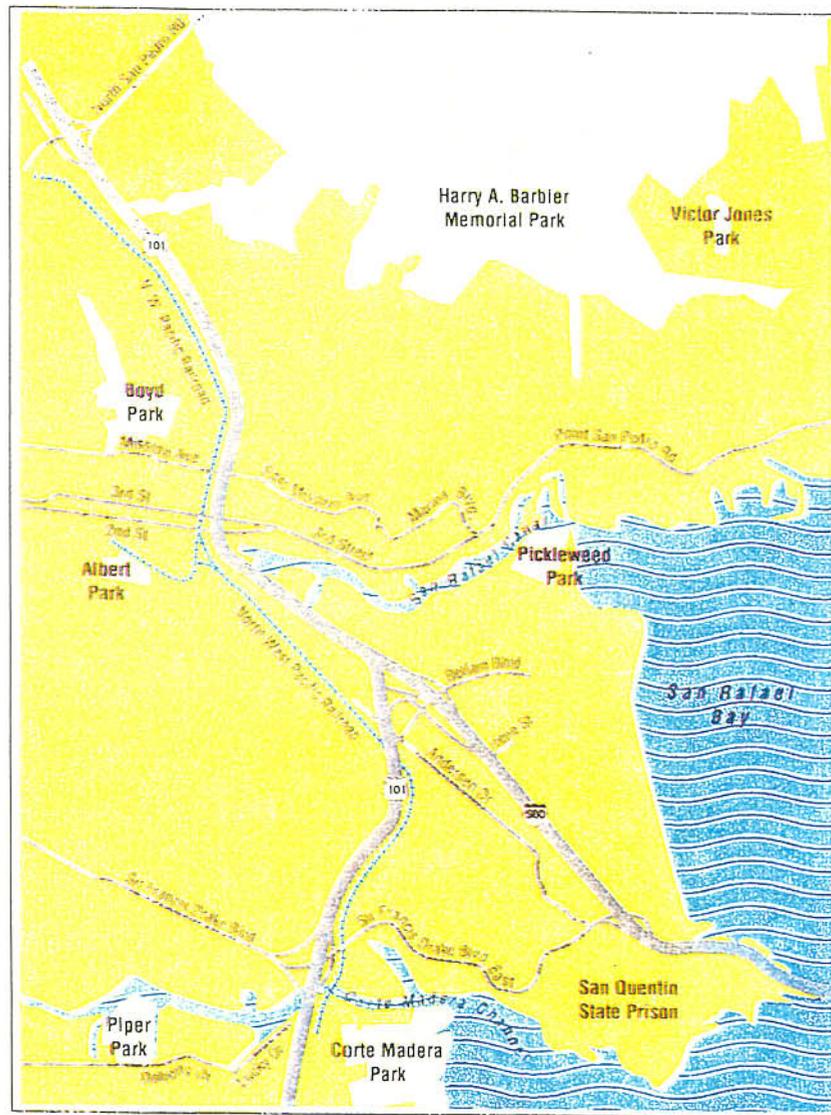




MARIN 101 HOV LANE GAP CLOSURE PROJECT

California Department of Transportation



Final Environmental Impact Statement/Report

Volume I



Prepared by
State of California
Department of Transportation
District 4



US Department of Transportation
Federal Highway Administration

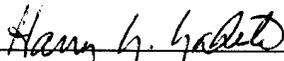


**U.S. 101/INTERSTATE 580
 KP12.7/20.6(7-9/12.8)/KP7.2/7.7(4.5/4.8)
 ON U.S. 101 FROM LUCKY DRIVE TO NORTH SAN PEDRO ROAD
 AND INTERSTATE 580 FROM IRENE STREET TO U.S. 101
 MARIN COUNTY, CALIFORNIA
 FINAL ENVIRONMENTAL IMPACT STATEMENT/REPORT (FEIS/R)**

Submitted Pursuant to National Environmental Policy Act - 42 U.S.C. 4332(2)(c)
 California Environmental Quality Act - Division 13, Public Resources Code

by the
 U.S. Department of Transportation
 Federal Highway Administration
 and the
 State of California Department of Transportation

12/3/99
 Date of Approval


 Harry Y. Yahata
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12/28/99
 Date of Approval


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Abstract: Caltrans proposes to close the gap in the HOV lane system on U.S. 101 in Marin County between Lucky Drive in Corte Madera and North San Pedro Road in San Rafael. This FEIS/R evaluates the project alternatives including the Southbound/Reversible HOV Lane Gap Closure Alternative. The Southbound/Reversible HOV Lane Gap Closure Alternative is identified as the Preferred Alternative. The Southbound/Reversible HOV Lane Gap Closure Alternative proposes to construct a southbound high occupancy vehicle (HOV) lane and, in a second stage, to convert the southbound HOV lane to a reversible southbound and northbound lane. The Build Alternatives also propose improvements to the U.S. 101/I-580 interchange; relocation of a portion of the Northwestern Pacific Railroad (NWPR) right of way; relocation of Francisco Boulevard West; and noise barriers where required.

The adverse socioeconomic and environmental impacts from the Marin 101 HOV Lane Gap Closure Project Build Alternatives include: the acquisition of residences and businesses on the west side of U.S. 101, change in the viewshed by removal of landscaping and the addition of noise barriers, modification of riparian and wetland habitat, and temporary impacts from construction, among others.

Controversy over certain elements of the project, primarily which side of the existing highway would be widened, the required residential relocation, the possible impacts on the NWPR transit corridor and the potential for reflected noise is considered in this FEIS/R.

The potential benefits of the Marin 101 HOV Lane Gap Closure Project include: creation of a continuous HOV lane system to reduce delay and encourage HOV usage, improved highway operations and safety, and improved access to the commercial Francisco Boulevard West area and to other areas in San Rafael. Highway improvements will include lane and shoulder widening, and on and off-ramps constructed to current standards to improve operational safety.

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JOSE MEDINA
Director

Date: 7-27-99

MARIN 101 HOV LANE GAP CLOSURE PROJECT

Lucky Drive to North San Pedro Road

Final Environmental Impact Statement/Report

Volume I

Federal Highway Administration

California Department of Transportation

District 4 - Oakland

January 2000

SUMMARY

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S.1 Introduction

This document is the Final Environmental Impact Statement/Report (FEIS/R) for the Marin 101 HOV Lane Gap Closure Project. This FEIS/R identifies the Southbound/Reversible HOV Lane Gap Closure Alternative as the Preferred Alternative.

A Draft Environmental Impact Statement/Report (DEIS/R) for this project was prepared and circulated to the public on June 23, 1997. The DEIS/R included many project alternatives that were “considered and withdrawn,” including the Southbound/Reversible HOV Lane Gap Closure Alternative. However, due to factors such as public and agency interest in an HOV lane in each direction, additional funding options, and similarity of environmental impacts with the Southbound Only HOV Lane Gap Closure Alternative, the Southbound/Reversible HOV Lane Gap Closure Alternative is being retained as an alