrier for pedestrians (including children) from easily accessing the roadway however there is no absolute way to prevent access.

Comment Sheet

Name (Please print): _____ **Date:** 10/14/09

Mailing address: _____

Resident, Business, Organization, etc.: Resident

Phone: _____ **Email:** _____

Comments: I don't believe the # of cars on I-5 is enough to justify a car pool lane - even during peak hours. R-1
You can always stripe for car pool later, if needed.
I would rather see a truck lane - if such a lane exists in our country. R-2
I feel N. Gateway would not be necessary for many many years. I've heard "growth" development is on hold during our "housing crisis". R-3
Otto Drive is most likely unnecessary as well. R-4
Hopefully your studies show otherwise to avoid huge waste of $'s. R-5
Stockton does need another "EASY" connector between I5 and Hwy 99 out North. R-6

Public Information Coordinator
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(209) 464-8707, ext. 101 Fax (209) 942-3080
email: hotline@buethecommunications.com

Anonymous Resident, private party (October 14, 2009)

Response R-1: Two build alternatives were evaluated as part of the project. One includes a "carpool" lane and one does not. Your comments and the comments of others were considered during the process of choosing a preferred alternative. After comparing and weighing the benefits and impacts of both of the feasible alternatives, Caltrans identified Alternative 2, the Mainline High-Occupancy Vehicle/Carpool Lanes Alternative as the preferred alternative, because the project meets the purpose and need, because it is consistent with adopted programs and policies of the San Joaquin Council of Governments, Caltrans, and the City of Stockton, because it provides the best person carrying capacity of the corridor, and because it provides superior reduction in air quality emissions.

Response R-2: The purpose of truck-only lanes is to separate trucks from mixed-flow traffic to enhance safety and/or stabilize traffic flow. In February 2001, the Southern California Association of Governments completed a feasibility study report on exclusive lanes for commercial trucks. "Trucks" were defined as vehicles having three or more axles. The study included a literature review which revealed that exclusive truck lanes were the most plausible for congested highways where three factors exist: 1) truck volumes exceed 30 percent of the vehicle mix, 2) peak hour volumes exceed 1,800 vehicles per lane-hour, and 3) off-peak volumes exceed 1,200 vehicles per lane-hour. The percentage of truck volumes on Interstate 5 is well below the 30 percent of the vehicle mix minimum, and therefore, separate truck-only lane facilities are not a consideration for Interstate 5 through the project area.

Response R-3: The transportation demand for the Gateway Interchange and improvements north of Eight Mile Road are based on the land uses identified in the 2035 City of Stockton General Plan (dated 2006), and the San Joaquin Council of Governments 2007 Regional Transportation Plan which also identified a need for a new interchange north of Eight Mile Road. This project is simply accommodating the traffic demand needs identified in that planning document. Also refer to Response to comment LOC-2.

The Gateway interchange will be built when development approval by the City requires it. Since development fees will drive the schedule, designing this component of the project in preparation for the anticipated development is considered prudent decision-making despite the time lag that may occur before the interchange is actually constructed.

Response R-4: The proposed Otto Drive interchange was a part of both the 1990 General Plan and the 2006 General Plan update. The Interstate 5/Otto Drive interchange is needed to accommodate the traffic demands forecast at an acceptable level of traffic service through the year 2035 (see Transportation Section 2.1.6 for further details). The new interchange will serve the traffic demand generated by forecast traffic volumes from current and future development. This interchange represents an important component of the City's circulation network and will improve traffic conditions and accessibility in the immediate area as well as adjacent interchanges. Significant improvements are anticipated to the traffic congestion currently occurring at the Hammer Lane Interchange.

Response R-5: Thank you for your expression of concern regarding wasting taxpayer money. The North Gateway Interchange will be implemented based on developer fee contributions; the interchange will not be constructed until future development entitlements are obtained and development fees are collected to finance the interchange improvements. In summary, the improvement financing has a direct correlation with developer need and traffic generation. Further, studies have demonstrated that the Otto Drive interchange is needed to support traffic generated by approved entitlements and planning forecasts. This interchange will have multiple benefits to the local and regional circulation system; including significant congestion relief at the Hammer Lane Interchange (see also the response to comment KK-1). Without the Otto Drive interchange, local vehicles will be required to access Interstate 5 through the Hammer Lane Interchange creating future intolerable congestion and degrading local air quality. The future implementation of the Otto Drive Interchange would be a wise and necessary investment, not a waste of money.

Response R-6: The connector you call for in your comment is planned to extend from the North Gateway Interchange on Interstate 5 to the east ultimately connecting to State Route 99 (not included as a part of this project, but as a part of a future project). The City of Stockton has included this connector roadway in the 2035 General Plan to assist in improving regional mobility through northern Stockton, but it is not a component of the proposed project.

Comment Sheet

Name (Please print): David Baird **Date:** 10/14/09

Mailing address: 2336 W. Benj. Holt Dr, Stockton 9520[illegible]

Resident, Business, Organization, etc.: resident

Phone: 209-478-7107 **Email:** bairdzf@aol.com

Comments: The gateway Interchange is a road to nowhere. It should not be built with public funds since it benefits only a private developer. I was told by Council of Governments & Caltrans personnel that it would not be built unless the developer paid for it and that there is no current plan to build it. DB-1

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email: hotline@buethecommunications.com

David Baird, private party, (October 14, 2009)

Response DB-1: Caltrans is doing the design for this interchange as part of the project because, since the interchange is called for in Stockton's general plan, it makes sense to include it with this design package. Actual construction of the proposed interchange will not be part of this project, and will not take place until development in the area creates the need. When that happens, the developers who are building in the area will help fund the construction.

Comment Sheet

Name (Please print): Anonymous **Date:** 10/14/09

Mailing address:

Resident, Business, Organization, etc.:

Phone: **Email:**

Comments: The on-ramp from Benjamin Holt Dr south onto I-5 is currently dangerous as a merge lane. Will the project address this? A-1

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email: hotline@buethecommunications.com

Anonymous, private party, (October 14, 2009)

Response A-1: The on-ramp you ask about is beyond the project limits and issues surrounding it will not be addressed by this project.

Comment Sheet

Name (Please print): Anthony FORNOS **Date:** Oct 14, 2009

Mailing address: 7017 Shiloh Pl., stockton, CA 95219

Resident, Business, Organization, etc.: Homeowner's Board, Lincoln Village West #10

Phone: (209) 951 6338 **Email:** jennsdad@earthlink.net

Comments: Soundwall issue: Southbound at Ben Holt exit, the soundwall is shown short of the commercial/residential interface. In order to control pedestrian (illegal) access to I 5 and to control highway noise for the adjacent residential units that wall should extend south along the offramp 150'± AF-1

New work at 8 Mile Drive: This interchange has been in use for a number of years now. New signs should make it clear that northbound traffic headed west to Park West Shopping center should take the second exit at 8-mile Rd. there is no easy way to recover if a vehicle takes the eastbound exit. AF-2

Finally I would strongly discourage any Diamond Lanes through urban stockton. North of future North Gateway interchange it is (presently) not as critical, the trade off of slow congested AF-3 AF-4

(over)

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traffic with increased pollution, slow speeds, and low speed truck noise simply isn't worth the marginal potential increase of efficiency. Along the section between Country Club Blvd and 8 mile Drive the freeway is heavily used for local traffic. Fighting trucks during heavy congestion will be simply made worse by the addition of a diamond lane. AF-4

Anthony Fornos, private party (October 14, 2009)

Response AF-1: The City has requested a sound wall extension at this location to address this noise concern. Please see SW-9 Ext 2 in Figure 2.5f in the Final Environmental Impact Report/Environmental Assessment.

Response AF-2: Caltrans carefully plans freeway signage to ensure motorist safety and convenience. When designing the signage for Eight Mile Road interchange modifications, your concerns will be considered by Caltrans and the design team.

Response AF-3: Two build alternatives were evaluated as part of the project. One includes a "carpool" lane and one does not. Your comments and the comments of others were considered during the alternatives analysis. After comparing and weighing the benefits and impacts of both of the feasible alternatives, Caltrans identified Alternative 2, the Mainline High-Occupancy Vehicle/Carpool Lanes Alternative, as the preferred alternative, because the project meets the purpose and need, because it is consistent with adopted programs and policies of the San Joaquin Council of Governments, Caltrans, and the City of Stockton, because it provides the best person carrying capacity of the corridor, and because it provides superior reduction in air quality emissions. Please see section 1.2.4, Identification of the Preferred Alternative for further information on the selection of the preferred alternative.

Response AF-4: The transportation demand forecast for the Gateway Interchange and improvements north of Eight Mile Road is based on the land uses identified in the 2035 City of Stockton General Plan (dated 2006), and the San Joaquin Council of Governments 2007 Regional Transportation Plan which also identified a need for a new interchange north of Eight Mile Road. This project is designed to accommodate the traffic demand needs identified in that planning document. If these improvements are not made, studies indicate that the conditions will worsen considerably as demonstrated by the No Build Alternative. Also refer to Response LOC-2.

Please see comment response AF-3 for carpool or "diamond lane" discussion.

A diamond (or carpool) lane is being proposed as this alternative best meets the project purpose and need. Alternative 2, the preferred alternative, was selected in part because it provides the best person carrying capacity of the corridor, and because it

provides superior reduction in air quality emissions when compared with the Mixed Flow Lane Alternative.

Comment Sheet

Name (Please print): Karen Kleinert **Date:** 10-14-09

Mailing address: 2894 Smoke Tree Cir

Resident, Business, Organization, etc.: Stonewood Estates - Board member

Phone: 209-478-1356 **Email:** kkleinert05@comcast.net

Comments: Some of my fellow board members are against the Otto Drive interchange as are some of our homeowners. I know this has been in the works for over 10 years and nothing will change this. But is there any way I can let these fellow board members & homeowners know that this is good? I think it is great as it will help traffic flow & make it easier for evacuations or medical responses. anything you can send me would be beneficial KK-1

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Stockton, CA 95201-0773
(209) 464-8707, ext. 101 Fax (209) 942-3080
email: hotline@buethecommunications.com

Karen Kleinert, private party, (October 14, 2009)

Response KK-1: Thank you for your comment in support of the Otto Drive Interchange. You are correct that the proposed Otto Drive interchange was a part of the development plan in both the 1990 General Plan and the 2006 General Plan update. The Interstate 5/Otto Drive interchange is needed to accommodate the traffic demands forecast for this area through the year 2035 at an acceptable level of traffic service. The future benefits of constructing the Otto Drive Interchange are:

- The new interchange will serve the traffic demand generated by forecast traffic volumes from current and future development.
- This interchange represents an important component of the City's circulation network and will improve traffic conditions and accessibility in the immediate area as well as adjacent interchanges.
- Substantial improvements of traffic congestion currently occurring at the Hammer Lane Interchange are expected as a result of this project. In addition, the City is also planning on widening and adding traffic signals to the intersections of Otto Drive with Mariners Drive, Bancroft Way, and Estate Drive to accommodate traffic and from the Interstate 5/Otto Drive interchange.
- Access into and out of the Twin Creeks Estates subdivision to Interstate 5 will improve significantly, as will congestion at the Hammer Lane Interchange.
- Emergency services access will improve resulting in better response times.

State of California
Department of Fish and Game

2010 JAN 13 AM 10 48

Flex your POWER

Memorandum

Date: January 11, 2010

To: Gail Miller
California Department of Transportation, District 10
1976 East Charter Way/Martin Luther King Jr. Blvd.
Stockton, CA 95205

From: Jeff Drongesen
Acting Environmental Program Manager
Department of Fish and Game
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Subject: North Stockton Corridor Improvements project (project)

The Department of Fish and Game (DFG) has reviewed the draft Environmental Impact Report/ Environmental Assessment (DEIR) for Caltran's, Interstate 5 North Stockton Corridor Improvements project. The project consists of a plan to add two lanes in the median of the existing highway, and construct off ramps and other improvements. The project is located on Interstate Highway 5 between 0.2 miles south of Charter Way and 1.8 miles north of Eight Mile Road, in Stockton, San Joaquin County.

Wildlife habitat resources consist of the highway right-of way and adjacent areas. Significant natural resources of the project include habitat for sensitive species. Five-Mile Slough, Calaveras River, Mosher Slough, and Bear Creek are within the project site.

We find that the DEIR fails to adequately mitigate for the project's impacts to fish and wildlife resources. The following are our concerns:

Natural Communities:
The DEIR states that the project will result in direct impact to 8.3 acres of valley oak woodlands located near the intersection of Eight Mile Road and Interstate 5. The DEIR proposes to avoid impacts to oak trees where possible, but there is no mitigation for the loss of valley oak woodland habitat. Construction of a freeway on-ramp within a valley oak woodland habitat will significantly affect its habitat value.

In addition to the measures proposed in the DEIR, we recommend that the DEIR be revised to include mitigation for the loss of valley oak woodland habitat. Adequate mitigation would consist of providing replacement habitat that is protected and managed in perpetuity.

Threatened and Endangered Species:

a) California Black Rail (*Laterallius jamiecensis cortula*) and sandhill crane (*Grus canadensis tabida*). The DEIR fails to address the project's potential for impacts to the California black rail or the sandhill crane. California Natural Diversity Database (CNDDB), San Joaquin Multi-Species Conservation Plan (SJMSCP), and DFG files contain records for these species within the project area.

We recommend that the DEIR be revised to include a discussion of the project's affect on the California black rail and sandhill crane.

b) Swainson's hawk (*Buteo swainsoni*). The DEIR identifies that the project will result in the elimination of 8.3 acres of valley oak woodlands near the intersection of Eight Mile Road and Interstate 5, as well as the removal of other trees located within the project site. Many of these trees may provide Swainson's hawk nesting habitat. The DEIR also identifies that the project will result in the loss of 58 acres of Swainson's hawk foraging habitat.

Both CNDDB and SJMSCP records indicate that there are a large number of Swainson's hawks nesting within the project area. Several of these nests are located adjacent to Interstate 5. Cutting down trees could easily result in the loss of Swainson's hawk nesting habitat. Similarly, converting agricultural fields adjacent to the Interstate into freeway on-ramps and clover-leafs will add to the cumulative loss of Swainson's hawk foraging habitat.

While the DEIR contains measures that lessen the project's potential for take of an individual Swainson's hawk, it contains nothing to mitigate the project's impact on Swainson's hawk habitat. Loss of existing, or potential nest trees, or the loss of preferred foraging habitat located in close proximity to active Swainson's hawk nests are significant project caused effects.

We recommend that the DEIR be revised to include mitigation for the loss of Swainson's hawk habitat. The mitigation should be designed so that it reduces impacts below a level that is significant, and should consist of replacement habitat, of like habitat value that is protected and managed in perpetuity.

This project will have an impact to fish and/or wildlife habitat. Assessment of fees under Public Resources Code Section 21089 and as defined by Fish and Game Code Section 711.4 is necessary. Fees are payable by the project applicant upon filing of the Notice of Determination by the lead agency.

Pursuant to Public Resources Code Sections 21092 and 21092.2, the DFG requests written notification of proposed actions and pending decisions regarding this project. Written notifications should be directed to this office.

Thank you for the opportunity to review this project. If the DFG can be of further assistance, please contact Mr. Dan Gifford, Staff Environmental Scientist, telephone (209) 369-8851 or, Mr. Jeff Drongesen, telephone (916) 358-2919.

ec: Jeff Drongesen
Dan Gifford
Department of Fish and Game

cc: Ellen McBride
U.S. Fish and Wildlife Service
2800 Cottage Way, Room W2605
Sacramento, CA 95825-1888

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

DEPARTMENT OF TRANSPORTATION

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1.1.1.1 DISTRICT 6

2015 E. Shields Ave.
Fresno, CA 93726
PHONE (559) 287-9320
TTY (559) 488-4066

February 11, 2010

Mr. Jeff Drongesen
Acting Environmental Program Manager
Department of Fish and Game
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Dear Mr. Drongesen:

Thank you for your letter dated January 11, 2010 regarding the North Stockton Corridor Improvements project. We have reviewed your comments on the Draft Environmental Impact Report (DEIR) and have responded below:

In your letter you state:

> "The DEIR states that the project will result in direct impact to 8.3 acres of valley oak woodlands located near the intersection of Eight Mile Road and Interstate 5. The DEIR proposes to avoid impacts to oak trees where possible, but there is no mitigation for the loss of valley oak woodland habitat. Construction of a freeway on-ramp within a valley oak woodland habitat will significantly affect its habitat value.
>
> In addition to the measures proposed in the DEIR, we recommend that the DEIR be revised to include mitigation for the loss of valley oak woodland habitat. Adequate mitigation would consist of providing replacement habitat that is protected and managed in perpetuity."

In the project area, oak woodland is limited to a small grove in the northeast quadrant of I-5 and Eight-Mile Road, at the northern end of the project. This woodland area includes a residence and associated outbuildings, is bounded on the west by the existing Eight Mile Road on-ramp and on the south by Eight Mile Road, and is generally disturbed. The woodland represents the northernmost extension of the much larger (approximately 175 acre) oak woodland located to the south of Eight Mile Road within Oak Grove Park. Due to the existing disturbance and level of activity occurring in this area (residence, agricultural practices, and nearby freeway and on-ramp), it has been determined

that the habitat loss is not significant, and the proposed mitigation measures will help protect individual trees. No additional mitigation measures are required for the loss of woodland habitat.

In your letter you also state:

> "California black Rail (*Laterallus jamaicensis coturniculus*) and Sandhill Crane (*Grus canadensis tabida*). The DEIR fails to address the project's potential for impacts to the California black rail or the sandhill crane. California Natural Diversity Database (CNDDB), San Joaquin Multi-Species Conservation Plan (SJMSCP), and DFG files contain records for these species within the project area.
>
> We recommend that the DEIR be revised to include a discussion of the project's affect on the California black rail and sandhill crane."

Both the California black rail and sandhill crane were discussed in the Natural Environment Study prepared for the project and were determined absent from the project area; consequently, they were not discussed in the DEIR. Both of these species have fairly specific habitat requirements, which was the primary basis for concluding their absence from the project area.

And finally, your letter states:

> "Swainson's hawk (Buteo swainsoni). The DEIR identifies that the project will result in the elimination of 8.3 acres of valley oak woodlands near the intersection of Eight Mile Road and Interstate 5, as well as the removal of other trees located within the project site. Many of these trees may provide Swainson's hawk nesting habitat. The DEIR also identifies that the project will result in the loss of 58 acres of Swainson's hawk foraging habitat.
>
> Both CNDDB and SJMSCP records indicate that there are a large number of Swainson's hawks nesting within the project area. Several of these nests are located adjacent to Interstate 5. Cutting down trees could easily result in the loss of Swainson's hawk nesting habitat. Similarly, converting agricultural fields adjacent to the Interstate into freeway onramps and clover-leafs will add to the cumulative loss of Swainson's hawk foraging habitat.
>
> While the DEIR contains measures that lessen the project's potential for take of an individual Swainson's hawk, it contains nothing to mitigate the project's impact on Swainson's hawk habitat. Loss of existing, or potential nest trees, or the loss of preferred foraging habitat located in close proximity to active Swainson's hawk nests are significant project caused effects.
>
> We recommend that the DEIR be revised to include mitigation for the loss of Swainson's hawk habitat. The mitigation should be designed so that it reduces impacts below a level that is significant, and should consist of replacement habitat, of like habitat value that is protected and managed in perpetuity."

As noted under the response above regarding the loss of oak woodland habitat, the potential nesting habitat for Swainson's hawks in the project area is generally disturbed and subject to a high level of activity. There are no known active nest trees within the biological study area for the project. There is a substantial amount of potential nesting habitat for Swainson's hawks in the general vicinity, including the 175-acre Oak Grove Park located immediately east of the biological study area and White Slough Wildlife Area located about 3 miles north of the project area.

Foraging habitat associated with agricultural lands is abundant in the project vicinity. Caltrans determined that the loss of nesting and foraging habitat for Swainson's hawks resulting from the project is not significant and mitigation for loss of this habitat is not required.

If you have any further questions, please contact either myself of Scott Smith at (559) 243-8223.

Sincerely,

Zachary Parker
Senior Environmental Planner

c: Scott Smith, File

STATE OF CALIFORNIA

CALIFORNIA TRANSPORTATION COMMISSION

1120 N STREET, MS-52
P. O. BOX 942873
SACRAMENTO, 94273-0001
FAX (916) 653-2134
(916) 654-4245
http://www.catc.ca.gov

January 12, 2010

Gail Miller, Branch Chief
Central Sierra Environmental Analysis Branch
California Department of Transportation
2015 E. Shields Avenue, Suite 100, Fresno, CA 93726

Re: Interstate 5 North Stockton Corridor Improvements Project Draft Environmental Impact Report

Dear Ms. Miller,

The California Transportation Commission (Commission) received the Draft Environmental Impact Report (DEIR) prepared for the Interstate 5 North Stockton Corridor Improvements Project (project) in San Joaquin County.

It is our understanding that the project is currently programmed with $120 million to $200 million of San Joaquin Measure K funds. As the total estimated project cost is $435 million, this project is not fully funded. Assuming the availability of funding, construction is estimated to begin in Fiscal Year 2010.

The Commission has no comments to the DEIR or the alternatives to be considered in the DEIR. However, the Commission recommends that the Department and its partners identify and secure the necessary funding to complete the project.

The Commission should be notified as soon as the environmental process is complete since the Commission cannot allocate funds to a project for design, right of way or construction until the final environmental document is complete and the Commission has considered the environmental impacts of the project and approved the environmentally cleared project for future consideration of funding.

Upon completion of the CEQA process, prior to the Commission's action to approve the project for future consideration of funding, the Commission expects the lead and/or implementing agency to provide written assurance whether the selected alternative identified in the final environmental document is or is not consistent with the project programmed by

Ms. Gail Miller
January 12, 2010
Page 2 of 2

the Commission and included in the Regional Transportation Plan. In the absence of such assurance of consistency, it may be assumed that the project is not consistent and Commission staff will base its recommendations to the Commission on that fact. The Commission may deny funding to a project which is no longer eligible for funding due to scope modifications or other reasons.

If you have any questions, please contact Susan Bransen, Associate Deputy Director, at (916) 653-2082.

Sincerely,

BIMLA G. RHINEHART
Executive Director

c: Jay Norvell, Chief, Caltrans Environmental Analysis

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

DEPARTMENT OF TRANSPORTATION

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1.1.1.2 DISTRICT 6

2015 E. Shields Ave.
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PHONE (559) 287-9320
TTY (559) 488-4066

February 11, 2010

Ms. Bimla Rhinehart
Executive Director
California Transportation Commission
1120 N. Street, MS-52
Sacramento, 94273-0001

Dear Ms. Rhinehart:

Thank you for your letter dated January 12, 2010 regarding the North Stockton Corridor Improvements project. We understand that you have no comments on the Draft Environmental Impact Report but wanted to acknowledge the receipt of your letter. We will continue to work with the CTC in the future for the successful delivery and construction of this important project for the State of California.

If you have any further questions, please contact either myself of Scott Smith at (559) 243-8223.

Sincerely,

Zachary Parker
Senior Environmental Planner

c: Scott Smith, File

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. LL40
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October 27, 2009

Gail Miller
California Department of Transportation, District 6
2015 E. Shields Avenue, Suite 100
Fresno, CA 93726-5428

Dear Ms. Miller,

State Clearinghouse (SCH) Number: 2008102101
I-5 North Stockton Corridor Improvements
Draft Environmental Impact Report/Environmental Assessment (DEIR/EA)

Staff for the Central Valley Flood Protection Board has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board (formerly known as The Reclamation Board). The Board is required to enforce standards for the construction, maintenance and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (CCR), Section 2).

According to the DEIR/EA p. 75, "Five water courses within the project area would be affected by the project: Bear Creek, Mosher Slough, Five Mile Slough, Fourteen Mile Slough, and Calaveras River." Additional waterways impacted were also identified on p. 150 which includes the Smith Canal.

A Board permit is required prior to starting the work within the Board's jurisdiction for the following: CVF-1

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee(CCR Section 6);

- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6).

- An acceptable vegetation plan including, the detailed design drawings, vegetation type and the plant names (i.e. common name and scientific name), total number of each plant, planting spacing and irrigation method that will be within the project area (CCR, Section 131).

The criteria used to develop the environmental mitigation measures were not provided. According to the DEIR/EA p. 150, "Direct impacts to aquatic, wetland and riparian habitats would be limited to the new bridge piers to support the widened bridge decks at the Calaveras River, Fourteen Mile Slough, Mosher Slough and Bear Creek and the new parapet and wing walls at Five Mile Slough." CVF-2

Vegetation standards for levees and floodways are to be in accordance with CCR, Section 131 and should be used during the development of vegetative management plans. For each of the regulated streams impacted by the project, a vegetation plan will be required.

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at http://www.cvfpb.ca.gov/. Contact your local, federal and state agencies, as other permits may apply.

If you have any questions please contact me at (916) 574-0651 or by email at jherota@water.ca.gov.

Sincerely,

James Herota

James Herota
Staff Environmental Scientist
Floodway Protection Section

cc:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Central Valley Flood Protection Board, Agency, (October 27, 2009)

Response CVF-1: Prior to initiating construction, Caltrans will apply for and obtain a permit from the Central Valley Flood Protection Board.

Response CVF-2: The criteria used for the mitigation measures were developed from the concept of having a no net loss of wetlands or waters of the United States. Such criteria are typical of mitigation requirements by the Army Corps of Engineers and the California Regional Water Quality Control Board in conjunction with regulatory permit compliance. Likewise, some of the measures represent standard conditions from the Regional Water Quality Control Board and the California Department of Fish and Game permit/agreement requirements. These measures/conditions are typically utilized in stream locations where anadromous fish occur, and to assist in reducing degradation to water quality.

CITY OF LODI
Community Development Department
CITY HALL, 221 WEST PINE STREET
P.O. BOX 3006
LODI, CALIFORNIA 95241-1910
(209) 333-6714 – Building
(209) 333-6711 – Planning & Neighborhood Services
(209) 333-6842 - Fax
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November 11, 2009

Gail Miller
Branch Chief
Central Sierra Environmental Branch
California Department of Transportation
2015 E. Shields Avenue, Suite 100
Fresno, CA 93726

gail_miller@dot.ca.gov

Re: Interstate 5 North Stockton Corridor Improvements
DEIR SCH No. 2008102101

Dear Ms. Miller:

The City of Lodi appreciates the opportunity to review and comment on the Draft Environmental Impact Report for the above referenced project. The project is located along Interstate 5 between 0.2 mile south of Charter Way/Martin Luther King Jr. Boulevard and 1.8 miles north of Eight Mile Road in northwest Stockton, California.

We have reviewed this document for consistency with the California Environmental Quality Act (CEQA) as well as discussed this matter with the Lodi City Council at their meeting on November 4, 2009. As a result of this review we offer the following comments on the report:

Section 2.1.2 Growth The Environmental Impact Report must examine the potential for growth that may occur as a result of the project. Specifically, CEQA Guidelines require that the EIR "discuss the ways in which the proposed project could foster economic or population growth, or construction of additional housing, either directly or indirectly" (CEQA Guidelines §15126.2(d)). The discussion outlined in the document states that "The proposed project would not directly affect growth within the Stockton region or San Joaquin County, but accessibility in the project area would change." Further the document states "Both the 2035 Stockton General Plan and the 2010 San Joaquin General Plan do not project any potential growth as a result of the proposed project; only transportation circulation would improve in the region."

However, the EIR fails to ever even consider the potential that the projected development could not occur. A traffic study is necessary to determine whether the existing and planned infrastructure (absent the highway improvements) could support the growth this project is admittedly designed to serve before any conclusion can be

L-1

drawn that this project is not growth inducing. The EIR does suggest the logical outcome of such study. Figure 1.4 shows no Level of Service issues on the highway in the existing condition. Lodi staff can support that conclusion based on actual highway use. It is not until 2035 that Figure 1.5 finally shows traffic north of Hammer Lane and even farther north of Eight Mile Road reaching Level of Service F. Table 2.23 reflects the expected growth served by the project. According to the conclusions drawn by the EIR , this project will serve the development of over 7,500 acres of farmland with nearly 40,000 residential units. L-1 cont.

There can be no debate about whether the improvements contemplated are necessary in order for the growth that has been approved as well as the growth contemplated in Stockton. To suggest otherwise would call into question the need for the project. As such, the EIR's failure to consider its potential to foster the growth of north Stockton is fatal to any test of its adequacy.

Section 2.1.3 Farmlands/Timberlands Construction of the project would convert approximately 58 acres of agricultural soils to urban (highway) uses. Most of that impact occurs within the existing right-of-way of Interstate 5 south of Eight Mile Road. According to the California Department of Conservation, approximately five acres of Prime and Unique Farmland is impacted by the project slated north of Eight Mile Road. The document states that the amount of agricultural land to be converted is "negligible" compared to the total amount of farmland in San Joaquin County or in California. We are not aware, nor does the DEIR state what the Department of Transportation's threshold of significance is with regard to this issue, but comparing this loss to the entire State of California is absurd. The fact is that the resulting loss is a significant and irreversible impact under CEQA. Even though mitigation cannot lessen the impact to a less than significant level, mitigation should be proposed which lessons this impact nonetheless. An additional concern related to this discussion is the missing Farmland Conversion Impact Rating form. The discussion within this section refers to Appendix H, which is not included in the document. Further, another part of the document indicates that Appendix G contains this information; however, it is not included there either. L-2

Sections 2.1.1.2 and 2.1.4 Community Impacts The analysis of community impacts does a fine job in characterizing the urban community that is adjacent to the project boundaries, but fails to mention anything about the community that exists north of Eight Mile Road. Specifically, the document must address the environmental consequence the project may have on the agricultural area in question. Moreover, the document makes no mention of the City of Lodi's White Slough Water Pollution Control Facility which contains 1,014 acres immediately adjacent to the project. Section 2.1.1.2 details how the project is consistent with all surrounding general plans. Again it fails to even reference the City of Lodi General Plan or the proximity of the plan to Lodi's detached annexation a few hundred feet to the north of the North Gateway interchange. L-3

Section 2.3.5 Threatened and Endangered Species Section 2.3.5 mentions impacts on a number of threatened species including the Giant Garter Snake (GGS). Although figure 2.2c reflects a large new interchange at the new North Gateway Interchange immediately adjacent to Telephone Cut. The GGS analysis fails to reference any loss of GGS habitat other than the .021 acres of aquatic habitat. An interchange cannot serve as GGS habitat given the multiple and compact roadway surfaces that would pose significant hazards to any snakes residing therein. As such at least 2 acres and more likely more acres of habitat will be permanently taken. The EIR proposes no mitigation for the loss of this habitat nor a Statement of Overriding Consideration. L-4

The EIR's failure to seriously address loss of GGS habitat is compounded by the lack of consideration of cumulative impacts as discussed above. Figure 2.2c's top image shows the existing condition and the bottom condition shows the development fostered by the construction of the freeway interchange, representing hundreds of homes and commercial structures immediately adjacent to Telephone Cut. When combined there must be massive impact on GGS habitat that even the EIR is forced to "presume" is present "[d]ue to the proximity of a known population and availability of suitable habitat…." (p. 175) L-4 cont.

Section 2.4 Cumulative Impacts As discussed above the EIR fails to consider cumulative impacts in any serious fashion because for every impact acknowledged, the EIR only studies them at the macro level. To say there is no impact to farmland or timberland (as the EIR does at page 189 with no explanation as to how that conclusion is reached) is a relatively simple thing. But to say it with regard to the 7,500 acres in growth it is necessary to make possible is quite another.

Section 2.4's discussion of Visual and Aesthetic impacts on page 189 is another example of the effort that went into this document. The EIR states that the only new landscape features are Otto Drive and North Gateway interchanges. However it concludes that the impact would be minor. A mere reference to figure 2.2c reveals just how facile that conclusion is. The before figure reveals acres of green space and farmland. The after reflects of the same acres subdivided for homes, mini storage and commercial strips. This same flaw flows through every reference in the cumulative impacts section. As such the EIR is defective. L-5

Finally, I respectfully request timely notice of any and all hearings and staff reports as well as any revisions that may occur concerning this project. We believe that as an adjacent property owner to the project and adjacent Public Agency, we should have received the Notice of Preparation as well as a direct notice of the release and availability of this Draft EIR. L-6

If you have any questions or would like to discuss these comments in more detail, please do not hesitate to contact me at 209-333-6711 or rbartlam@lodi.gov.

Sincerely,

Konradt Bartlam
Community Development Director
City of Lodi

Cc: City Manager
City Attorney

City of Lodi, Public Agency (email November 12, 2009)

Response L-1: The transportation demand for the proposed project is based on the land uses identified in the 2035 City of Stockton General Plan (dated 2006), and the San Joaquin Council of Governments 2007 Regional Transportation Plan. Please see the Interstate 5 North Stockton Interchanges and Mainline Widening Final Traffic Operations Report dated January 2008 which addresses both existing, design year, and final buildout year traffic operations.

Caltrans is doing the design for this interchange as part of the project because, since the interchange is called for in Stockton's general plan, it makes sense to include it with this design package. Actual construction of the proposed interchange will not be part of this project, and will not take place until development in the area creates the need. When that happens, the developers who are building in the area will fund the construction.

The City of Stockton General Plan Environmental Impact Report (dated 2007) provided a program level Environmental Impact Report that analyzed the environmental impacts of land uses and growth inducing impacts in the 2035 City of Stockton General Plan. The 2035 City of Stockton General Plan outlines the land use types, projected traffic demands, and directly references the need for interchanges north of Eight Mile Road, and widening along Interstate 5. The proposed project does not introduce new land uses beyond those discussed in the City of Stockton General Plan Environmental Impact Report, see section 2.1.2 Growth. The proposed project is responding to the future growth demand generated by the General Plan and forecast traffic volumes. Therefore, the proposed project anticipates timing for future development and growth based on regional projections as needed to avoid congestion and to promote better air quality. The proposed project will follow or keep pace with growth, but will not provide the impetus for growth.

It is the position of the City of Stockton, the San Joaquin COG and Caltrans that the proposed freeway widening and interchange improvements are growth accommodating. Recognizing that growth in the City of Stockton is likely to occur based on the projected land uses described in the City of Stockton General Plan Environmental Impact Report, and that a considerable amount of this growth is projected for North Stockton and West Stockton, the forward planning approach to accommodate this growth with planned roadway improvements is the responsibility of the local agencies. To delay these improvements until growth inundates the local and regional circulation network would be irresponsible and would have significant and adverse effects on traffic, air quality, and quality of life.

Response L-2: Correction made: The NRCS form is under Appendix G; references to the NRCS form in the Environmental Impact Report have been corrected and reflect Appendix G, and not Appendix H.

Table 2.2 of the Farmland section describes the project's impacts and compares that with farmland resources in the County. Impacts represent less than .0001 percent of the County's farmland resources. As explained in the text of the Farmland section under Environmental Consequences, a NRCS rating of above 160 would warrant further examination of alternatives to reduce farmland impacts and would require avoidance, minimization, and mitigation measures. Based on the fact that the amount of total acres converted to non-agricultural uses represents less than .0001 percent of the County's total farmland, and that the NRCS rating (83.6) was substantially less than 160, this is substantive evidence that the proposed project will not induce a significant affect on agricultural resources under the CEQA Guidelines. Additionally, any significant farmland impacts that would have been created by this project were addressed programmatically in the City of Stockton 2035 General Plan Environmental Impact Report (2007), which included this project in described land uses.

Response L-3: The Community Impact Assessment (dated March 2009), discusses the process of how community boundaries were delineated, including agricultural areas north of Eight Mile Road. The Environmental Impact Report section on Community Impacts primarily focuses on certain communities in the project area that are directly impacted by the proposed project and which specifically require relocation of residents in those neighborhoods. Agricultural impacts are discussed under Farmland; please see responses L1 and L2. The City of Lodi White Slough Water Pollution Control Facility is about 1/2 mile away from the northernmost portion of the project area. No impacts from the proposed project are anticipated to the Lodi White Slough Water Pollution Control Facility. Open space lands to the north of the Stockton Sphere of Influence for use in spraying or spreading effluent generated by the plant will remain unaffected by the proposed project. The proposed project is not within the boundaries of the City of Lodi, nor within its Sphere of Influence, and this is why no reference is made to the City of Lodi General Plan.

Response L-4: The proposed project has undergone rigorous review by the U.S Fish and Wildlife Service under Section 7 consultation with Caltrans. The project was reviewed under the *Programmatic Biological Opinion on the Effects of Small Highway projects on the Threatened Giant Garter Snake in Butte, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo and Yuba Counties, California* issued to the Federal Highway

Administration on January 24, 2005. The Programmatic Biological Opinion establishes thresholds for impacts to giant garter snakes as well as standards for habitat suitability as described below.

The biological opinion defines giant garter snake habitat to include appropriate uplands within 200 feet of aquatic habitat. Based on the project design, approximately 0.2 acre of upland habitat located within 200 feet of Telephone Cut will be permanently impacted by the project at the proposed North Gateway Interchange; however, this is not suitable upland habitat for the giant garter snake as discussed below.

The biological opinion identifies agricultural areas supporting row crops, small grains other than rice, vineyards and orchards as unsuitable for giant garter snakes because they lack adequate cover and are subject to frequent disturbance. Other frequently disturbed areas are similarly excluded as upland habitat. The entire area of the proposed North Gateway Interchange consist either of row crops or farm access roads, neither of which is considered suitable upland areas for giant garter snakes.

For the reasons given above, no impacts to giant garter snake have been identified at the proposed North Gateway Interchange and no mitigation has been proposed. Similarly, no cumulative impacts have been identified. As stated above, this area is predominantly agricultural row crops and is generally considered unsuitable for giant garter snakes. In appending the project to the Programmatic Biological opinion, The U.S. Fish and Wildlife Service concurred with this conclusion.

Response L-5: Cumulative Impacts consist of an evaluation of impacts which are created as a result of the combination of the project together with all other projects which cumulatively contribute to degradation of an environmental resource. By their very nature cumulative impacts are assessed on a macro level, while project specific impacts are assessed on a smaller scale. The purpose of a cumulative impacts analysis is to determine whether a project's contribution to an environmental resource will be rendered cumulatively considerable and thus significant or whether the project's contribution to an environmental resource will be rendered less than cumulatively considerable and thus less than significant.

Farmland impacts were deemed to not be cumulatively considerable because the project's contribution to farmland impacts was considered less than significant (see Farmland impacts section) and because the project is consistent with the City of Stockton 2035 General Plan and other relevant planning documents. Please see Response L-1 regarding discussion of Growth Inducing Impacts. It should be noted that since the proposed

project accommodates and responds to future growth, but is not the impetus for growth. Therefore, conversion of farmlands has no direct association with the project. The proposed transportation facilities are provided as a result of growth where such farmland conversions have already occurred or are anticipated to occur due to adopted plans and entitlements.

Regarding the Visual and Aesthetics' graphic Figure 2.2c, the subdivisions and roadway infrastructure shown outside the boundaries of the proposed project reflect projected 2035 land uses based on the City of Stockton General Plan and are consistent with projected land use activities envisioned in the build-out year. While the graphic presents the subdivision layout, it is not an approved project and is intended to be representative of the potential future condition. As mentioned in the Environmental Impact Report, the proposed Gateway Interchange will only be built when land use development occurs and provides the transportation demand for this project. The land use designations for the areas surrounding the project have been accepted and approved in the City and County General Plans. Development contribution from these land developments will be required for the completion of this phase of the project build-out.

Response L-6: The City of Stockton and Caltrans will include the City of Lodi in all required noticing and distributions.

November 10, 2009

Attn: Gail Miller gail_miller@dot.ca.gov.
Central Sierra Environmental Analysis Branch
2015 E. Shields Avenue
Suite 100
Fresno, CA 93726

Caltrans Officials & Gail Miller,

Please acknowledge our organization's comments for Caltrans draft EIR recently made public for the **"North Stockton Improvement Project."**

We attended your public meeting on October 14 to learn more about the I-5 North Stockton Improvement Project. Specifically our comments will be limited to one of the proposed new interchanges, titled North Gateway Boulevard.

Caltrans Project Leaders explained this interchange had a "projected" build date of 2013-15 but dependent upon demands created by new development. Also, mentioned repeatedly was that this interchange will not be constructed using tax dollars but rather entirely funded by Developer Fees. This was confirmed by several Caltrans officials and is the understanding of the Director of San Joaquin County Council of Governments. Our comments are as follows:

- The EIR does not take into consideration economic damage to Lodi and north San Joaquin County Winegrape Industry and Ag-Tourism Industries. A recent Economic Impact Report of Wine & Grapes in Lodi (May 2009) paints a greatly needed and improving economic picture of a rapidly maturing regionally profitable cluster of ag-related industries. In synopsis the report profiles a growing industry creating other cluster industries based on wine production and sales via hospitality and tourism. Currently direct and indirect economic impact of wine production and clustered industries is a $5 Billion dollar contribution. Local industry leaders believe the area has only scratched the surface of its potential. This industry demands rural agricultural settings not urban. The Gateway Interchange, at the northern most point of the Stockton 2035 General Plan will create addition growth to the north, beyond Stockton's Sphere of Influence. Thus this Gateway Interchange becomes a huge growth-inducing element creating leap-frog development north, east and west through county land, paving over olive orchards and hundreds acres if not more of vineyards. This interchange will precipitate and encourage urbanization, destroying irreplaceable farmland and going against the efforts of wine marketing groups, farming groups, conference & visitor groups, Chambers of Commerce and the City of Lodi's interests. Suffice to say, our community is not in favor of this proposed interchange, and ask it be removed from your final draft. LOC-1
- Additionally, as stated earlier Caltrans officials repeatedly have stated the North Gateway Interchange project is to be funded by developer fees. The A.G. Spanos Company has LOC-2

"revised" their plans for development north of 8-Mile Road to the east and west of I-5. In 2004 Spanos Company plans called for an Interchange also named "North Gateway" in the same location as the one you propose today. However, the current development plans for this area along I-5 are quite different. They include hundreds of acres devoted to seeding a "greenbelt" among many other environmentally friendly features. The company openly states the Gateway Interchange is not needed for their development "The Preserve." Therefore we would believe this developer will not be providing any funds to build said Interchange if they do not believe it is needed. If the developer of land abutting I-5 is not funding the Gateway Interchange it is unlikely to think some other one will. If it is not needed then the interchange totally becomes growth-inducing creating unplanned development destroying prime agricultural lands. LOC-2 cont.

We believe it is not the will or intent of Caltrans to severely damage the economic engine of our city and that of north San Joaquin County. However it appears these plans as they relate to the Gateway Interchange were largely done in a vacuum in regards to what our area is trying to accomplish through value-added agriculture. LOC-3

Also given the down-turn in the economy from a residential and commercial building perspective, it is highly unlikely anything will be built north of 8-Mile Road for perhaps many years. Also, to those ends there are at least two entire subdivisions to the south in Stockton along Atlas Tract that will build out before going north of 8-Mile, as well as hundreds of acres inside the Stockton City limits to the south of 8-Mile Road. What is the hurry to build this Gateway interchange in the middle of farmland? Also the Attorney General of California has told the City of Stockton to build out through infill development in the future before sprawling outwardly. It appears Caltrans may NOW be the leading agent of sprawl inducing development with your Gateway interchange plan. LOC-4

In conclusion, it is the Lodi District Chamber of Commerce's desire and also that of many other vested land-owners, farmers, agricultural organizations, business industry associations and community citizen groups that the North Gateway Boulevard interchange be dropped from your I-5 Improvement Project and completely eliminated from the final environmental document. LOC-5

Sincerely,

Robert E. Patrick
President / CEO
Lodi District Chamber of Commerce

Cc: Lodi Winegrape Commission
Lodi District Grape Growers Association
Visit Lodi
Campaign for Common Ground
Jerry Brown, A. G. Office State of California

Lodi District Chamber of Commerce, Non Profit Organization (email November 12, 2009)

Response LOC-1: The transportation demand estimates for the Gateway Interchange and improvements north of Eight Mile Road are based on the land uses identified in the 2035 City of Stockton General Plan (dated 2006), and the San Joaquin Council of Governments 2007 Regional Transportation Plan which also identified a need for a new interchange north of Eight Mile Road. This project accommodates the traffic demand needs identified in that planning document. The economic impacts of the conversion of agricultural land uses to commercial and residential land uses was addressed in the City of Stockton 2035 General Plan Environmental Impact Report dated 2007. The suggestion that either the North Gateway Interchange or the potential development within the City of Stockton's Sphere of influence will be growth inducing is not founded, see section 2.1.2 Growth. Lands to the north of the Stockton Sphere of Influence are under the governmental jurisdiction of the City of Lodi. Accordingly, the City of Lodi governs the use of those lands, including decisions on entitlement and potential for development. Should the City of Lodi believe that the project will be growth inducing on lands subject to their own jurisdiction; the City of Lodi has the discretionary authority to prevent such growth.

Response LOC-2: The 2035 City of Stockton General Plan designates "Village" land use for the area referenced by the commenter. An analysis of traffic demand and of the need for the proposed project and its composite elements is based on those land use designations (which are designed to look out to the next 20-25 years) and are not predicated upon any single land use concept. The A.G. Spanos Companies have been planning for land development in this area and have submitted applications to initiate the entitlement process. A Notice of Preparation was circulated for the Gateway Village project in June 2007. The proposed development plan identifies the North Gateway Interchange as a component of the project. This concept remains active in the City of Stockton's entitlement review process.

Response LOC-3: Several planning documents have contained the outline for a new interchange north of Eight Mile Road for several years including the aforementioned 2035 City of Stockton General Plan and San Joaquin County Council of Governments Restricted Transportation Plan. In addition, the City of Stockton extended its Sphere of Influence from the previous Eight Mile Road limit to the current limits in 2004. By shifting the Sphere of Influence to the north, the City's General Plan Study area was expanded to the north to include the "Gateway Village" project area, including the

proposed North Gateway Interchange. There have been numerous opportunities to voice concern over proposed land uses at City and County meetings. It is beyond the scope of Caltrans' responsibilities to designate land use; however, providing roadway infrastructure that is planned based on local agency land use and transportation forecasts, is of the utmost importance to Caltrans.

Response LOC-4: The Gateway interchange will be built when development approval by the City requires it. Since development fees will drive the schedule, designing this component of the project in preparation for the anticipated development is considered prudent decision-making despite the time lag that may occur before the interchange is actually constructed.

Response LOC-5: Please see above Responses LOC-1 through LOC-4.

Harry Osell
<harryosell1@clea
rwire.net>

10/02/2009 01:24
PM

To: gail_miller@dot.ca.gov, Scott_Guidi@dot.ca.gov

cc:

Subject: I5 project comments between Dr. Martin King and 8 mile Rd

Something needs to be done in this area on the Pershing Off Ramp. My wife almost got forced off the I5 into the channel by a truck , and each time I merge onto I5 from the crosstown it's difficult with my entering I5, as traffic on I5 is exiting to the Pershing Off Ramp. I have to both watch oncomming traffic to merge but traffic exiting to Pershing as well . She was entering I5 from the crosstown freeway and a truck was exiting from I5 to the pershing exit. He/she did not see my wife's car and was squeezing her against the railing , at the last moment he/she saw my wife and abruptly swerved back onto I5. What about just closing the Pershing exit people could use the Mt Diablo exit and be delayed what a minute or two... HO-1
thank you Harry Osell 209 948 9929 1856 Christina Stockton , CA 95204

--
patron saint of gardeners is St. Filace

Harry Osell, private party, (email October 2, 2009)

Response HO-1: The proposed project does not include any physical improvements other than signing and lane striping modifications to the mainline freeway (Interstate 5) south of Country Club Boulevard. The Pershing Avenue Interchange is located to the south of Country Club Boulevard, and therefore beyond the defined roadway construction limits.

Luvtu77@aol.com

10/04/2009 09:59 AM

To gail_miller@dot.ca.gov

cc

Subject I-5 North Stockton Improvement project

DB-1

Dear Gail,

The freeway noise level in Lincoln Village West is substantial. A freeway wall controlling some of this traffic noise on the west side of I-5 between Benjamin Holt Drive and Hammer lane seems appropriate and needed. Please submit this problem for consideration at the meeting and into the record.

Thank you,
Dan Brady
6820 Gordon Ct.
Stockton, Ca. 95219

Dan Brady, private party, (email October 4, 2009)

Response DB-1: Comment noted. Soundwalls along the Interstate 5 corridor will be built as a part of this project including the area between Benjamin Holt Drive and Hammer Lane. Please see the noise section of this document for this discussion and refer to Figures 2.5A-I.

To: "Dana Cowell" <Cowell@sjcog.org>, "Kevin Sheridan" <ksheridan@sjcog.org>, "William Ridder" <wridder@sjcog.org>

cc: "Dianne

Subje Fw:
ct:

Comment received.

>>> "Nancy McPherson" <nancymcp@sonic.net> 10/06/2009 7:10 AM >>>
I am hopeful that part of the project will include a plan for beautifying I-5. The work done on I-5 south of March Lane is less than impressive. The unattractive sound walls without decoration or vegetation, which appear to be constantly covered in graffiti, are an eyesore. The completed portion of I-5 is a detriment to any positive perception out-of-towners might have of our city. If this same look is allowed north on I-5, I believe we will have sealed our fate as an unattractive city. Other cities along the I-5 corridor have found a way to preserve an attractive view of their city; I am really hoping Stockton will do the same. NM-1

Thank You for requesting comments on the project. Nancy McPherson

1

Nancy McPherson, private party, (email October 6, 2009)

Response NM-1: Aesthetic treatments will be incorporated for the additional soundwalls in the project area that will create unique visual elements and break up the visual landscape along the Interstate 5 corridor. The proposed soundwalls will include aesthetic enhancements that will be professionally designed. Additional beautification along the project corridor will include undercrossing motifs and aesthetic treatments for bridge columns. Landscaping would be provided at interchanges to be modified or constructed within the project limits. Please see Section 2.1.7 Visual/Aesthetics for additional information.

Patricia Voss
<tinricia@att.net
>

To Gail_Miller@dot.ca.gov

10/06/2009 08:40 AM

cc

Subject N I-5 Project

I do hope that any of the improvements considered will positively affect our city. As you drive north on I-5, the view is less than attractive. It is no wonder that so many people have such a poor impression of Stockton. My concern is not only the attactiveness of the project, but the long term, irritating length of time that this project will take to complete and the "mess" that each interchange will have on the residents of that area. Do plans include contingencies in the event that portions of the project run into unforseen problems and are not completed? Sudden loss of funding? Re-direction of funds to other projects. No funding for 'finishing' touches. PV-1

It took 'forever' to get some attention to the on/off ramps at March Lane & Ben Holt - what will it take to have some beautification of the interchange or will the new interchanges just fill with garbage? As a user of the freeway system, I have seen some very attractive interchanges - is it too much to hope for that Stockton will rate the same quality? PV-2

Thank you for allowing comments
Patricia Voss, Homeowner

Patricia Voss, private party, (email October 6, 2009)

Response PV-1: The project has a number of aesthetic enhancements to improve the image of the freeway corridor. While the project will require a number of years to construct, each phase will deliver a completed improvement for use by the public and to minimize the disruption. Each phase of construction funding is required to be financially secured; no phase of construction will begin without adequate funding, and there will not be a sudden loss of funding. The agency constructing each project or phase and will not enter into a construction contract without obtaining full and adequate funding.

Response PV-2: This project includes design elements and mitigation measures to help ensure that the project area retains its aesthetic value after construction of the proposed project. The interchanges will be landscaped in ways that improve the image of the city. Caltrans maintenance programs and private sponsorships will assist in providing periodic removal of debris accumulation within the freeway. Please see the Visual/Aesthetics Section 2.1.7 of the Environmental Impact Report for further information.

CALTRANS
Attn: Gail Miller
Central Sierra Environmental Analysis Branch
2015 E. Shields Avenue, Suite 100
Fresno, CA 93726
October 7, 2009

Dear Sir or Madam,

I am writing to voice my opposition to one part of the proposed Interstate Expansion Project for Stockton, CA, specifically the future Interchange at Otto Drive.

My home and community is within a 1/4 mile of Otto Drive. It has been my opinion that any residential area in Stockton, that has an on and off ramp that dumps into their residential area, is one that has a greater incident of crime, run down property and lower property values. Take Country Club and Alpine for an excellent example.

Otto Drive is already at the end of a crime ridden area off Kelly Drive. Only recently, through community and police efforts, has the community begun to turn around and have less crime and better looking property. If an Interchange is placed on Otto Drive, it will only serve the people who look for homes to rob near easy freeway access to get in and out easily. DC-1

Another issue would be the through way access and increased traffic flow on both Otto Drive and especially Estate Drive. To the North and East of Otto Drive, Estate Drive runs directly through my community and past an elementary school to Thornton Road. To the south and east of Otto Drive, Estate which becomes Wagner Heights runs past a Junior High, also intersecting with Thornton Road. This easy freeway access will draw a heavy increase in traffic from both directions on Estate Drive and Wagner Heights. This increased traffic will usually be exceeding the speed limits to get somewhere fast and will pose unnecessary danger to the students of both schools and members of the community. Increased traffic on Estate Drive and Wagner Heights will also lower the values of the properties on these streets and the adjacent connecting streets, such as mine. DC-2

However, if for some reason you still foolishly go thorugh with this bad idea at Otto Drive, please be sure to place many 15 Mile an Hour Speed Bumps on Estate Drive, Wagner Heights, Otto Drive and Stanfield to discourage speeding and traffic flow through my community. DC-3

The added benefit of having easy freeway access for me personally, is outweighed by the consequences of having the increased traffic flow through my community and the easy access for the criminal types to rob the community homes, thus lowering all property values significantly.

Please DO NOT build the Otto Drive Interchange and save the taxpayers some money. DC-4

Thank you

Duane Cissna

Duane Cissna
3310 Timberlane Drive
Stockton, CA 95209

Duane Cissna, private party, (October 7, 2009)

Response DC-1: Stockton City police will continue to provide police protection services to the neighborhoods surrounding the new interchange in a manner equivalent to services provided for all city residents and the business community. According to a representative at the City of Stockton Police Department construction, of a new interchange would not increase or encourage criminal activities. Conversely, the Police Department believes that a new interchange would provide easier access for patrol units to make more regular visits to the area and give better access routes for emergency vehicles potentially discouraging criminal activities. Also, the Police Department confirmed that no additional units or equipment would be required to service the interchange as it already falls within their service area.

Response DC-2: Comment noted. The proposed Otto Drive interchange was a part of the development plan in both the 1990 General Plan and the 2006 General Plan update. Traffic from the interchange has been anticipated in the long range city planning and is needed as a vital component of the city's future street system to prevent deterioration of traffic flows in the project vicinity. While a traffic increase on Otto Drive is expected in the immediate vicinity of the new freeway connection, traffic volumes on local streets will be reduced elsewhere. The City has taken this into consideration in its future planning and with this project, will implement a component of the General Plan that was approved by the City Council as a means to serve the long-term traffic demand in this area of Stockton and to avoid traffic congestion and roadway gridlock.

With respect to increasing speeds due to the proposed circulation improvements, the City routinely patrols these roadways and enforces the motor vehicle code within the affected school zones. Because posted speed limits will not be changed (and will continue to be legally enforced), because the volumes anticipated would lead to lower speeds than currently exist (higher traffic volumes correspond with lower speeds), and because traffic analysts have designed the roadways to operate at current speeds (or lower), the City does not anticipate an increase in traffic speed as a result of changes to traffic volumes. Please see the Interstate 5 North Stockton Improvements Traffic Operations Report for further details.

Response DC-3: Comment noted. Traffic calming measures (e.g. speed bumps) on these streets to address speeding and traffic flow are outside the purview of this

project and would in any case be the responsibility of the local jurisdiction. Please see the Interstate 5 North Stockton Improvements Traffic Operations Report for further details.

Response DC-4: Refer to the responses DC-1 to DC-3.

Richard Edelstein
<edelstein@gl-net
works.com>
10/08/2009 10:57
AM

To
scott_guidi@dot.ca.gov
cc
Subject
North Stockton Improvement Project

Dear Mr. Guidi,

I have a couple of questions regarding the project:

1) Is Noise Abatement by constructing walls or barriers included in the project? The current barriers end between the Country Club Exit and the March Lane exit. If not, why not? Sound walls will be constructed at this location. RE-1

2) Why is the investment being made to build the North Gateway Blvd. interchange when there is no current development in that area and future development of the scale that would require an interchange is not certain? The Environmental document clears the corridor of I-5 through Stockton and the 4 Interchanges that are required to undergo construction in order to accommodate the City of Stockton's approved growth plan (i.e., approved General Plan). The actual construction will occur when the need is triggered. In other words construction of the Interchange improvements will be phased out to be consistent with the City's expansion. RE-2

Thank you for your time and consideration.

Cordially,

Richard Edelstein

Richard Edelstein
6888 Atlanta Circle
Stockton, CA 95219
U.S.A
Tele: 1 (209) 351-5857, 957-1841
Email: edelstein@gl-networks.com

Richard Edelstein, private party, (October 8, 2009)

Response RE-1: Yes soundwalls will be constructed at this location. Please see Figure 2.5 A-I in the Environmental Impact Report. For further explanation of sound wall extension decisions please see the Noise Abatement Decision Report and the Noise Section of the Environmental Impact Report.

Response RE-2: No investment of funds is being made to build the North Gateway Blvd. interchange at this time. Design of this interchange will be completed in accordance with the 2035 City of Stockton General Plan (dated 2006), and the San Joaquin Council of Governments 2007 Regional Transportation Plan which identified a need for a new interchange north of Eight Mile Road based on proposed land uses. The actual construction will occur when the need is triggered. In other words construction of the interchange improvements will be phased over time to be consistent with the City's approval of land development activity.

The Gateway interchange will be built when development approval by the City requires it. Since development fees will drive the schedule, designing this component of the project in preparation for the anticipated development is considered prudent decision-making despite the time lag that may occur before the interchange is actually constructed.

"Stan Strassburg"
<sstrassburg1@sbcglobal.net>
10/09/2009 08:09 PM

To <gail_miller@dot.ca.gov>
cc
Subject Hwy I-5 improvements

Hi Gail,

I am curious if this upcoming Improvement Project includes a sound barrier wall between March Lane and Ben Holt? When I bought my home I was concerned about the highway noise and the realtor said that there will be a wall built within a year or two, this was over ten years ago. Hopefully, this would be part of the improvement project. ST-1

Sincerely,

Stan Strassburg

Stan Strassburg, private party, (October 9, 2009)

Response ST-1: Yes soundwalls will be constructed at this location. Please see Figures 2.5 G-I in the Environmental Impact Report. For further explanation of sound wall extension decisions please see the Noise Abatement Decision Report and the Noise Section 2.2.7 of the Environmental Impact Report.

Terrence VanOss
<jujripper@yahoo.com>
10/05/2009 08:42 AM

To: Gail_Miller@dot.ca.gov
cc:
Subject: Flyer re I-5 North Stockton Improvement Project

As one of the many persons affected by this project, I offer this comment.
I urge CalTrans to reconsider its decision not to extend the sound wall on the east side of I-5 north of Country Club. Doing this in conjunction with the new project would make it much easier. This new project will measurably increase the freeway noise in that area because the widening of a freeway always brings more traffic and the noise will increase by the very fact that traffic will be moving faster. The gaps in the sound wall are very inconsistent with the appearance of the area and a blight on the surrounding area. I understand CalTrans reasoning in not completing that portion of the sound wall but I think it is outweighed by the consequences of the result. TV-1

Terrence Van Oss, private party, (email October 11, 2009)

Response TV-1: Thank you for your comment. Sound walls currently run continuously from Country Club Boulevard to the Calaveras River on the eastern side of Interstate 5. There are no gaps in soundwall coverage in this area and so no need for additional soundwalls was determined in the environmental document. A gap in the soundwall will occur at the Calaveras River because the noise analysis determined that no sensitive receptors are nearby because of proximity of the river. The proposed soundwalls north of the Calaveras River and the existing soundwalls south of the Calaveras River were evaluated as part of the Noise Study Report and were found to provide adequate protection to the sensitive receptors located to the north and south of the river crossing. Please see Figure 2.5H and 2.5I in the Environmental Impact Report.

Chris Sandoval
<chrissandoval2003@yahoo.com>
10/15/2009 01:18 PM

To: gail_miller@dot.ca.gov
cc: Arcie Sandoval <arcitita@yahoo.com>
Subject: Project Proposal

Good afternoon,

I have a question regarding the project proposal for Stockton, freeway and interchange improvements, will sound barriers be made between Benjamin Holt and North Gateway Blvd. (future interchange)? They were made along Interstate 5 starting at March Lane on both sides going south but nothing was ever done above Benjamin Holt to Eight Mile. SA-1

Sincerely,

Chris Sandoval

Chris Sandoval, private party (email October 15, 2009)

Response SA-1: Yes, soundwalls will be constructed at this location. Please see Figures 2.5a-g in the Environmental Impact Report. For further explanation of sound wall extension decisions please see the Noise Abatement Decision Report and the Noise Section 2.2.7 of the Environmental Impact Report.

Re EIR I-5 North Stockton Improvement Project.txt

"L. A. Nordstrom"
<Lanordstrom@sbcglobal.net>

10/16/2009 08:55 AM

To <Gail_Miller@dot.ca.gov>

cc

Subject EIR I-5 North Stockton Improvement Project

Gail Miller, Senior Environmental Planner Caltrans District 06 Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, CA 93726-5428

RE: Draft EIR Interstate 5 North Stockton Corridor Improvements (SCH No. 2008102101)

Dear Gail,

As a follow up to the public meeting Wednesday 10/14/09 and our discussion, I have reviewed the Draft Environmental Document and offer the following comments.

This Document and specifically Chapter 2, Section 2.1.6 does not analyze the impacts to pedestrian and bicycles on the Arterial Street modifications that are being proposed. The DEIR fails to describe the severity and extent of the impacts not only to the pedestrian and bicyclist, but also to the loss of the street trees and landscape parkways within the project Arterial Street Corridors. The Hammer Lane modifications especially impacts pedestrian and bicycles yet no discussion is made within the DEIR. LN-1

This Project Environmental Document should discuss and analyze all impacts to pedestrian and bicycles on the Arterial Streets including provisions for safety and landscape separation from the vehicle lanes. The Document should further address how the proposed improvements comply with State and Local policies relating to Complete Streets Design including, but not limited to LN-2
1) Caltrans Complete Streets policy, 2) California AB1358, 3) Stockton 2035 General Plan and Street Design Guidelines. LN-3

Please e-mail or call if you have any questions.

Thanks, Larry

Lawrence A. Nordstrom
L. A. Nordstrom Associates
LANordstrom@sbcglobal.net
Phone/Fax 209-464-8968

Lawrence A. Nordstrom, private party (email October 16, 2009)

Response LN-1 and LN-2: For pedestrian and bikeway discussion, please see Chapter 2, Section 2.1.6, page 48 for project area and page 60 (Impacts to Pedestrian and Bikeway Facilities) for any impacts to pedestrian and bikeway facilities within or surrounding the project area. Discussion of streetscape and/or design is located in Section 2.1.7 Visual/Aesthetics. The proposed improvements will not affect existing street trees or landscaping along arterial street corridors except in the vicinity of the interchanges. A landscape plan will address tree replacement in selected locations due to the loss of trees within the mainline corridor.

Response LN-3: Local and government policy was considered and consulted in the analysis of this Environmental Impact Report including but not limited to the Stockton 2035 General Plan, CEQA regulations, and Caltrans Policy.

Shirley Bills
<twoseniorbills@yahoo.com>

10/23/2009 12:25 AM

To
Gail_Miller@dot.ca.gov,
Scott_Guidi@dot.ca.gov,
hotline@buethecommunications.com

cc

Subject

Oct 22,2009

Dear Sirs:

Thank you for the opportunity to respond. It is sincerely hoped my following comments will be seriously considered. I am a retired businessman and a resident of Twin Creeks Estates for the past 19 years. Most of your future planning proposals seem to be well thought out for the present and future planned increases in homes and business in the northwest section of Stockton, with the exception of the Otto Drive Interchange. Please carefully consider the following recommendations of changes and for the reasons stated. This is respectfully submitted but with emphasis to express the FIRM OPINION and desire of most, if not all, 383 Twin Creeks home owners.

Trinity Parkway on the west side of the Twin Creeks Estates has now been changed from the original planned two (2) lane to a designated four (4) lane street or expressway extension south from Bear Creek to Otto drive primarily due to the soon to be developed Atlas Tract with an eventual 3,000 to 4000 homes directly west of Twin Creeks Estates and your NOW PLANNED Interchange at Otto Drive and I-5 as the primary route to the I-5 Freeway. This will bring a tremendous amount of UNWANTED traffic, smog, noise and all the other problems associated with an over abundance of traffic THROUGH THE MIDDLE of the 383 homeowners in Twin Creeks Estates. It will also devalue our property and deprive us of our nice, quiet and peaceful neighborhood. we envisioned and have enjoyed these last almost twenty (20) years. Trinity Parkway is also planned to be EXTENDED from Otto Drive south to Hammer Lane in the future providing a continuous expressway all the way from Eight Mile Road to Hammer Lane. A FULL INTERCHANGE at Otto & I-5 will also DIRECTLY connect us next to all the crime elements on Kelly Drive which is THE LAST THING WE HOMEOWNERS WANT. SOLUTION: Complete Trinity Parkway south to Hammer Lane NOW, and PLEASE, " PLEASE" DO NOT BUILD THE INTERCHANGE AT OTTO and I-5. Mariners Drive IS ONLY one (1) block east of Trinity Parkway and that will PROVIDE THREE (3) LANES OF TRAFFIC NORTH AND SOUTH FROM OTTO DRIVE TO THE HAMMER LANE INTERCHANGE. There will be many, many millions saved by not building the Otto Drive and I-5 as a full Interchange and some of those tax paid funds

SFB-1

SFB-2

S&FBills.txt

can be used for the Trinity Parkway which would then be complete from Eight Mile Road to Hammer Lane providing GREAT access for all. Everybody would be happier, great access everywhere by everyone and ultimately MANY tax dollars would be saved.

Sincerely,

Shirley and Frank Bills
4435 Sturgeon Rd
Stockton, CA

Shirley and Frank Bills, private party (email October 22, 2009)

Response SFB-1: The proposed Otto Drive interchange was a part of the development plan in both the 1990 General Plan and the 2006 General Plan update and was evaluated programmatically as a part of the General Plan EIR. The Interstate 5/Otto Drive interchange is needed to accommodate the traffic demands forecast for this area through the year 2035 at an acceptable level of traffic service. The new interchange will serve the traffic demand generated by forecast traffic volumes from current and future development. This interchange represents an important component of the City's circulation network and will improve traffic conditions and accessibility in the immediate area as well as adjacent interchanges. Significant improvements are anticipated to the traffic congestion currently occurring at the Hammer Lane Interchange. In addition, the City is also planning on signalizing and widening the intersections of Otto Drive with Mariners Drive, Bancroft Way, and Estate Drive to accommodate traffic and from the Interstate 5/Otto Drive interchange. Noise, traffic and air quality impacts associated with this project (including the construction of Otto Drive) have been analyzed in technical studies and are discussed in sections 2.2.7 (Noise and Vibration), 2.1.6 (Traffic and Transportation/Pedestrian and Bicycle Facilities), and 2.2.6 (Air Quality).

Response SFB-2: According to a representative at the Stockton Police Department, construction of a new interchange would not increase or encourage criminal activities. Conversely, the Police Department believes that a new interchange would improve access to the area for patrol units, enabling them to make more regular visits and potentially discouraging criminal activities, and give better access routes for emergency vehicles, possibly increasing public safety. Also, the Police Department confirmed that no additional units or equipment would be required to service the interchange as it already falls within their service area.

The extension of Trinity Parkway from Bear Creek Bridge to Hammer Lane is a city project that is funded through local sources including fees paid by the development community. Federal funds are not planned to be utilized for the Trinity Parkway construction.

It should be noted that the City has approved development projects west of Interstate 5 (Delta Cove and The Sanctuary) that require the construction of Trinity Parkway, as well as the Otto Drive Interchange and Hammer Lane Interchange modifications. All of these improvements are required to serve these projects. Mariners Drive cannot

support the traffic from these approved projects without also construction of Trinity Parkway, the Otto Drive Interchange and modification of the Hammer Lane Interchange.

October 24, 2009

Jack Richardson (e-mail to G. Miller, S. Guidi, and Hotline)
(209) 477-6906
j2j1953@sbcglobal.net

10/22/2009 11:10 AM

Subject : Proposed Otto Drive Interchange

Thank you for the opportunity to respond. It is sincerely hoped my following comments will be seriously considered. I am a retired businessman and a resident of Twin Creeks Estates for the past 19 years.

Most of your future planning proposals seem to be well thought out for the present and future planned increases in homes and business in the northwest section of Stockton, with the exception of the Otto Drive Interchange. Please carefully consider the following recommendations of changes and for the reasons stated. This is respectfully submitted but with emphasis to express the FIRM OPINION and desire of most, if not all, 383 Twin Creeks home owners.

Trinity Parkway on the west side of theTwin Creeks Estates has now been changed from the original planned two (2) lane to a designated four (4) lane street or expressway extension south from Bear Creek to Otto Drive primarily due to the soon to be developed Atlas Tract with an eventual 3,000 to 4000 or more homes directly west of Twin Creeks Estates and your NOW PLANNED Interchange at Otto Drive and I-5 as the primary route to the I-5 Freeway. This will bring a tremendous amount of UNWANTED traffic, smog, noise and all the other problems associated with an over aboundance of traffic THROUGH THE MIDDLE of the 383 homeowners in Twin Creeks Estates. It will also devalue our property and deprive us of our nice, quiet and peaceful neighborhood we envisioned and have enjoyed these last almost twenty (20) years. Trinity Parkway is also planned to be EXTENDED from Otto Drive south to Hammer Lane in the future providing a continuous expressway all the way from Eight Mile Road to Hammer Lane. A FULL INTERCHANGE at Otto & I-5 will also DIRECTLY connect Twin Creeks Estates, AND the near future Atlas Tract homes directly to all the crime elements on Kelly Drive which is THE LAST THING WE HOMEOWNERS WANT. RI-1

SIMPLE SOLUTION: Complete Trinity Parkway south to Hammer Lane "NOW" , and PLEASE, "PLEASE" DO NOT BUILD THE INTERCHANGE AT OTTO and I-5. Mariners Drive "IS ONLY" one (1) block east of Trinity Parkway and that will PROVIDE "THREE (3) LANES OF TRAFFIC NORTH AND SOUTH" FROM OTTO DRIVE TO THE HAMMER LANE INTERCHANGE. There will be many, many millions saved by not building Otto Drive and I-5 as a full Interchange and some of those VALUABLE tax paid funds can be used for the Trinity Parkway extension which would then be a complete expressway from Eight Mile Road to Hammer Lane providing GREAT access for all. RI-2

Everybody would be happier, great access everywhere by everyone and ultimately MANY tax dollars would be saved.

Sincerely,
Jack Richardson

Jack Richardson, private party (email October 24, 2009)

Response RI-1: Please see response SFB-1 and SFB-2 above.

Response RI-2: The extension of Trinity Parkway from Bear Creek Bridge to Hammer Lane is a city project that is funded through local sources, including fees paid by the development community. Federal funds are not anticipated to be utilized for the Trinity Parkway construction. Federal funds committed to this project cannot be redirected to the Trinity Parkway project.

It should be noted that the City has already approved development projects west of Interstate 5 (Delta Cove and The Sanctuary) that require the construction of Trinity Parkway, as well as the Otto Drive Interchange and Hammer Lane Interchange modifications. All of these improvements are required to serve these projects. Mariners Drive cannot support the traffic from these approved projects without also construction of Trinity Parkway, Otto Drive Interchange and modifying the Hammer Lane Interchange.

Marianne McCarroll <ladyfish@dartmouth84.org>

10/28/2009 02:01 PM

To: Scott_guidi@dot.ca.gov

cc:

Subject: Future I-5 interchange hearing Stockton CA

Dear Scott - I received a flyer about a hearing Oct 14, 2009 about 2 new interchanges on I-5 just north of Stockton CA

I had thought that the area west of I-5 was to be protected and not developed on and couldn't understand why we are entertaining (and spending taxpayers' money) to consider this. MM-1

I have since learned-to my shock- that huge developments have been approved here. I can't understand the need and if the developers are going to pay for the exits are they paying for the cost of this flyer, mailing and hearing? MM-2

I don't want to see more development 30 feet from the highway like the spanos building and shopping mall at 8 mile road. It is an eyesore every time I drive by. Why did they put it so close to the highway to distract drivers. That used to be a peaceful stretch of road with a peaceful view of Mount Diablo. Now I am bombarded by neon signs and the back side of a mall. MM-3

What's more there is no community in Spanos Park West - we don't need more development like that. We need development / redevelopment downtown and we need to leave open space between towns. MM-4

I hope Cal Trans has handed the bill for the flyer, mailing and hearing to the developers who have made the need for the hearing.

Thank You

Cheers - Marianne

# # #

Marianne McCarroll & David Powell • 209-951-7223 • 209-603-6290 • 3206 Rutledge Way • Stockton CA 95219

Do not let what you cannot do interfere with what you can do - John Wooden

Marianne McCarroll, private party (email October 28, 2009)

Response MM-1 to MM-4: Development and land use anticipated in the area west of Interstate 5 has been included within the 2035 City of Stockton General Plan. The project improvements are based on approved traffic forecasts derived from the anticipated General Plan land use, and not from specific projects. The City is anticipating future development consistent with the General Plan land use. Actual development in the Stockton area is independent of this proposed project and is not included within the environmental scope.

Caltrans is doing the design for this interchange as part of the project because, since the interchange is called for in Stockton's general plan, it makes sense to include it with this design package. Actual construction of the proposed interchange will not be part of this project, and will not take place until development in the area creates the need. When that happens, the developers who are building in the area will help fund the construction.

Caltrans and the City of Stockton are engaged in planning for the region's future transportation systems. Accordingly, traffic demand generated by current and forecast traffic volumes is being addressed by these agencies to maintain appropriate levels of service and avoid congestion and delay. All of the forward planning is conducted in conjunction with regional forecasts that include reasonably foreseeable development conditions as allowed in General Plan land use programs and adopted Regional Transportation Plans.

Dear Ms. Miller,

I was given your name by Scott Guidi. I am writing on behalf of the residents of Dena Ct. to request the completion of a soundwall project between Monte Diablo on-ramp and the country Club off-ramp be included in the North Stockton Improvement Project. Years ago we were told that this project meets the riteria but no funds were available. Since this no longer appears to be the case since soundwalls are included in this new project, we eagerly await your reply. VB-1

Thank you,
Veronica Velasco
1441 DENA Ct.
Stockton, CA. 95203
209-463-4958

Veronica Belasco, private party, (October 2009)

Response VB-1: These soundwalls are included in the proposed project. Proposed soundwalls will cross Bear Creek and will provide continuous soundwall coverage between Country Club Boulevard and Monte Diablo Avenue on the east side of Interstate 5. Please see Figure 2.5I and Noise Section 2.2.7 for further details.

Mary Webb
<notairhead@yahoo
.com>

11/01/2009 05:23
PM

To
gail_miller@dot.ca.gov
cc
Subject
North Stockton Improvement Project

Dear Gail Miller:

I was unable to attend the meeting held by Caltrans on Wednesday, October 14 in Stockton. I am, however, in receipt of your postcard mailed to all households in Twin Creeks Subdivision, which is located west of I-5, north of Hammer Lane and south of Eight Mile Road. According to this postcard, it is Caltran's intent to build a future interchange at Otto Drive. This new interchange would have an enormous negative impact on our small (378 lots) subdivision. Not only would it require the removal of existing occupied homes, it would open our very low crime-rate neighborhood to a very high-rate crime area directly east of I-5 on Otto Drive, which intersects with Kelley Drive. This is an extremely frightening prospect to all who live in, and enjoy the peacefulness, of Twin Creeks Subdivision, as well as all the apartment complex areas along Mariners Drive. MW-1

Because of this, I am writing to request that Caltrans revisit their plans to build an interchange at Otto Drive and I-5. Once the interchanges at Hammer Lane and Eight Mile Road are modified, and the Trinity Parkway just east of I-5 is extended south all the way from Eight Mile Road to Hammer Lane, I don't see the need for Caltrans to expend millions of dollars to build this additional interchange. In the past, the Trinity Parkway was originally planned as a two lane roadway. However, just in the past few months, the levee on the west side of Twin Creek Subdivision was moved eastward in order to construct a four lane, higher density, higher speed roadway that will eventually link Eight Mile Road and Hammer Lane. MW-2

I am asking that Caltrans review this information. I think that once they see the redesign for the Trinity Parkway roadway from Eight Mile Road south to Hammer Lane, and the expansions of the Hammer Lane and Eight Mile Road interchanges at I-5, they will see that is not necessary to construct an additional interchange at Otto Drive. This will save Caltrans millions of dollars and protect the security of our little subdivision, as well as all the apartment complexes along Mariners Drive to the south of us. It would be a win-win opportunity for all the current residents west of I-5 as well as a savings of millions of dollars for Caltrans.

Respectfully submitted,

Mary Webb
4439 Sturgeon Road
Stockton, CA 95219
209-473-2034

Mary Webb, private party (email November 01, 2009)

Response MW-1: According to a representative at the Stockton Police Department, construction of a new interchange would not increase or encourage criminal activities. Conversely, the Police Department believes that a new interchange would improve access to the area for patrol units, enabling them to make more regular visits and potentially discouraging criminal activities, and give better access routes for emergency vehicles, possibly increasing public safety. Also, the Police Department confirmed that no additional units or equipment would be required to service the interchange as it already falls within their service area.

Response MW-2: The proposed Otto Drive interchange was a part of the development plan in both the 1990 General Plan and the 2006 General Plan update and was evaluated programmatically as a part of the General Plan EIR. The Interstate 5/Otto Drive interchange is needed to accommodate the traffic demands forecast for this area through the year 2035 at an acceptable level of traffic service. The new interchange will serve the traffic demand generated by forecast traffic volumes from current and future development. This interchange represents an important component of the City's circulation network and will improve traffic conditions and accessibility in the immediate area as well as adjacent interchanges. Substantial improvements are anticipated to the traffic congestion currently occurring at the Hammer Lane Interchange. In addition, the City is also planning on signalizing and widening the intersections of Otto Drive with Mariners Drive, Bancroft Way, and Estate Drive to accommodate traffic and from the Interstate 5/Otto Drive interchange.

The extension of Trinity Parkway from Bear Creek Bridge to Hammer Lane is a City project that is funded through local sources, including fees paid by the development community. Federal funds are not anticipated to be utilized for the Trinity Parkway construction. Federal funds committed to this project cannot be redirected to the Trinity Parkway project.

It should be noted that the City has already approved development projects west of Interstate 5 (Delta Cove and The Sanctuary) that require the construction of Trinity Parkways, as well as the Otto Drive Interchange and Hammer Lane Interchange modifications. All of these improvements are required to serve these projects. Mariners Drive cannot support the traffic from these approved projects without also construction of Trinity Parkway, Otto Drive Interchange and modifying the Hammer Lane Interchange.

"Pat Sloan"
<psloan10@comcast
.net>

11/07/2009 10:06
AM

To
<gail_miller@dot.ca.gov>
cc
Subject
Proposed I-5 Improvement Project in
Stockton (Martin Luther King Drive
to North Gateway)

Dear Ms. Miller:

I was unable to attend the meeting on October 14th regarding the proposed "improvement project" in Stockton on I -5 between Martin Luther King Drive and North Gateway.

I have strong objections to the proposed Otto Drive interchange. I live in small (approx 380 homes) subdivision, known as Twin Creeks, which is just west of I -5 between Hammer Lane and 8 Mile Road

An Otto Drive interchange would bring a lot of traffic right thru the middle of a small, stable, relatively safe subdivision and undoubtedly would result in increase crime in my subdivision. PS-1

I don't understand the need for the Otto Drive freeway off/on ramps as Hammer Lane and 8 Mile Road already have off/on ramps and are only 2.81 miles apart . An Otto Lane off/on would certainly not be a plus for my small community. Who benefits from a Otto off/on?

Patricia Sloan
9234 Twin Brooks Lane
Stockton, Calif. 95219
Home Phone: 209-472-9518

Pat Sloan, private party (email November 07, 2009)

Response PS-1: According to a representative at the Stockton Police Department, construction of a new interchange would not increase or encourage criminal activities. Conversely, the Police Department believes that a new interchange would improve access to the area for patrol units, enabling them to make more regular visits and potentially discouraging criminal activities, and give better access routes for emergency vehicles, possibly increasing public safety. Also, the Police Department confirmed that no additional units or equipment would be required to service the interchange as it already falls within their service area.

The proposed Otto Drive interchange was a part of the development plan in both the 1990 General Plan and the 2006 General Plan update and was evaluated programmatically as a part of the General Plan EIR. The Interstate 5/Otto Drive interchange is needed to accommodate the traffic demands forecast for this area through the year 2035 at an acceptable level of traffic service. The new interchange will serve the traffic demand generated by forecast traffic volumes from current and future development. This interchange represents an important component of the City's circulation network and will improve traffic conditions and accessibility in the immediate area as well as adjacent interchanges. Substantial improvements are anticipated to the traffic congestion currently occurring at the Hammer Lane Interchange. In addition, the City is also planning on signalizing and widening the intersections of Otto Drive with Mariners Drive, Bancroft Way, and Estate Drive to accommodate traffic and from the Interstate 5/Otto Drive interchange.

The extension of Trinity Parkway from Bear Creek Bridge to Hammer Lane is a city project that is funded through local sources, including fees paid by the development community. Federal funds are not anticipated to be utilized for the Trinity Parkway construction. Federal funds are committed to this project and cannot be redirected to the Trinity Parkway project.

It should be noted that the City has already approved development projects west of Interstate 5 (Delta Cove and The Sanctuary) that require the construction of Trinity Parkways, as well as the Otto Drive Interchange and Hammer Lane Interchange modifications. All of these improvements are required to serve these projects. Mariners Drive cannot support the traffic from these approved projects without the construction of Trinity Parkway, Otto Drive Interchange and modifying the Hammer Lane Interchange.

The future benefits of constructing the Otto Drive Interchange are:

- The new interchange will serve the traffic demand forecast to be generated by current and future development.
- This interchange represents an important component of the City's circulation network and will improve traffic conditions and accessibility in the immediate area as well as adjacent interchanges.
- Substantial improvements are anticipated to the traffic congestion currently occurring at the Hammer Lane Interchange. In addition, the City is also planning on signalizing and widening the intersections of Otto Drive with Mariners Drive, Bancroft Way, and Estate Drive to accommodate traffic and from the Interstate 5/Otto Drive interchange.
- Access into and out of the Twin Creeks Estates subdivision to Interstate 5 will improve substantially, as will congestion at the Hammer Lane Interchange.
- Emergency services access will improve resulting in better response times.

Donna Lester
<dlester53@sbcglobal.net>
11/11/2009 02:42 PM

To: gail_miller@dot.ca.gov
cc:
Subject: I-5 North Stockton Improvement Proj.

DL-1

Attention: Gail Miller

I am writing to say that my husband and I are in favor of this improvement project. We live near I-5 on the east side and the noise seems to have increased in the ten years we have lived in our present home. We have longed wished that a sound wall had been erected along the I-5 corridor so we were excited to hear there will be one in the future.

Another positive improvement is the additional interchange at Otto Drive.
Hammer Lane can be quite congested at times. We have to travel north on Kelley Drive through a busy residential neighborhood filled with children playing on the street to our home when exiting from I-5. We hope that bypassing this neighborhood will benefit the safety of those who live on Kelley Drive as well as benefit our property values since an off-ramp would be closer to our subdivision.

Further, improving the roadways and nearby areas would greatly improve Stockton's image to those passing through. We have had a lot of negative press and people's impression of our city might be improved with a more visually appealing roadway.

I do have one objection. I am not in favor of the future interchange north of Eight Mile Road. That reeks of possible development in an area that I think should remain a greenbelt between Stockton and Lodi. My understanding is that property in the area was bought by the Spanos Dev.
Co. Again, this is my only objection to your project that I have at this time. DL-2

We look forward to your project's completion.

Sincerely,

Donna L. Lester

Donna Lester, private party (email November 12, 2009)

Response DL-1: Thank you for your comment in support of the project.

Response DL-2: Caltrans is doing the design for this interchange as part of the project because, since the interchange is called for in Stockton's general plan, it makes sense to include it with this design package. Actual construction of the proposed interchange will not be part of this project, and will not take place until development in the area creates the need. When that happens, the developers who are building in the area will help fund the construction.

The Gateway interchange will be built when development approval by the City requires it. Since development fees will drive the schedule, designing this component of the project in preparation for the anticipated development is considered prudent decision-making despite the time lag that may occur before the interchange is actually constructed.

Chapter 5 List of Preparers

This document was prepared by the following staff:

Consulting Staff

Lucie Adams, Senior Biologist. B.A., Environmental Studies/Biology; University of California Santa Barbara; 19 years of biology experience. Contribution: Natural Environment Study.

Jeff Bray, Associate Biologist. B.S., Wildlife Biology, Humboldt State University, Arcata; 16 years of wildlife biology experience. Contribution: Natural Environment Study.

Kristen Granback, Planner. B.S., Environmental Studies/Conservation and Resource Management, San Francisco State University; 3 years of environmental planning experience. Contribution: Environmental Impact Report/Environmental Assessment.

Shanna Guiler, Senior Planner. M.U.E.P., Urban and Environmental Planning, University of Virginia; 7 years of environmental planning experience. Contribution: Environmental Impact Report/Environmental Assessment.

Richard Harlacher, Principal Biologist and Wetlands Specialist. M.S., Biology, California State Polytechnic University, Pomona; 30 years of wildlife biology and wetlands experience. Contribution: Project management and project coordination.

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Amberly Morgan, Assistant Environmental Planner. B.A., Environmental Studies, California State University, Sacramento; 3 years of environmental planning experience. Contribution: Floodplain Evaluation Technical Report.

Justin Howland, Assistant Planner. B.L.A., Landscape Architecture, University of Oregon; less than 1 year of environmental planning experience. Contribution: Community Impact Assessment and Visual/Aesthetics Technical Report.

Mike Trueblood, Biologist. B.S., Wildlife, Fish, and Conservation Biology; University of California, Davis; 8 years of biology experience. Contribution: Natural Environment Study.

Caltrans Staff

Allam Alhabaly, Transportation Engineer. B.S., Industrial Engineering, California State University, Fresno; 8 years environmental technical studies experience. Contribution: Noise.

Javier Almaguer, Environmental Planner. B.S., Biology, California State University, Fullerton; 3 years experience in environmental planning. Contribution: Biology.

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Alan Gold, Associate Environmental Planner. Ph.D., Anthropology, University of California, Davis; M.A., Anthropology; University of California, Davis; B.A., Anthropology, California State University, Northridge; 23 years cultural resource management experience. Contribution: Cultural Resources.

Susan Greenwood, Associate Environmental Planner. B.S., Environmental Health Science, California State University, Fresno; 17 years environmental health, hazardous waste, and hazardous material management experience. Contribution: Hazardous Waste.

Richard C. Stewart, Engineering Geologist, P.G. B.S., Geology, California State University, Fresno; 19 years hazardous waste and water quality experience; 2 years paleontology/geology experience. Contribution: Paleontology.

Philip Vallejo, Environmental Planner (Architectural Historian). B.A., History, California State University, Fresno; 7 years of Architectural History experience in the Cultural Resources Management field. Contribution: Cultural Resources.

Charles Walbridge, Associate Environmental Planner. B.S., Biological Sciences, California State University, Fresno; 8 years environmental planning experience. Contribution: Biology.

Chapter 6 Distribution List

Through the California State Clearinghouse, a copy of the environmental document is sent to the following state agencies:

- Air Resources Board
- California Highway Patrol
- Caltrans Planning (Headquarters)
- Department of Conservation
- Delta Protection Commission
- Department of Education
- Energy Commission
- Fish and Game Region #2
- Housing and Community Development
- Integrated Waste Management board
- Native American Heritage Commission
- Office of Emergency Services
- Office of Historic Preservation
- Office of Public School Construction
- Parks and Recreation
- Public Utilities Commission
- Reclamation Board
- Regional Water Quality Control Board #5 Sacramento
- Natural Resources Agency
- San Joaquin River Conservancy
- State Lands Commission
- Storm Water Regional Control Board: Water Quality
- Department of Toxic Substances Control
- Department of Water Resources

The document is also sent to the following interested parties:

- Stockton Unified School District
- County of San Joaquin, Community Development Department
- County of San Joaquin, Public Works Department
- Stockton Metropolitan Airport
- San Joaquin County Public Works Department
- Office of Emergency Services
- County of San Joaquin, Parks and Recreation
- San Joaquin Regional Transit District
- Community Development, City of Stockton
- Parks and Recreation, City of Stockton

- Fire Department, City of Stockton
- Redevelopment, City of Stockton
- Airport Corridor Action Team
- San Joaquin County Hispanic Chamber of Commerce
- Greater Stockton Chamber of Commerce
- California Highway Patrol – Business Office
- San Joaquin County's Sheriff's Department
- Stockton Police Department
- Cesar Chavez Central Library
- Fair Oaks Branch Library
- San Joaquin Council of Governments
- Environmental Affairs Council
- Stockton Merchants Association
- Asian American Chamber of Commerce

Appendix A California Environmental Quality Act Checklist

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

Supporting documentation of all California Environmental Quality Act checklist determinations is provided in Chapter 2 of this Environmental Impact Report/Environmental Assessment. Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Except for noise, discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2. Noise impacts under the California Environmental Quality Act are discussed in Chapter 3.

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?		X		
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?			X	
AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
c) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural 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?			X	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	X	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	X	☐	☐
d) Expose sensitive receptors to substantial pollutant concentration?	☐	X	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	X	☐
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 United States Fish and Wildlife Service?	☐	X	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or United States Fish and Wildlife Service?	☐	X	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	X	☐	☐
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?	☐	X	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	X	☐	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?	☐	X	☐	☐
CULTURAL RESOURCES - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	X	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☐
	Archaeological resources are considered "historical resources" and are covered under a).			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	X	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	X
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.	☐	X	☐	☐
ii) Strong seismic ground shaking?	☐	X	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	X	☐	☐
iv) Landslides?	☐	☐	X	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	X	☐	☐
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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	X	☐	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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.	☐	☐	X	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	X
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?	☐	☐	☐	X
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?	☐	X	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site that 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?	☐	☐	☐	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 result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
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?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	X	☐	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?				X
HYDROLOGY AND WATER QUALITY - Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
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 that would not support existing land uses or planned uses for which permits have been granted)?			X	
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 that would result in substantial erosion or siltation on or offsite?		X		
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 that would result in flooding on or offsite?		X		
e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?		X		
f) Otherwise substantially degrade water quality?		X		
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?				X
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?		X		

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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?	☐	X	☐	☐
j) Result in inundation by a seiche, tsunami, or mudflow?	☐	☐	☐	X
LAND USE AND PLANNING - Would 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 result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	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	☐	☐

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	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?	☐	☐	☐	X
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)?	☐	☐	X	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	X	☐	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	X	☐	☐
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?	☐	☐	X	☐
Police protection?	☐	☐	X	☐
Schools?	☐	☐	☐	X
Parks?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
Other public facilities?	☐	☐	X	☐
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?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	X
TRANSPORTATION/TRAFFIC - Would the project:				
a) Cause an increase in traffic that 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)?	☐	☐	X	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	X	☐
c) Result in a change in air traffic pattern, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	X	☐
e) Result in inadequate emergency access?	☐	☐	X	☐
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X
UTILITY AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	X	☐	☐
b) Require or result in the construction of new water or				

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	X	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	X	☐	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X
MANDATORY FINDINGS OF SIGNIFICANCE -				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	☐	X	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	X	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	X	☐	☐

Appendix B Title VI Policy Statement

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

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

Flex your power!
Be energy efficient!

August 25, 2009

TITLE VI
POLICY STATEMENT

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

RANDELL H. IWASAKI
Director

"Caltrans improves mobility across California"

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Appendix C Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

Relocation Assistance Advisory Services

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

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

Residential Relocation Payments Program

For more information or a brochure on the residential relocation program, please contact Gail Miller at 2015 E. Shields Avenue, Suite 100, Fresno, CA 93726.

The brochure on the residential relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/residential_english.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/residential_spanish.pdf.

If you own or rent a mobile home that may be moved or acquired by Caltrans, a relocation brochure is available in English at http://www.dot.ca.gov/hq/row/pubs/mobile_eng.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/mobile_sp.pdf.

Business and Farm Relocation Assistance Program

For more information or a brochure on the relocation of a business or farm, please contact Gail Miller at 2015 E. Shields Avenue, Suite 100, Fresno, CA 93726.

The brochure on the business relocation program is also available in English at http://www.dot.ca.gov/hq/row/pubs/business_farm.pdf and in Spanish at http://www.dot.ca.gov/hq/row/pubs/business_sp.pdf.

Additional Information

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

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

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

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

Important Notice

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

State of California Department of Transportation, District 10
1976 E. Charter Way/1976 E. Dr. Martin Luther King Jr. Boulevard
Stockton, CA 95205

Appendix D Minimization and/or Mitigation Summary

Date: July 23, 2009
Environmental Coordinator:
Scott Smith
Phone No: (559) 243-8223

MITIGATION MONITORING and REPORTING RECORD
(**MMRR**)
Page 1 of 23

10-SJ-5- PM 25.0/37.1
EA
I-5 North Stockton Corridor Improvements

Task and Brief Description	Ref.	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
DESIGN KICK-OFF		Proj Mgmt & Proj Dev	Beginning of 1 phase							
ENVIRONMENTAL PS&E REVIEW		Proj Mgmt & Environmental	District PS&E Circ							
PRECONSTRUCTION MEETING		Proj Mgmt	Contract Award							
Transfer Resident Engineer Book		Proj Eng	Preconst Meeting							
PREJOB MEETING		Proj Mgmt & Const	Const							
ENVIRONMENTAL COMPLIANCE REVIEW		Proj Mgmt & Const	Safety Review							
DESIGN FEATURES MEMORANDUM		Proj Mgmt & Const	Post Const							
Relocations										
All displacees would be contacted by a Relocation Agent who would ensure that eligible displaced residents receive their full relocation benefits including advisory assistance, and that all activities be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to all displaced residents free of discrimination. At the time of the first written offer to purchase, owner occupants are given a detailed explanation of Caltrans' "Relocation Program and 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 Caltrans' "Relocation Program and 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 non-profit organization displaced as a result of acquisition of real property for public use.	ED, p. 39	Const.	PreConst.	Y							
The Uniform Relocation Assistance and Real Property Acquisitions Policies Act (Uniform Act) of 1970 (Public Law 91-646, 84 Stat. 1894) mandates that payments be made available to eligible residents, businesses, and nonprofit organizations displaced or affected by projects. The Uniform Act provides for equitable land acquisition policies.	ED, p. 39	Const.	PreConst.	Y						

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Where acquisition is unavoidable the provisions of the Uniform Act and the 1987 Amendments as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by the Department of Transportation dated March 2, 1989 would be followed. An independent appraisal of the affected property will be obtained and an offer for the full appraisal would be made..	ED, p. 39	Const.	PreConst.	Y						
Utilities										
The project would be designed to minimize conflicts with utilities in the project area. The project would include relocation of those utilities that would be inaccessible for maintenance or access purposes as a result of the project.	ED, p. 43	Const.	Design	Y						
The contractor would be required to provide notification to utility users of any short-term, limited interruptions of service.	ED, p. 44	Const.	Const.	Y						
If unexpected underground utilities were encountered, the contractor would coordinate with the utility provider to develop plans to address the utility conflict, protect the utility if needed, and limit services interruptions.	ED, p. 44	Const.	Const.	Y						
The contractor would circulate construction schedules and traffic control information to City emergency service providers at least one to two weeks before any road closures	ED, p. 44	Const.	Const.	Y						
Traffic										
The project would modify the Otto Drive/Estate Drive intersection to provide the following: 1. Traffic signal 2. Northbound Approach – 1 left-turn lane (150 feet) and one shared through/right-turn lane 3. Southbound Approach – 1 shared through/left-turn lane and 1 right-turn lane (150 feet) 4. Westbound Approach – 1 left-turn lane (50 feet) and 1 shared through/right-turn lane 5. Eastbound Approach – 1 left-turn lane (full lane) and 1 shared through/right-turn lane	ED, p. 56	Const.	Design	Y						
As part of modifying the intersection, the City would maintain the existing Class II bicycle facilities by eliminating some on-street parking spaces.	ED, p. 56	Const.	Design	Y						

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The contractor would be required to prepare and implement a traffic management plan that would identify the locations of temporary detours and signage to facilitate local traffic patterns and through-traffic requirements.	ED, p. 57-58	Const.	Const.	Y						
The Project Special Provisions of the highway contract would require that emergency service providers (i.e., law enforcement, fire protection, and ambulance services) be given adequate advance notice of any street closures during the construction phases of the proposed project.	ED, p. 57-58	Const.	Const.	Y						
Construction activities would be coordinated to avoid blocking or limiting access to homes and businesses to the extent possible. Residents would be notified in advance about potential access or parking effects before construction activities begin.	ED, p. 57-58	Const.	Const.	Y						
Any interchange, ramp, or road closures required during construction would, to the extent possible, be limited to nighttime hours to reduce effects on businesses in the study area.	ED, p. 57-58	Const.	Const.	Y						
Construction activities would be coordinated to avoid blocking or limiting access to businesses located along Eight Mile Road and Hammer Lane during business hours. Businesses would be notified in advance concerning construction activities before construction begins near businesses.	ED, p. 57-58	Const.	Const.	Y						
The traffic management plan would be prepared to address short-term disruptions in existing circulation patterns during construction; for example, the traffic management plan would identify the locations of temporary detours or temporary roads to facilitate local traffic circulation and through-traffic requirements.	ED, p. 57-58	Const.	Design	Y						
Visual/Aesthetics										
Architectural detailing and/or surface treatments consistent with the surrounding community should be incorporated into new bridge designs.	ED, p. 68	Const.	Design	Y						
Artistic soundwall design should be implemented to break up the built environment and enhance the driving experience. Soundwall design should be compatible with the surrounding area and meet community goals.	ED, p. 68	Const.	Const.							

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Soundwalls should be designed to discourage the proliferation of graffiti. Some examples of soundwall design may include rough-textured finishes or uneven surfaces, graffiti-resistant coatings, and vine plantings of a type that will attach to walls.	ED, p. 68	Const.	Const.							
Highway art may also be incorporated to break up the built environment and enhance the quality of the driving experience. Artistic design elements must be consistent with community goals.	ED, p. 68	Const.	Const.							
Replacement planting would include the replacement of removed landscaping.	ED, p. 68	Const.	Const.							
Areas affected or disturbed by construction would be revegetated in the form of new landscape planting and irrigation systems.	ED, p. 68	Const.	Const.							
Cultural Resources										
If human remains are discovered State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains were thought to be Native American the coroner would notify the Native American Heritage Commission, which would then notify the Most Likely Descendent. At this time the person who discovered the remains would contact the City of Stockton so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.	ED, p. 70	Const.	Const.	Y						
Hydrology and Floodplain										
Prior to construction of the Otto Drive interchange, levee recertification is required to provide 100-flood protection south of Bear Creek and west of I-5. Improvements needed for levee recertification will be funded by the I-5 Improvement Project.	ED, p. 76	Const.	Pre-Const.	Y						
Water Quality										
Prior to performing excavation work, personnel who will be working in the areas containing lead, shall complete a safety training program which meets the requirements of 8 CCR 1532.1.	ED, p. 81-83	Const.	Pre-Const.	Y						

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Work within the any live channel will be limited to the period between June 1 and October 31. Impacts to sensitive species should also be considered when coordinating construction schedules.	ED, p. 81-83	Const.	Const.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 81-83	Const.	Const.	Y						
Bridge and road footings shall be located outside of high water zones and riparian habitats wherever practical within the constraints of the proposed project.	ED, p. 81-83	Const.	Const.	Y						
Land disturbing activities and the installation of erosion and sedimentation control practices shall be coordinated to reduce on-site erosion and off-site sedimentation. These measures may include mulches (above the mean high water line only), soil binders, and erosion control blankets, silt fencing, fiber rolls, sediment desilting basins, sediment traps, and check dams.	ED, p. 81-83	Const.	Const.	Y						
Existing vegetation shall be protected where feasible to provide an effective form of erosion and sediment control, as well as watershed protection, landscape beautification, dust and pollution control, and noise reduction.	ED, p. 81-83	Const.	Const.	Y						
Loose bulk materials shall be applied to the soil surface as a temporary cover to protect bare soil from rainfall impact, increase infiltration, and reduce runoff and erosion.	ED, p. 81-83	Const.	Const.	Y						
Stabilizing materials shall be applied to the soil surface to prevent the movement of dust at the project site caused by traffic, wind, and grading activities.	ED, p. 81-83	Const.	Const.	Y						
Roughening and terracing shall be implemented, as feasible, to reduce erosion potential, decrease runoff velocities, and trap sediment aiding in the establishment of vegetative cover from seed and increasing infiltration into soil.	ED, p. 81-83	Const.	Const.	Y						
The disturbed area shall be graded to its preexisting contour and ripped, if necessary, to decompact the soil. Hydroseeding will be implemented as a temporary measure, if feasible.	ED, p. 81-83	Const.	Const.	Y						

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Provide berms along the tops of slopes to prevent water from running uncontrolled down the slopes and into adjacent water resources. Collect the water in bermed basins and convey it down the slopes in an erosion-proof drainage system. Sediment that is collected within bermed basins will be allowed to "settle out" and will be removed from the site.	ED, p. 81-83	Const.	Const.	Y						
Install permanent landscaping, as soon as practical, after the completion of grading.	ED, p. 81-83	Const.	Const.	Y						
Construction activities and vehicles will be confined to paved areas, as feasible, to prevent erosion and sediment discharge to the adjacent water resources.	ED, p. 81-83	Const.	Const.	Y						
All demolished or unused roadway and bridge material will be hauled off-site.	ED, p. 81-83	Const.	Const.	Y						
All erosion control measures and stormwater control measures will be properly maintained until construction activities are completed. The condition and effectiveness of the measures will be monitored until they are removed. At a minimum, all measures should be inspected after every rain event and weekly throughout the rainy season.	ED, p. 81-83	Const.	Const.	Y						
Construction roadways will be properly protected to prevent excess erosion and sedimentation.	ED, p. 81-83	Const.	Const.	Y						
All vehicle and equipment maintenance procedures will be conducted off-site. In the event of an emergency, maintenance will occur away from the water resources.	ED, p. 81-83	Const.	Const.	Y						
All concrete curing activities will be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.	ED, p. 81-83	Const.	Const.	Y						
A spill prevention and countermeasure plan will be prepared for the project prior to commencing construction activities.	ED, p. 81-83	Const.	Design	Y						
All construction materials, vehicles, stockpiles, and staging areas will be situated outside of the waterway as feasible. All stockpiles will be covered, as feasible.	ED, p. 81-83	Const.	Const.	Y						
Provide energy dissipaters and erosion control pads at the bottom of downdrains prior to releasing into the watershed. Other flow conveyance control mechanisms may include earth dikes, swales, or ditches. Streambank stabilization measures should also be implemented.	ED, p. 81-83	Const.	Const.	Y						

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The drainage plan shall include water quality control measures (including cleansing or filtration of drainage waters) to ensure minimized contaminants in waters discharged to surface streams or percolated into the ground.	ED, p. 81-83	Const.	Design	Y						
Fluvial erosion related to construction is controlled by a construction erosion control program which shall be filed with the City of Stockton Department of Public Works office and kept current throughout the site development phase.	ED, p. 81-83	Const.	Const.	Y						
The erosion control program shall include best management practices as appropriate, given the specific circumstances of the site and/or project.	ED, p. 81-83	Const.	Design	Y						
Geology										
Foundation systems of the structures for the bridge widening may consist of Caltrans Standard Precast Prestressed Concrete Alternate "X" piles or Caltrans Standard Alternate "W" piles.	ED, p. 85-86	Const.	Design	Y						
Exploratory soil borings to investigate the subsurface soil conditions should be planned and the potential for consolidation settlement should be investigated prior to project implementation.	ED, p. 85-86	Const.	Pre-Const.	Y						
The retaining wall foundation may be designed in accordance with Caltrans standard retaining wall plans. The foundation of the proposed retaining wall may consist of Caltrans Type 1 retaining wall with spread footing. However, specific subsurface soil conditions and wall height may require consideration of Cast-In-Drilled-Hole (CIDH) pile foundations.	ED, p. 85-86	Const.	Design	Y						
The soundwall foundation may be designed in accordance with Caltrans standard soundwall plans. The soundwall foundation may consist of CIDH piles. The potential for corrosion should be investigated prior to project implementation.	ED, p. 85-86	Const.	Design	Y						
Prior to project implementation, additional data should be collected to confirm that liquefaction potential at the project site is low. Any potential post-liquefaction settlement at abutements/bents of the bridge widening and new interchanges and undercrossing may cause downdrag to the foundation pile system. This should be considered in the pile design.	ED, p. 85-86	Const.	Pre-Const.	Y						
Paleontology										

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A qualified principal paleontologist (M.S. or PhD in paleontology or geology familiar with paleontological procedures and techniques) will be retained to be present to consult with grading and excavation contractors at pre-grading meetings.	ED, p. 88	Const.	Const.	Y						
Paleontological monitor, under the direction of the qualified principal paleontologist will be on site to inspect cuts for fossils at all times during original grading involving sensitive geologic formations.	ED, p. 88	Const.	Const.	Y						
When fossils are discovered, the paleontologist (or paleontological monitor) will recover them. Construction work in these areas will be halted or diverted to allow recovery of fossil remains in a timely manner.	ED, p. 88	Const.	Const.	Y						
Fossil remains collected during the monitoring and salvage portion of the mitigation program will be cleaned, repaired, sorted, and cataloged.	ED, p. 88	Const.	Const.	Y						
Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will then be deposited in a scientific institution with paleontological collections.	ED, p. 88	Const.	Post-Const.	Y						
A final report will be completed that outlines the results of the mitigation program.	ED, p. 88	Const.	Post-Const.	Y						
Where feasible, selected road cuts or large finished slopes in areas of critically interesting geology may be left exposed as important educational and scientific features. This may be possible if no substantial adverse visual impact results.	ED, p. 88	Const.	Const.	Y						
Hazardous Materials										
Surface samples of soil should be collected and analyzed for lead within the project area.	ED, p. 96	Const.	Pre-Const.	Y						
An asbestos containing materials investigation should be performed by an inspector certified by the Asbestos Hazardous Emergency Response Act under the Toxic Substances Control Act Title II and certified by the California Occupational Safety and Health Agency under State of California rules and regulations (California Code of Regulations, Section 1529). This work should be performed during the design phase.	ED, p. 96	Const.	Pre-Const.	Y						

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In the event that any subsurface structures are encountered during development or excavation on the project site, it should be determined whether or not the structures contain asbestos. If they contain asbestos, they should be removed, handled, transported and disposed of in accordance with local, state, and federal laws and regulations. If suspect materials are encountered the signatories of the Kleinfelder, Inc. (2005) report should be notified.	ED, p. 96	Const.	Pre-Const.	Y						
Surveys for lead based paint should be conducted prior to demolition of the structures within the right of way. Lead based paint and asbestos containing materials should be abated by using a contractor certified to perform such work.	ED, p. 96	Const.	Pre-Const.	Y						
Soil samples should be taken from the proposed project site and analyzed for pesticides and herbicides.	ED, p. 96	Const.	Pre-Const.	Y						
Air Quality										
All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemimcal stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.	ED, p. 106-107	Const.	Const.	Y						
All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.	ED, p. 106-107	Const.	Const.	Y						
All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.	ED, p. 106-107	Const.	Const.	Y						
With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.	ED, p. 106-107	Const.	Const.	Y						
When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions and at least six inches of freeboard space from the top of the container shall be maintained.	ED, p. 106-107	Const.	Const.	Y						

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All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)	ED, p. 106-107	Const.	Const.	Y						
Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emission utilizing sufficient water or chemical stabilizer/suppressant.	ED, p. 106-107	Const.	Const.	Y						
Within urban areas, track out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.	ED, p. 106-107	Const.	Const.	Y						
Any site with 150 or more vehicle trips per day shall prevent carryout and track out.	ED, p. 106-107	Const.	Const.	Y						
Limit traffic speeds on unpaved roads to 15 miles per hour.	ED, p. 106-107	Const.	Const.	Y						
Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.	ED, p. 106-107	Const.	Const.	Y						
Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.	ED, p. 106-107	Const.	Const.	Y						
Install wind breaks at windward side(s) of construction area.	ED, p. 106-107	Const.	Const.	Y						
Suspend excavation and grading activity when winds exceed 20 mph (regardless of wind speed, an owner/operator must comply with Regulation VIII's 20 percent opacity limitation).	ED, p. 106-107	Const.	Const.	Y						
Limit area excavation, grading, and other construction activity at any one time.	ED, p. 106-107	Const.	Const.	Y						
The following construction equipment control measures would reduce construction exhaust emissions:	ED, p. 106-107	Const.	Const.	Y						
Properly and routinely maintain all construction equipment, as recommended by the manufacturer manuals, to control exhaust emissions.	ED, p. 106-107	Const.	Const.	Y						
Shut down equipment when not in use for extended periods of time to reduce emissions associated with idling emissions.	ED, p. 106-107	Const.	Const.	Y						
Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use.	ED, p. 106-107	Const.	Const.	Y						

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Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways.	ED, p. 106-107	Const.	Const.	Y						
Noise										
Based on the studies completed to date noise abatement in the form of masonry block walls (soundwalls) at fifteen separate locations are proposed. See Figures 2.2a through 2.2i Existing and Proposed Sound Walls showing the locations of all the soundwalls being considered for the project.	ED, p. 127	Const.	Const.	Y						
All equipment would have sound-control devices that are no less effective than those provided on the original equipment. No equipment would have an unmuffled exhaust.	ED, p. 127	Const.	Const.	Y						
As directed by Caltrans the contractor would implement appropriate additional noise mitigation measures including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.	ED, p. 127	Const.	Const.	Y						
Biology										
Natural Communities										
Any mature oak trees that do not require removal for project construction shall be preserved and protected; bright orange plastic fencing shall be installed around the perimeter of the drip line of any trees to be preserved, and no construction activity shall be allowed to encroach within the protected zone.	ED, p. 140	Const.	Const.	Y						
Appropriate areas within the limits of the reconstructed interchange at Eight Mile Road would be planted with native valley oaks; plantings would be placed in a random, naturally occurring pattern; trees would not be staked or tied out to the ground.	ED, p. 140	Const.	PostConst.	Y						
Wetlands										
All areas temporarily disturbed during project construction shall be restored to pre-project conditions.	ED, p. 144	Const.	PostConst.	Y						

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Measures consistent with the Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/Construction_Site_BMPs.pdf]) would be implemented to minimize effects to the wetlands (e.g., siltation, etc.) during construction.	ED, p. 144	Const.	Const.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 144	Const.	Const.	Y						
Riparian vegetation shall be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, shall be cut off at the ground line and the root systems left intact.	ED, p. 144	Const.	Const.	Y						
The permanent loss of wetland habitats shall be compensated for at a 3:1 ratio by one, or two or more, of the following options: • Payment of appropriate mitigation fee (in lieu fees); • Dedication of mitigation lands; • Purchase of approved mitigation bank credits; or • Development of an alternative mitigation plan.	ED, p. 144	Const.	PostConst.	Y						
Plant Species										
All areas temporarily disturbed during project construction shall be restored to pre-project conditions.	ED, p. 147	Const.	PostConst.	Y						
Measures consistent with the Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/Construction_Site_BMPs.pdf]) would be implemented to minimize effects to special status plant species (e.g., siltation, etc.) during construction.	ED, p. 147	Const.	Const.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 147	Const.	Const.	Y						
Riparian vegetation shall be retained to the maximum extent possible Where vegetation removal is necessary, rapidly sprouting plants, such as willows, shall be cut off at the ground line and the root systems left intact.	ED, p. 147	Const.	Const.	Y						

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Clearing shall be confined to the minimal area necessary to facilitate construction activities. If vegetation clearing activities require removal within 100 feet of the special status plant habitat, a qualified biological monitor will be on site to monitor the clearing activity.	ED, p. 147	Const.	Const.	Y						
Animal Species										
Bats										
All potential roost trees (20 inches diameter at breast height or greater) to be removed for project construction shall be surveyed by a qualified biologist to determine if any trees can be excluded as suitable bat roosts due to the lack of suitable structural characteristics. If any trees can be excluded as bat roosts, removal of these trees shall not be subject to the seasonal restrictions given below.	ED, p. 159	Const.	PreConst.	Y						
All potential roost trees, including snags, within the project impact area shall be removed between September 1 and October 14, or between February 16 and April 14. Removal of trees during these periods will avoid impacts to any bats occurring in the biological study area during the normal breeding season (April 15 to August 30) and winter torpor (October 15 to February 15). Removal shall occur as follows: o Prior to removal of the potential roost site trees, smaller trees and brush from the area near the potential roost tree shall be removed in order to expose bats potentially using the roost tree to the sounds and vibrations of equipment. These activities shall be conducted on at least two consecutive days before the roost tree is removed. o Equipment and vehicles shall not be operated under potential roost trees, while nearby trees and brush are being removed, to prevent exhaust fumes from filling roost cavities.	ED, p. 159	Const.	Const.	Y						

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Task and Brief Description	Ref.	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
A preconstruction bat survey of all structures to be affected by the project shall be initiated prior to project construction. If bats or bat sign are detected, the following measures shall be implemented: o Bats shall be evicted from the bridge structures between February 15 – April 1, under the direction of a qualified bat biologist. Eviction and exclusion structures shall be left in place until bridge demolition is complete. o To avoid impacts to flying bats roosting in bridge structures, demolition shall occur only after bats have been evicted from or caused to abandon the bridge roost, and only as directed by a qualified bat biologist possessing a Memorandum of Understanding with the California Department of Fish and Game.	ED, p. 159	Const.	PreConst.	Y						
If active roost sites are identified in trees or structures that will be permanently impacted by the project, a plan for replacement of lost roost sites shall be prepared by a qualified bat biologist and approved by the Caltrans prior to project implementation. The plan shall provide for permanent replacement of lost roost sites within permanently protected woodland or riparian habitat.	ED, p. 159	Const.	Const.	Y						
Nesting/Foraging Raptors: Coopers Hawk and White-tailed hawk										
Removal of nesting habitat for raptors and migratory birds shall be timed to avoid the nesting season (February 1 to September 1).	ED, p. 161	Const.	PreConst.	Y						
If vegetation removal and/or project construction occurs during the nesting season for raptors and migratory birds, preconstruction surveys shall be conducted by a qualified biologist approved by Caltrans. The surveys shall cover all areas of suitable nesting habitat within 500 feet of the project activity and shall be conducted within 14 days prior to commencement of project activity. The surveys shall be valid for one construction season. If no active nests are found, no further mitigation shall be required.	ED, p. 161	Const.	Const.	Y						

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Task and Brief Description	Ref.	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
If nesting birds are found within the areas to be impacted by the project, the nest and a 100-foot buffer area (200 feet for raptors) around the nest shall be protected and maintained until the biologist determines that young have fledged and/or the nests are no longer active. The buffer area shall be delineated with orange snow fencing. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.	ED, p. 161	Const.	Const.	Y						
TriColored Blackbird										
A preconstruction survey for nesting tricolored blackbirds shall be conducted in the biological study area and vicinity by a qualified biologist. If nesting tricolored blackbirds are found within the biological study area, the following measure shall be implemented: A setback of 500 feet from colonial nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground disturbing activities must begin during the nesting season in the presence of nests which are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing.	ED, p. 161	Const.	PreConst.	Y						
Burrowing Owl										
If nesting birds are found within the areas to be impacted by the project, the nest and a 100-foot buffer area (200 feet for raptors) around the nest shall be protected and maintained until the biologist determine. A preconstruction survey for nesting burrowing owls shall be conducted in the biological study area and vicinity by a qualified biologist. If nesting burrowing owls are found within the biological study area, the following measure shall be implemented: During the non breeding season (September 1 through January 31) any burrowing owls occupying the project site should be evicted from the project site by passive relocation as described in the California Department of Fish and Game's Staff Report on Burrowing Owls (Oct., 1995).										

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Task and Brief Description	Ref.	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
During the breeding season (February 1 through August 31) occupied burrows shall not be disturbed and shall be provided with a 250 feet protective buffer until and unless the Technical Advisory Committee, with the concurrence of the Permitting Agencies' representatives on the Technical Advisory Committee; or unless a qualified biologist approved by the Permitting Agencies, verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed.	ED, p. 162	Const.	PreConst.	Y						
Loggerhead Shrike										
A preconstruction survey for nesting loggerhead shrikes shall be conducted in the biological study area and vicinity by a qualified biologist. If nesting loggerhead shrikes are found within the biological study area, the following measure shall be implemented: A setback of 100 feet from the nesting area shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground disturbing activities must begin during the nesting season in the presence of nests which are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing.	ED, p. 162	Const.	PreConst.	Y						
Pacific Pond Turtle										
A focused survey for Pacific pond turtles shall be conducted by a qualified biologist prior to any disturbance of suitable aquatic habitat. If pond turtles are found, a mitigation plan shall be prepared, submitted to California Department of Fish and Game for approval, and implemented prior to initiation of any project activities that may impact pond turtles. The mitigation plan shall address relocating pond turtles to suitable habitat outside of project impact areas, exclusion of turtles from impact areas, and long term enhancement of pond turtle habitat.	ED, p. 163	Const.	PreConst.	Y						

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Task and Brief Description	Ref.	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
If nesting areas for pond turtles are identified, a buffer area of 300 feet shall be established between the nesting site (which may be immediately adjacent to wetlands or extend up to 400 feet away from wetland areas in uplands) and the wetland located near the nesting site. These buffers shall be indicated by temporary fencing if construction has or will begin before nesting periods are ended (the period from egg laying to emergence of hatchlings is normally April to November).	ED, p. 163	Const.	Const.	Y						
Sacramento Splittail and Longfin Smelt										
All areas temporarily disturbed during project construction shall be restored to pre-project conditions	ED, p. 163-164	Const.	PostConst.	Y						
Measures consistent with the current Caltrans' Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/Construction_Site_BMPs.pdf]) shall be implemented to minimize effects to giant garter snake (e.g., siltation, etc.) during construction.	ED, p. 163-164	Const.	Const.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 163-164	Const.	Const.	Y						
Riparian vegetation shall be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, shall be cut off at the ground line and the root systems left intact.	ED, p. 163-164	Const.	Const.	Y						
Central Valley Fall/Late Fall-Run Chinook Salmon										
All in-water work associated with the proposed project shall be conducted between July 1 and November 1.	ED, p. 164	Const.	Const.	Y						
All areas temporarily disturbed during project construction shall be restored to pre-project conditions	ED, p. 164	Const.	PostConst.	Y						

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Task and Brief Description	Ref.	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
Measures consistent with the current Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/Construction_Site_BMPs.pdf]) would be implemented to minimize effects to Central Valley fall/late fall-run Chinook salmon (e.g., siltation, etc.) during construction.	ED, p. 164	Const.	Const.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 164	Const.	Const.	Y						
Riparian vegetation shall be retained to the maximum extent possible Where vegetation removal is necessary, rapidly sprouting plants, such as willows, shall be cut off at the ground line and the root systems left intact.	ED, p. 164	Const.	Const.	Y						
Threatened and Endangered Species										
Swainson's Hawk										
If possible, all trees that will be impacted by project construction will be removed during the non-nesting season (between September 16 and February 28).	ED, p. 171	Const.	Const.	Y						
At least 14 days prior to the start of construction, a survey for nesting Swainson's hawks shall be conducted in the biological study area and within a 0.25 mile radius by a qualified biologist. The survey area may be decreased due to property access constraints, etc.	ED, p. 171	Const.	PreConst.	Y						
If nesting Swainson's hawks are found within 0.25 mile of the biological study area, a qualified biologist shall evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the construction site, and line of sight between the nest and the construction site.	ED, p. 171	Const.	Const.	Y						

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Task and Brief Description	Ref.	Responsible Branch / Staff	Timing / Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initial	Date		Initial	Date
The California Department of Fish and Game shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities. o If work is allowed to proceed, at a minimum, a qualified biologist shall be on-site during construction activities during the nesting season to monitor nesting activity. The monitor will have the authority to stop work if it is determined the project is adversely affecting nesting activities.	ED, p. 171	Const.	Const.	Y						
Giant Garter Snake										
Avoid construction activities within 61.0 m (200 ft) from the banks of giant garter snake aquatic habitat. Confine movement of heavy equipment to existing roadways to minimize habitat disturbance.	ED, p. 172-176	Const.	Const.	Y						
To avoid disturbance, construction activity within the habitat is typically done between May 1 and October 1. This is the active period for giant garter snakes and direct mortality is lessened because snakes are expected to actively move and avoid danger. Between October 2 and April 30, contact the Service's Sacramento Fish and Wildlife Office to determine if additional measures are necessary to minimize and avoid take. Based on consultation with United States Fish and Wildlife Service and additional mitigation (1.163 conservation credits) proposed by Caltrans, the work window for this project is defined as July 1 to November 1.	ED, p. 172-176	Const.	Const.	Y						
Confine clearing to the minimal area necessary to facilitate construction activities. Flag and designate avoided giant garter snake habitat within or adjacent to the project area as ESAs. These areas will be avoided by all construction personnel.	ED, p. 172-176	Const.	Const.	Y						

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Construction personnel should receive Service-approved worker environmental awareness training. Awareness training may be given by biologists who have experience in giant garter snake natural history. This training instructs workers to recognize giant garter snakes and their habitat(s).	ED, p. 172-176	Const.	PreConst.	Y						
24-hours prior to construction activities, the BSA will be surveyed for giant garter snakes. Survey of the BSA will be repeated if a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Report any sightings and any incidental take to the Service immediately by telephone at (916) 414-6600.	ED, p. 172-176	Const.	PreConst.	Y						
Any dewatered habitat should remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.	ED, p. 172-176	Const.	PostConst.	Y						
After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions. Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.	ED, p. 172-176	Const.	PostConst.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 172-176	Const.	Const.	Y						
Follow the conservation measures below to minimize the effects of loss and disturbance of habitat on giant garter snakes. Replacement ratios are based on the acreage and on the duration of disturbance. For level one, one season: restoration. For level two, two seasons: restoration plus 1:1 replacement For level three, more than 2 seasons: 3:1 replacement (or restoration plus 2:1) For level three, permanent: 3:1 replacement	ED, p. 172-176	Const.	PostConst.	Y						
Following project completion, all areas temporarily disturbed during construction will be restored following the "Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat" outlined below.	ED, p. 172-176	Const.	PostConst.	Y						

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Restoring of giant garter snake habitat includes minimizing impacts of project activities to the existing habitat, including using silt fencing, designating environmentally sensitive areas, using protective mats, preventing runoff, and providing worker awareness training. Measures to minimize impacts are outlined above.	ED, p. 172 176	Const.	PostConst.	Y						
Remove all construction debris and stockpiled materials.	ED, p. 172 176	Const.	PostConst.	Y						
Regrade area to preexisting contour, or a contour that would improve restoration potential of the site.	ED, p. 172 176	Const.	PostConst.	Y						
Replant and hydroseed the restoration area. Recommended plantings consist of a) wetland emergents, b) low-growing cover on or adjacent to banks, and c) upland plantings/hydroseeding mix to encourage use by other wildlife. Riparian plantings are not appropriate because shading may result in lack of basking sites. Native plantings are encouraged except where nonnatives will provide additional values to wildlife habitat and will not become invasive in native communities. The applicant should obtain cuttings, plantings, plugs, or seeds, from local sources wherever possible. The applicant should attempt to restore conditions similar to that of adjacent or nearby habitats.	ED, p. 172 176	Const.	PostConst.	Y						
If the project will be completed in two seasons, in November, following the first construction season, all areas within the NEMDC temporarily disturbed during construction (e.g., equipment storage and access areas) will be reseeded with erosion control seeding consisting of a sterile, non-proliferating grass species such as cereal barley or regreen. The seed mix shall not include any fertilizers or chemicals.	ED, p. 172 176	Const.	Const. & Post Const.	Y						
Measures consistent with the current Caltrans' Construction Site Best Management Practices (BMPs) Manual (including the Storm Water Pollution Prevention Plan [SWPPP] and Water Pollution Control Program [WPCP] Manuals [http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf]) will be implemented to minimize effects to giant garter snake (e.g., siltation, etc.) during construction.	ED, p. 172 176	Const.	Const.	Y						

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A WPCP shall be prepared by the contractor in accordance with typical provisions associated with a Regional General Permit for Construction Activities (on file with the Central Valley RWQCB). The WPCP will contain a Spill Response Plan with instructions and procedures for reporting spills, the use and location of spill containment equipment, and the use and location of spill collection materials.	ED, p. 172-176	Const.	Const.	Y						
Delta Smelt										
August 1 through November 1 is the seasonal work window suggested by the U.S. Fish and Wildlife Service to minimize effects to the delta smelt. Based on consultation with United States Fish and Wildlife Service, the in water work window for this project is defined as July 1 to November 1.	ED, p. 176	Const.	Const.	Y						
All areas temporarily disturbed during project construction shall be restored to pre-project conditions	ED, p. 176	Const.	PostConst.	Y						
Measures consistent with the current Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/Construction_Site_BMPs.pdf]) would be implemented to minimize effects to delta smelt (e.g., siltation, etc.) during construction.	ED, p. 176	Const.	Const.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 176	Const.	Const.	Y						
Riparian vegetation shall be retained to the maximum extent possible. Where vegetation removal is necessary, rapidly sprouting plants, such as willows, shall be cut off at the ground line and the root systems left in tact.	ED, p. 176	Const.	Const.	Y						
Central Valley Steelhead Trout										
All in-water work associated with the proposed project shall be conducted between July 1 and November 1	ED, p. 177	Const.	Const.	Y						
All areas temporarily disturbed during project construction shall be restored to pre-project conditions	ED, p. 177	Const.	PostConst.	Y						

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						Initial	Date		Initial	Date
Measures consistent with the current Caltrans Construction Site Best Management Practices Manual (including the Storm Water Pollution Prevention Plan and Water Pollution Control Program Manuals [http://www.dot.ca.gov/hq/construc/Construction_Site_BMPs.pdf]) would be implemented to minimize effects to Central Valley steelhead trout (e.g., siltation, etc.) during construction.	ED, p. 177	Const.	Const.	Y						
Emergent and submergent aquatic vegetation shall be retained to the maximum extent possible.	ED, p. 177	Const.	Const.	Y						
Riparian vegetation shall be retained to the maximum extent possible Where vegetation removal is necessary, rapidly sprouting plants, such as willows, shall be cut off at the ground line and the root systems left in tact.	ED, p. 177	Const.	Const.	Y						
Invasive Species										
All earthmoving equipment to be used during project construction shall be thoroughly cleaned before arriving on the project site.	ED, p. 179	Const.	PreConst.	Y						
All seeding equipment (i.e., Hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.	ED, p. 179	Const.	Const.	Y						
To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.	ED, p. 179	Const.	Const.	Y						

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Appendix E Federally Listed Endangered and Threatened Species

Refer to Section 2.3 in this document.

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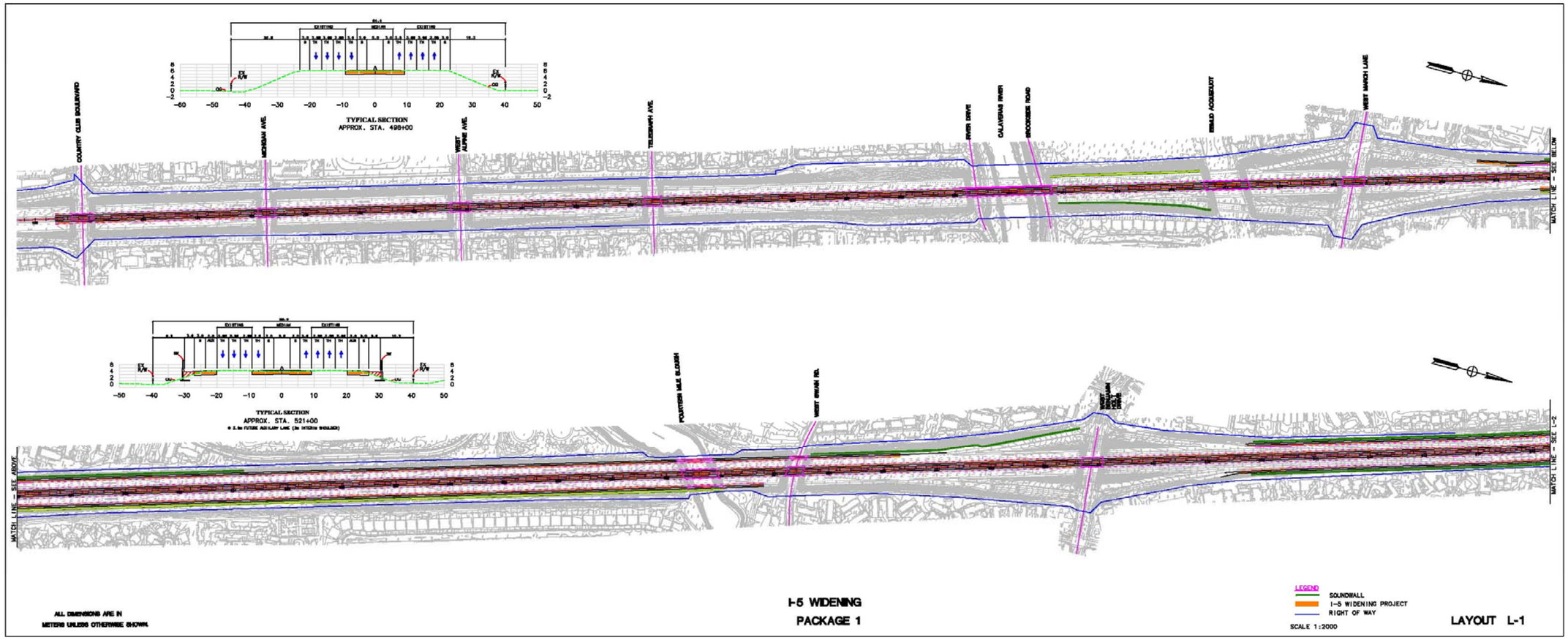
Appendix F Proposed Project Overview Plans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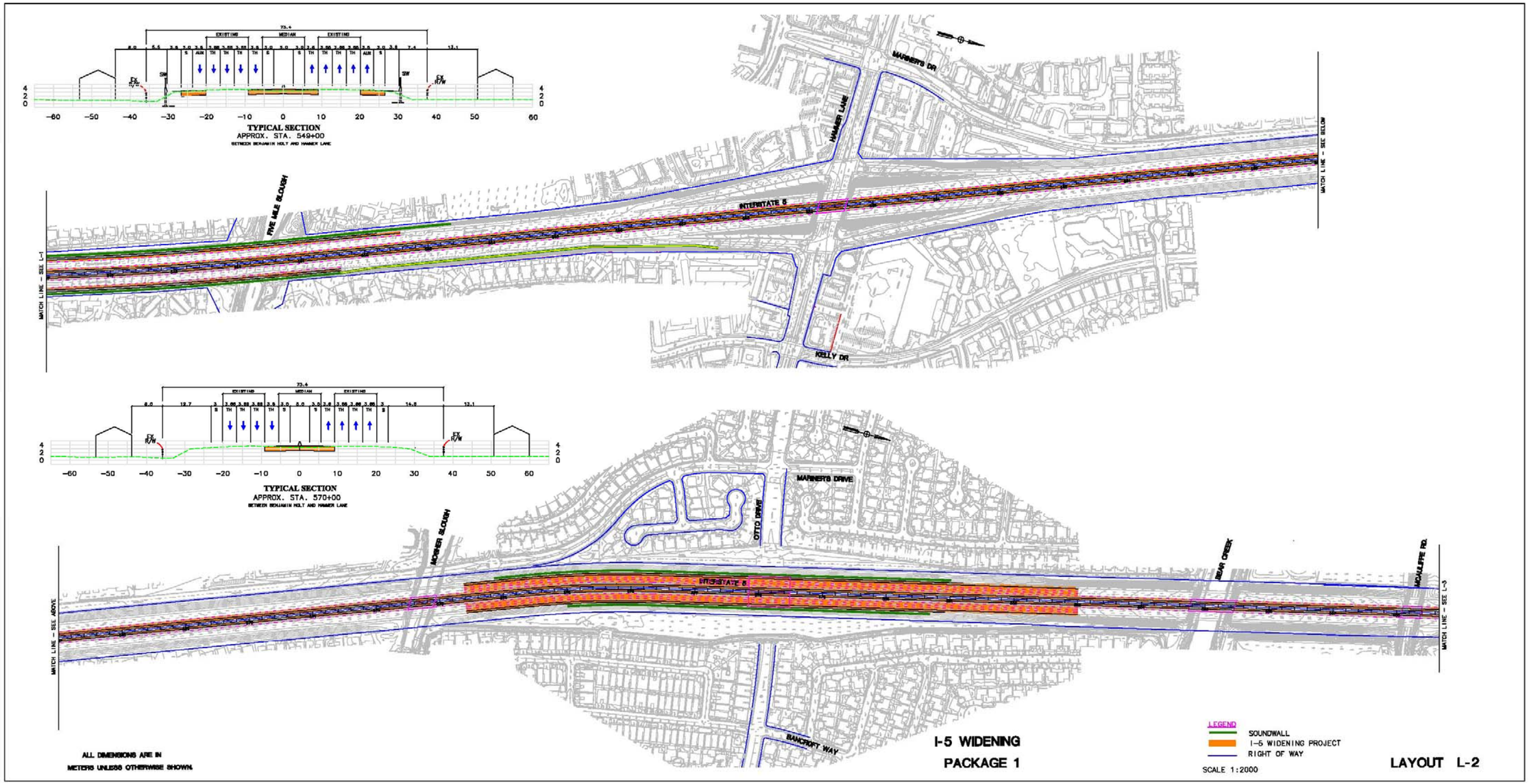
CALAVERAS RIVER
BROOKSIDE ROAD
SMALD AQUEDUCT
WEST MARCH LANE
MATCH LINE - SEE BELOW
TYPICAL SECTION
APPROX. STA. 521+00
FOURTEEN MILE SLOUGH
WEST EIGHAN RD.
MATCH LINE - SEE ABOVE
MATCH LINE - SEE L-2
ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN
I-5 WIDENING
PACKAGE 1
LEGEND
SOUNDWALL
I-5 WIDENING PROJECT
RIGHT OF WAY
SCALE 1:2000
LAYOUT L-1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TYPICAL SECTION
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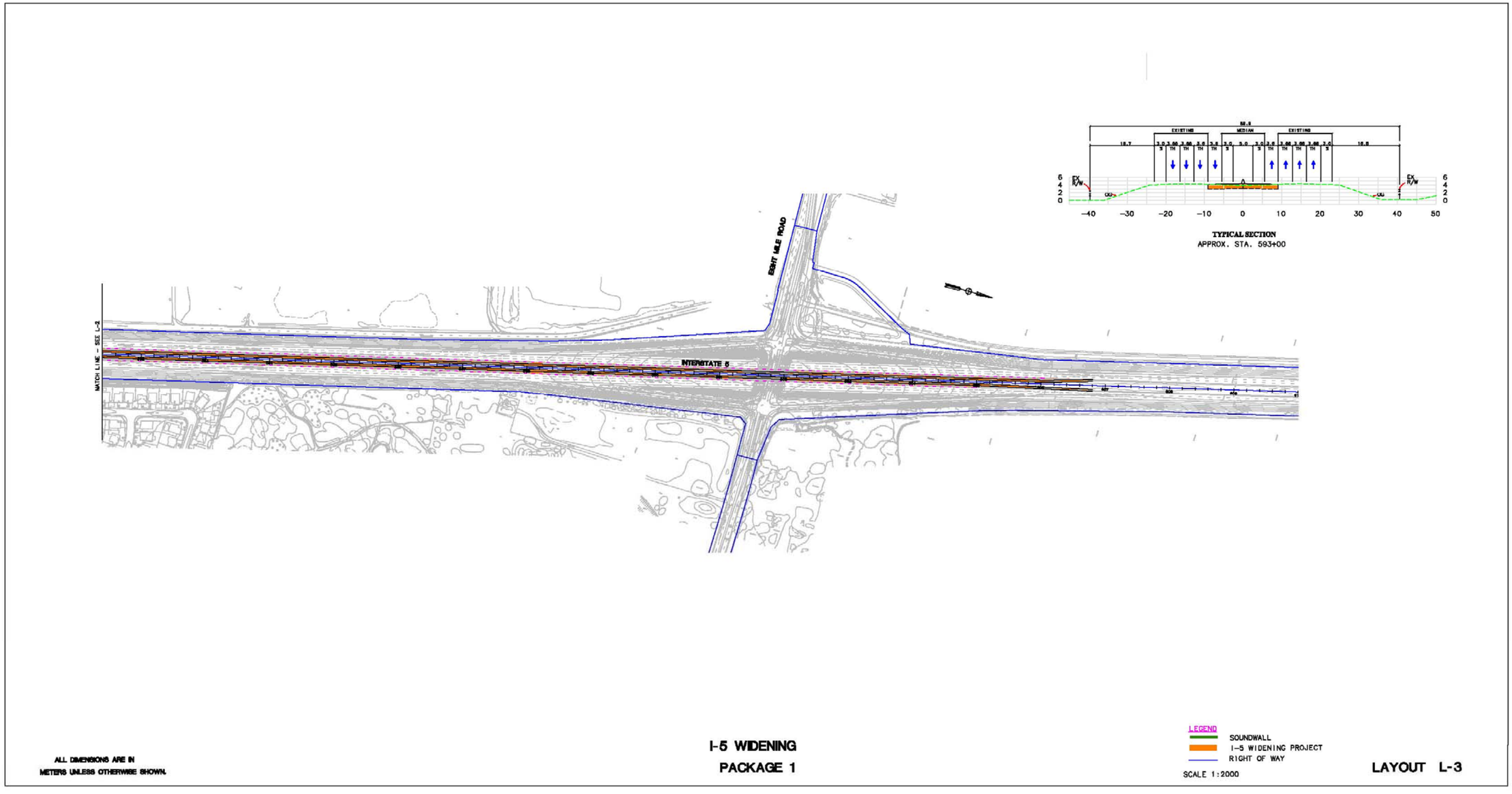
BETWEEN BENJAMIN HOLT AND HAMMER LANE
MARINERS DR
HAMMER LANE
INTERSTATE 5
FIVE MILE SLOUGH
KELLY DR
MARINERS DRIVE
OTTO DRIVE
MORMON SLOUGH
BEAR CREEK
MCAULIFFE RD
BANCROFT WAY
MATCH LINE - SEE L-1
MATCH LINE - SEE ABOVE
MATCH LINE - SEE L-3
ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.
I-5 WIDENING
PACKAGE 1
LEGEND
SOUNDWALL
I-5 WIDENING PROJECT
RIGHT OF WAY
SCALE 1:2000
LAYOUT L-2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MEDIAN
EXISTING
EX R/W
EX R/W
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−30
−20
−10
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30
40
50
TYPICAL SECTION
APPROX. STA. 593+00
EIGHT MILE ROAD
INTERSTATE 5
MATCH LINE - SEE L-2
ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.
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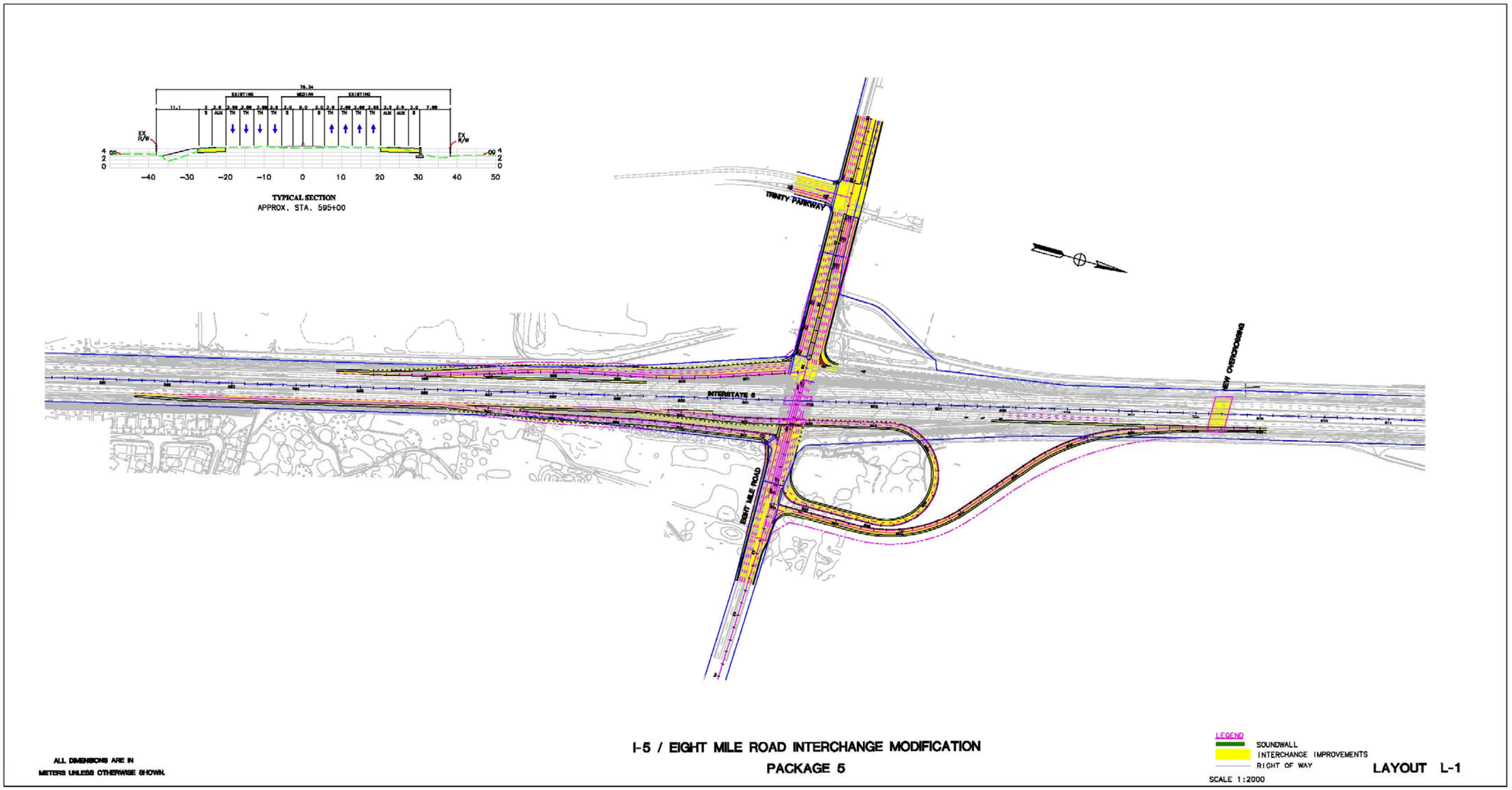
PACKAGE 1
LEGEND
SOUNDWALL
I-5 WIDENING PROJECT
RIGHT OF WAY
SCALE 1:2000
LAYOUT L-3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EXISTING
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TRINITY PARKWAY
INTERSTATE 5
NEW OVERCROSSING
EIGHT MILE ROAD
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
I-5 / EIGHT MILE ROAD INTERCHANGE MODIFICATION
PACKAGE 5
LEGEND
SOUNDWALL
INTERCHANGE IMPROVEMENTS
RIGHT OF WAY
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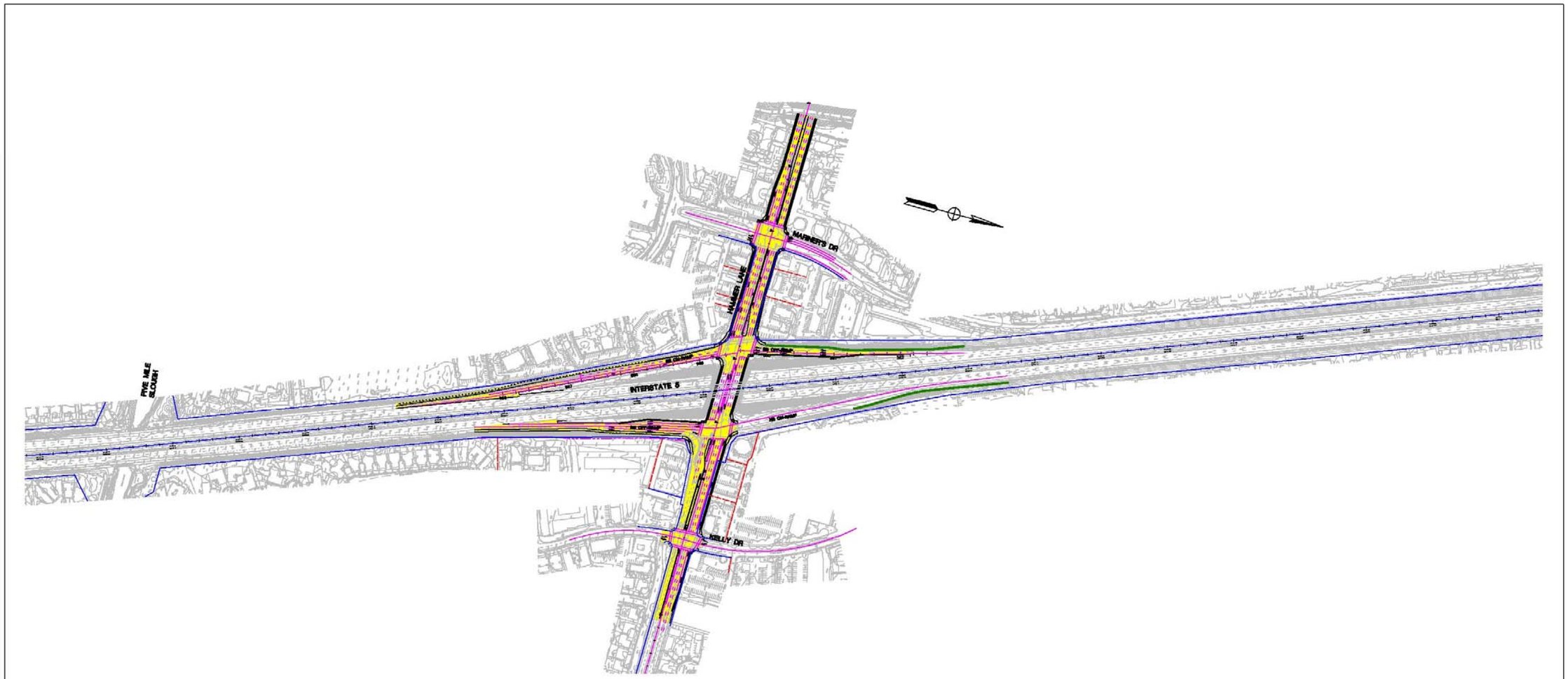
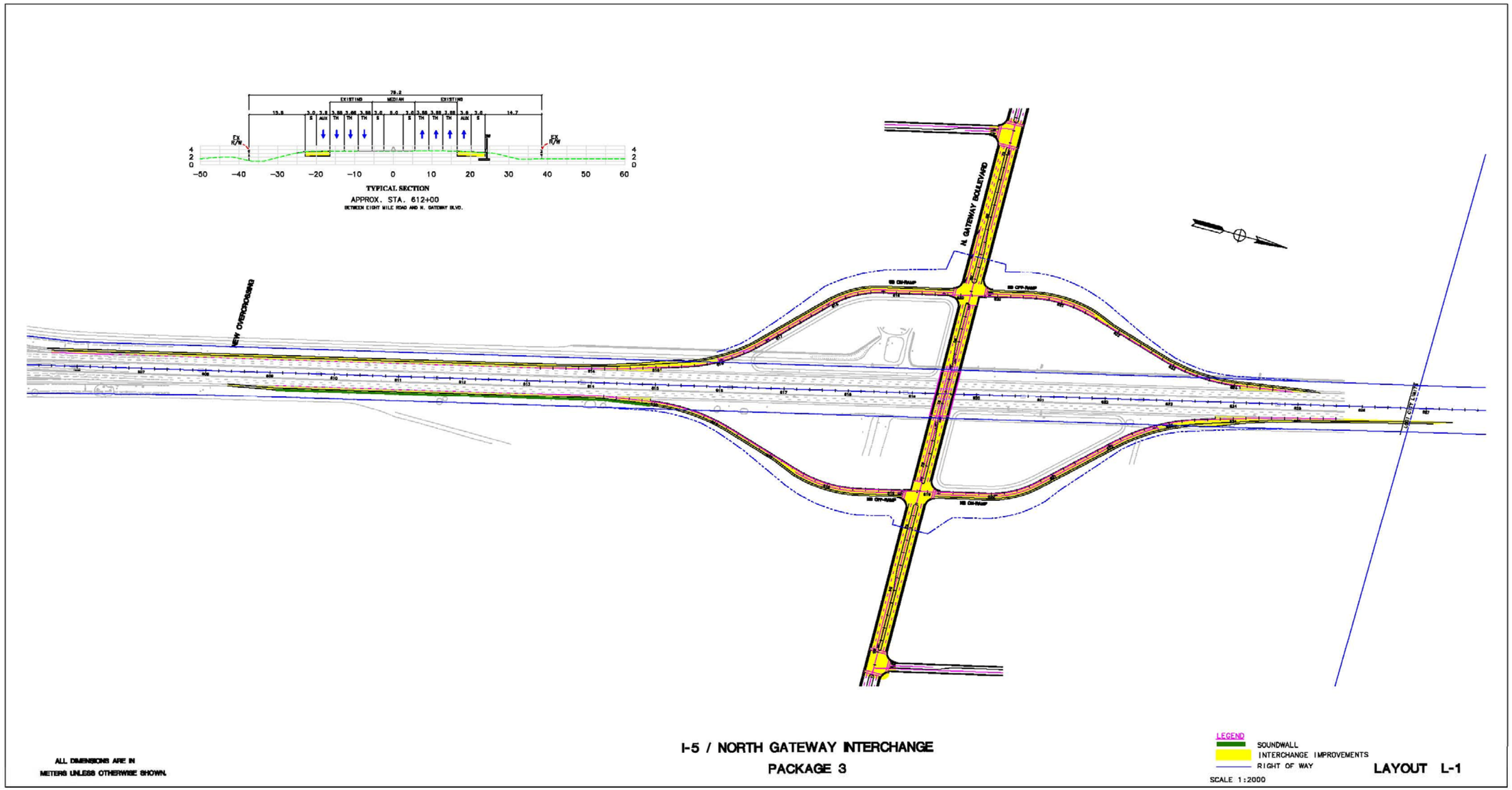
LAYOUT L-1


MARKETA DR
HAMMER LANE
INTERSTATE 5
FIVE MILE SLOUGH
KELLY DR
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
I-5 / HAMMER LANE INTERCHANGE MODIFICATION
PACKAGE 4
LEGEND
SOUNDWALL
INTERCHANGE IMPROVEMENTS
RIGHT OF WAY
SCALE 1:2000
LAYOUT L-1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MEDIAN
EXISTING
EX. R/W
EX. R/W
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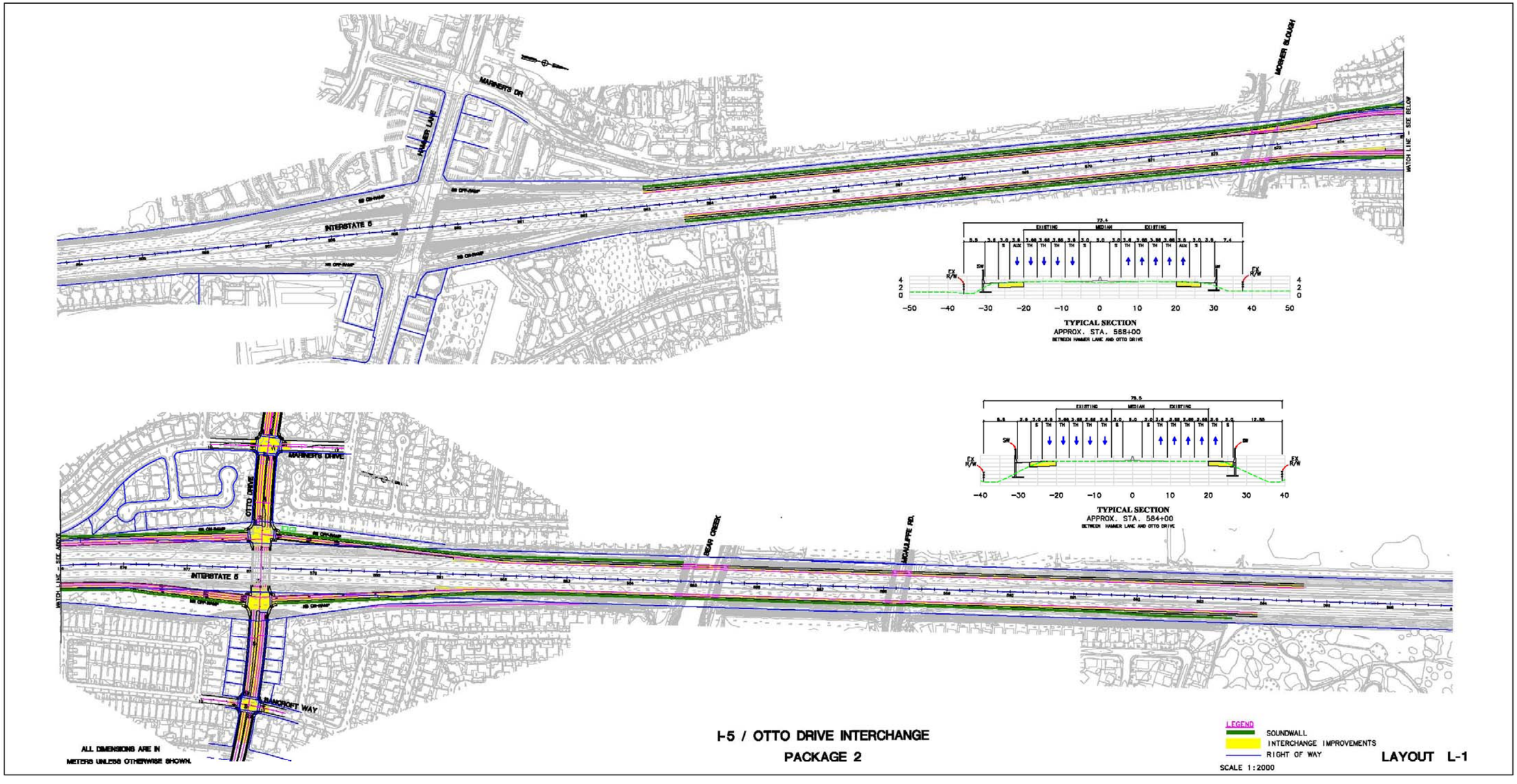
NEW OVERCROSSING
N. GATEWAY BOULEVARD
I-5 / NORTH GATEWAY INTERCHANGE
PACKAGE 3
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
LEGEND
SOUNDWALL
INTERCHANGE IMPROVEMENTS
RIGHT OF WAY
SCALE 1:2000
LAYOUT L-1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HAMMER LANE
INTERSTATE 5
MOKELUMNE SLOUGH
MATCH LINE - SEE BELOW
SB ON-RAMP
SB OFF-RAMP
NB OFF-RAMP
NB ON-RAMP
EXISTING
MEDIAN
EXISTING
TYPICAL SECTION
APPROX. STA. 588+00
BETWEEN HAMMER LANE AND OTTO DRIVE
OTTO DRIVE
MARINERS DRIVE
MATCH LINE - SEE ABOVE
BEAR CREEK
MCHALEE RD.
SUMMERSET WAY
TYPICAL SECTION
APPROX. STA. 584+00
BETWEEN HAMMER LANE AND OTTO DRIVE
ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN.
I-5 / OTTO DRIVE INTERCHANGE
PACKAGE 2
LEGEND
SOUNDWALL
INTERCHANGE IMPROVEMENTS
RIGHT OF WAY
SCALE 1:2000
LAYOUT L-1

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Appendix G Farmland Conversion Impact Rating

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 12/10/07
Name Of Project I-5 Widening and Interchanges Project, Stockton, C	Federal Agency Involved NRCS
Proposed Land Use Transportation	County And State San Joaquin County, CA
PART II *(To be completed by NRCS)*	Date Request Received By NRCS

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).* Yes ☑ No ☐ | Acres Irrigated 467,987 | Average Farm Size 191

Major Crop(s) corn, asparagus, wheat	Farmable Land In Govt. Jurisdiction Acres: 555,819 % 61	Amount Of Farmland As Defined in FPPA Acres: 633,533 % 69
Name Of Land Evaluation System Used California - Storie Index	Name Of Local Site Assessment System None	Date Land Evaluation Returned By NRCS 1/22/08

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	51.0			
B. Total Acres To Be Converted Indirectly	0.0			
C. Total Acres In Site	51.0	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	5.0			
B. Total Acres Statewide And Local Important Farmland	32.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	0.0			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	28	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use	15	6			
2. Perimeter In Nonurban Use	10	4			
3. Percent Of Site Being Farmed	20	8			
4. Protection Provided By State And Local Government	20	0			
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average	10	0			
8. Creation Of Nonfarmable Farmland	25	25			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	4			
11. Effects Of Conversion On Farm Support Services	25	0			
12. Compatibility With Existing Agricultural Use	10	4			
TOTAL SITE ASSESSMENT POINTS	160	56	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	28	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	56	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	84	0	0	0

Site Selected: | Date Of Selection | Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side)

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Clear Form

Form AD-1006 (10-83)

Appendix H Public Hearing Transcript

Interstate 5

North Stockton Improvement Project

Public Meeting

Wednesday, October 14, 2009

Don Riggio Elementary School

Multi-Use Room

3110 Brookside Road

Stockton, CA 95219

Reported by: Susan M. Portale, CSR No. 4095

Registered Merit Reporter Job No.: 7136TL

PERSONS PRESENT:

Judith Buethe, Public Outreach Coordinator

Keith Meyer, P.E., Rajappan & Meyer

Scott Guidi, Project Manager

Mary Anne Piana Chapman, Assistant

Susan Portale, Certified Shorthand Reporter

--o0o--

PUBLIC MEETING

KEITH MEYER: My name is Keith Meyer.

I am a consultant to Caltrans of the City.

I'd like to introduce Mr. Scott Guidi.

He is the Caltrans Project Manager for the I-5 North Stockton Corridor Project.

Scott.

SCOTT GUIDI: Good evening, everyone.

Can we get everybody to grab a chair?

That would be great so we can go ahead and get this presentation up and running and tell you guys what we plan on doing here.

I appreciate it.

Again, my name is Scott Guidi. I'm the Caltrans Project Manager. I've been given the opportunity to manage this project.

This is the I-5 North Stockton Corridor Project and along with this we will be modifying two interchanges and constructing two new interchanges.

Prior to getting into a lot of detail I'm going to actually introduce our Public Outreach staff member, Judith Buethe here (indicating).

She is going to go ahead and introduce a lot of the staff that you see surrounding you guys.

These folks are here for you to ask questions to.

They are fully informed in their expertise and will be glad to answer any questions that you have.

Judith.

JUDITH BUETHE: Actually, I'm not going to introduce too many people because I think you are going to want to listen to what Mr. Meyer has to say in his presentation.

But, first of all, thank you very much for taking the time to be here this evening and to provide your input on the project.

It is very important and you are listened to.

Do help yourself to refreshments, and in case anybody wonders, the restrooms are just outside this door and to your left.

There are a couple of introductions that I would like to make.

First of all, we have here from Lincoln Unified School District Board of Trustees, Trustee Everett Lowe is back here.

Thank you for being here.

And also we have Stockton City Council Member Elbert Holman.

Elbert is right here.

Thank you, Elbert.

And we are very pleased to have the second Director of the San Joaquin Council of Governments here, Andy Chesley.

And as you are making your way around the rooms this evening you will become acquainted with the environmental specialists, the staff and so forth, and I'll let you find them individually when we go back to the open house format.

With that I'm going to turn this meeting back over to Scott and Keith.

And thank you again for being here.

KEITH MEYER: Okay. Thanks very much, Judith, and welcome everybody.

This is a very large project. It's been under development for a few years.

We had our last Public Meeting when we first started the environmental process back in January of 2008 so we've been busy developing and evaluating the project that you see here tonight.

This is a very important project for the San Joaquin region and the City of Stockton.

It deals with the improvement of Interstate 5 north of Charter Way all the way up to the City limits, Stockton, up to near Highway 12.

You all know I don't need to tell you, you drive I-5, it's a major inter-regional connector, a major commute route and a major trucking route.

It's also an area of Stockton that has been recently changed in terms of land use so about a year ago, year and a half December, the Stockton City Council approved new uses north of Eight Mile Road and also to the west of I-5 so it is also a growth area.

One thing that this project hopes to accomplish is to get ahead of the growth curve by making improvements prior to the growth happening so that going forward into the next twenty years, twenty to twenty-five years, there is adequate capacity to handle traffic and growth and trucks in North Stockton.

So the purpose of this project is really four fold.

Number one, to reduce congestion that is there today and also to reduce congestion that is anticipated in the future.

Another big goal is a very large component of traffic on Interstate 5 and the abutting neighborhoods that is commute travel.

They commute to the Bay Area and commute to Sacramento so it's very important from an air quality standpoint, global warming and use of the facility to

encourage carpooling or high occupancy vehicle use.

A third goal is to improve the traffic operations at interchanges, particularly, Hammer Lane, which is quite congested, and allowing for future development to occur around Eight Mile Road.

Although, it was recently improved.

And, lastly, to provide regional connectivity.

That means that the City General Plan has a new east-west route north of Eight Mile Road.

Part of this project is to connect that up with Interstate 5 and which will provide better connections for residents and regional traffic.

So those are the four main goals of the project.

The description, which I won't spend a whole lot of time on, because it's plastered all over these boards for you today, is really multi-fold; it's physical widening, physical widening of the freeway from six lanes to eight lanes between Country Club Boulevard and Eight Mile Road.

That's to deal with growth in traffic today and in the future as well as congestion today.

Modifications at Hammer Lane interchange and Eight Mile Road interchange.

That's to accommodate existing problems at

Hammer as well as growth at new development of lands west of I-5 and north of Eight Mile Road, new interchanges at Otto Drive, which has been planned for the last fifteen years or so, and North Gateway Boulevard to help with that regional and local connectivity and also to relieve traffic at Hammer Lane.

It's a very important component for Otto Drive, and the North Gateway Boulevard will relieve future traffic problems at Eight Mile Road interchange.

The last two are very important.

As you know, the pavement condition on Interstate 5 is pretty bad, particularly south of March Lane.

This project, the first phase of the project that is being designed right now, will completely replace the existing concrete lanes south of March Lane, between March Lane and Country Club, with brand-new concrete, not just panel replacement but digging out the entire pavement concrete and replacing it with brand-new concrete.

That's a very important part. It's a good time to do it while we are doing all of the widening because we have the ability to maintain three lanes of traffic in each direction with this widening so that we can reconstruct that portion of I-5.

And then lastly something that's been I know long awaited and expected is soundwalls along the remainder of the corridor along March Lane.

They are depicted in a number of areas on the maps, both on the table and around the room, so we'll be able to talk about the locations of those soundwalls pretty much where they pick up at March Lane, going all the way up to past Otto Drive and up to Eight Mile Road.

I want to let you know that those components of all the work that I talked about is about a four hundred and thirty-five million dollar project. It is a huge project.

That requires money from your local county sales tax, from land development activity, from developers, from direct development contribution as well as allocations from the State and Federal government.

You know that the Federal government has been busy with funding various stimulus packages and there has been a number of applications made to help fund this project to the Federal government.

All the applications total are -- we cover everything that you see here. Whether that comes to fruition or not time will tell.

There is money to build certain phases of it. The most important phase in the initial phase is the

widening of Interstate 5, construction of soundwalls and the pavement rehabilitation up to Hammer Lane.

That would be the very first phase and there is general sufficient funds that that project can be the first to be constructed.

All of the construction components that I just talked to you about are packages of two alternatives in the environmental document.

The first alternative is to leave the lanes operating the way today. That is, that all lanes can be used by all vehicles. So if you add the lane to the inside of the freeway, it can be used by carpools, regular vehicles, single unit trucks, not semi-trucks.

The other alternative that we are considering is to make -- convert all of the new widening on the inside to carpool or high occupancy vehicle use.

That's for the carpools and commute traffic that already exists in the corridor.

In addition, this alternative would restripe the left lane from Country Club down to Charter Way/Martin Luther King Boulevard, Junior, which is currently for mixed flow use. It would also stripe that as a peak hour carpooling.

That would end up creating about a twelve and a half mile carpool lane between Charter, Martin Luther

King to Eight Mile Road.

It's a very significant project. There is already a significant amount of commuter traffic on Interstate 5.

So those are our two main alternatives, which include all of the construction components.

Of course, the environmental document also considers not doing anything and comparing those as well.

So just a couple of renderings and depictions here on the length of the project.

Our construction starts at Country Club Boulevard and ends north of Eight Mile Road.

We'll be adding what we call auxiliary lanes in the initial construction between March Lane and Benjamin Holt and Benjamin Holt to Hammer.

That will allow for better merging and diverging of traffic and trucks in and out of the main lanes.

There are already what we call auxiliary lanes south of March lane. That helps the interchanges and main line traffic to operate better and smoother.

The restriping or the construction of the carpool lane would -- the option that I talked about would go from Country Club up to north of Eight Mile

Road and the portion that would be restriped would be from Country Club down to Charter Way.

So that's one of our alternatives.

That's alternative two.

I mentioned the four interchanges, two of them to increase capacity at Hammer Lane and Eight Mile Road, two new interchanges, one at Otto Drive and one at North Gateway.

A photo of the existing condition just at Country Club looking north where the lane next down coming up to the bridges.

This, as you know, causes a pitch point in traffic and congestion.

Our package for widening will completely close up the medians with new lanes, concrete barrier, a glare fence and a pretty typical construction completely repairing the pavement as well.

The option, of course, is to have that inside lane striped as a carpool lane.

We'd certainly like to hear from you tonight about that.

A typical crossing over the waterways -- this happens to be Calaveras River. This is Brookside Drive. We are on Brookside Drive tonight a little further west of here.

This is River Road.

All of the bridges over the waterways and local streets will be closed in and in-depth.

It looks easier than it is.

It's a complicated process to do that, particularly over the waterways.

This would be particularly Calaveras would be our first phase of -- in our first packet.

This is another picture of existing condition south near March Lane.

There's many locations where there are partial soundwalls on the freeway.

There are no soundwalls on the other sides of the freeway that need them so our widening would include widening to the inside and construction of new soundwalls in those areas, residential areas that -- that exceed certain standards and thresholds.

The Hammer Lane interchange, this is a picture today.

The project will widen the freeway through the interchange and add some general lanes to the ramps and to Hammer Lane between Mariners and Kelly Drive.

The Otto Drive interchange, existing Otto Drive looking towards the west.

Bancroft is right over here and Mariners Drive

is over here.

This interchange has been on the books of the City for fifteen years or so.

In fact, the right of way for the interchange is already reserved and is part of the development already in place and the roadway has been planned to connect back up in the City General Plan for many years.

The proposed project would require acquisition of the duplexes over to Bancroft, creation of a little green way to protect access so that there's not too many conflicts up to the interchange.

We'd be raising the freeway to take it up and over Otto Drive, which would be at grade, in constructing on and off-ramps at the intersection with Otto Drive.

All of this work up to Otto Drive would include soundwalls on either side and the ramps would also have soundwalls where necessary.

So a big benefit here will be with the construction adding soundwalls to the interchange and freeway.

At Eight Mile Road this is the existing interchange that was recently approved a few years back.

The new Trinity Parkway Spanos Center.

This will require that a new exit ramp

northbound be constructed to handle the recent growth of development that's anticipated to the north.

And then lastly at the locations north of -- about 1.2 miles north of Eight Mile Road where a new regional growth center is anticipated; plus, this new east-west facility that would go from Interstate 5 over to Highway 99.

That's another cross-valley connector.

So those are the components of the project.

Around this room (indicating) we have attempted to set it up with project description over here.

We have fairly large scale maps of all of the proposed improvements along these tables. It's a little bit easier to find your house in this area.

And then we have our departmental discussions and land and traffic issues and some noise descriptions over around that area.

So just the lay of the land so you can flow around and take a look at any of the exhibits.

So we've been underway since January, 2008.

We released the environmental document on September 28th, 2009.

That is, we are here tonight on October 14th.

Any comments that you have on the environmental document are due to Caltrans by November 12th -- is that

at five p.m.?

Is that at the close of the period, five p.m.?

GAIL MILLER: Yeah.

KEITH MEYER: And we anticipate that the final environmental document will be approved later this year or the early part of 2010.

It does have to go to the Federal Highway Administration and some other agencies for review so that takes a little bit of time.

Now, after that we anticipate continuing with a little bit of design.

We are under design of that first phase of widening already so we can take advantage of some of the stimulus funds, hopefully.

That will continue -- design of the facilities will continue through 2011.

Acquisition is only necessary for the interchanges, interchange work all for the locations, so that will continue after the clearance of the environmental document.

The good news about the Interstate widening part is that no right of way is necessary to widen that freeway. The important part, it allows us to accelerate that project.

As I mentioned in the early part, the early

phase would be, hopefully, with funding permitted and realized, would be to construct the I-5 widening from Martin Luther King/Charter to Hammer Lane.

That would be the first package, hopefully, starting as soon as September of next year pending receipt of stimulus funds.

The next phase would be to construct the I-5 widening from Hammer Lane to Eight Mile Road.

And then between 2012 and 2015 construction of the interchanges.

It's desired that Otto Drive be the first interchange to be constructed because constructing the Otto Drive interchange relieves traffic at Hammer Lane a great deal.

All the folks who live in the area around the future Otto Drive interchange either have to go down to Hammer Lane or up to Eight Mile Road to get in and out of the area so by constructing Otto Drive it's a great relief to those folks in terms of traveling to and from Hammer Lane or Eight Mile Road.

So that would be the first priority.

The second priority or third or fourth or fifth priority would be the other interchanges, Hammer Lane, Eight Mile Road, and that's really going to be dependent on the development coming back in the region.

So why are we here tonight?

We want to discuss the project with you.

We want to describe and answer any questions that you have about the process and about the things that have been studied.

Most importantly, we want to hear from you any comments or concerns about anything on this project that you have, timing, work, impacts.

There's many ways for you to make those comments.

We have comment cards.

We have comments that could be expressed directly to any of the representatives, the Caltrans representatives, or anybody with a badge here probably can help you.

We have a fabulous court reporter over in the corner. She's actually the easiest because you could just go spill your guts out to her and she'll just type it down.

SCOTT GUIDI: She's right there.

KEITH MEYER: She's right there in the corner and she's great.

Or you can mail your comments directly to Caltrans so I'd remind you that the comments need to be delivered by November 12th, 2009.

Anything else, Scott?

SCOTT GUIDI: To give a name on that previous slide -- Gail, could you stand up real quick.

That's Gail Miller. She is the head of our environmental staff managing the environmental documents project so use her as a point of contact.

Use me as a point of contact, Kevin Sheridan -- this is Kevin Sheridan -- Alex Menor, Jeff Levers --

GAIL MILLER: These are all environmental?

SCOTT GUIDI: These are all environmental questions --

GAIL MILLER: If they have a comment about the document, send them to me.

SCOTT GUIDI: Other than that this is the interactive part of the evening so please feel free to go ahead and ask questions.

Thank you.

KEITH MEYER: Okay.

Thanks very much, everybody.

We have staff here to circulate.

Like I said, I think these layout maps here have a lot of information on them, show where the soundwalls are, show where the individual properties are.

Again, we thank you for coming and look forward

to hearing from you.

Thank you.

---oOo---

"Dictate Your Comments Here":

GARY NICKLES: I think this project is long overdue. The environmental impact is on ours here and the families that live and abut Highway I-5 with the noise, that's continually.

I've checked the decibel levels in our own apartment complex and they were over 80 dB as it stands right now so we look forward with great anticipation for the freeway soundwalls and the freeway widening and the improvements to the deteriorated freeway. It's almost impassable at times.

---oOo---

PATTY FENSTERWALD: My purpose in being here is simply to ask if they couldn't do a very simple thing.

At the entrance to I-5 from Benjamin Holt Drive could they put a simple sign up above Hammer Lane to keep the trucks off of the lane where you enter the freeway, the entering lane?

The trucks barrel down there. There is no place for entering onto I-5, to get off to I-5 if the trucks are in their lane and it's very, very, very, very dangerous.

I live at 1635 West Lincoln Road and I use that

entry all the time.

The other thing is at that address I would welcome the soundwalls because I hear the traffic as though I lived just about two blocks from I-5. There is some terrific sounds. You wouldn't believe it.

Thank you very much for the opportunity.

---oOo---

LARRY NORDSTROM: My concern is that the arterial streets, and I think there are four of them, Hammer Lane, Otto Drive, Eight Mile Road, and I think it's called North Gateway, arterial streets, that they incorporate what's called a complete streets design to accommodate other modes of transportation other than the automobile.

That's including bicyclists, pedestrian and other forms of mass transportation, buses and so forth.

The exhibits, as I see them on display, do not indicate those corridors to accommodate those types of pedestrian and bicyclist's pathways.

So I believe that this needs to be incorporated into the environmental document and looked at as to how other modes of transportation can be handled within the corridor or right-of-way.

---oOo---

DALE STOCKING: Okay. I'm a member of a couple different organizations, Sierra Club and also Concerned Citizens Coalition Of Stockton and Campaign For Common Ground.

And concerns that we would have would be the environmental improvement at this time of projects north of Eight Mile Road that most probably will not be coming online or to fruition for a number of years and including them in this environmental document and project would have the potential perhaps for grandfathering in something at this time that we may have environmental and economic considerations different and that this project would be better -- let's see how to word this -- if it were limited only up to Eight Mile Road.

That's the basic gist.

---oOo---

ANNA LOZANO: The first would be the exchange on Otto, would this put me -- because I live on Bancroft Way -- in a flood zone?

And then the other one -- I'm reading -- will Otto be a truck route?

And then the other one, what would the speed limit be and will there be a streetlight because there

isn't one now?

And that was it. That's all I can think of right at this moment.

---oOo---

DOLORES WASHINGTON: I was interested if they are going to install the traffic meter lights at the new intersections and the existing ones from Downey all the way to Gateway, the new road, the new pass that would be past Eight Mile Road?

From South Stockton will there be traffic meter lights at all of them?

Were they going to set new rules for the carpool lane?

Because a lot of people who drive from Tracy to Sacramento that are single and they would not be able to use the carpool lane unless there is some kind of rule changed, you know, or you had a stamp or something like that. Okay.

And I was wondering what they were going to do for the sound barrier walls in order to keep the graffiti or breaking up, and I understand that they are going to put down -- put ivy on them. Okay.

And will there be another Public Meeting or is this the only one that we will be having?

I would just like to make this comment, also:

And, that is, the chart and the presentations were excellent. They were big enough and you could see them.

However, I couldn't get the coffee to come out of that coffee spout. I'm just kidding.

I'm happy to see how they are going to not have to buy any more right-of-way, you know, by merging the two air spaces, so we call it, together, and I hope they do the Otto one very quickly because I live on Hammer, and I'm sure that will relieve a lot of the traffic from my house

And I guess that's -- that's about it.

---oOo---

WENDY MORGAN: My vote for the widening project would be alternative number one, to not make either of the two additional lanes be HOV lanes at peak hours or otherwise, to have access for everyone at all times of the day.

---oOo---

JUDITH BUETHE: The hearing is now closed.

(Hearing recessed at eight o'clock p.m.)

---oOo---

REPORTER'S CERTIFICATE

I certify that the foregoing proceedings in the within-entitled cause were reported at the time and place therein named; that said proceedings were reported by me, a duly Certified Shorthand Reporter of the State of CA, and were thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for either or any of the parties to said cause of action, nor in any way interested in the outcome of the cause named in said cause of action.

IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of October, 2009.

_____

SUSAN M. PORTALE, Calif. CSR No. 4095
Registered Merit Reporter

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List of Technical Studies that are Bound Separately

Draft Relocation Statement
Air Quality Report
Noise Study Report
Noise Abatement Decision Report
Water Quality Report
Natural Environment Study
Location Hydraulic Study
Historical Property Survey Report

- Archaeological Survey Report

Initial Paleontology Study
Hazardous Waste Reports

- Initial Site Assessment (2005)
- Initial Site Assessment (2007)
- Preliminary Site Investigation (Geophysical Survey)

Scenic Resource Evaluation/Visual Assessment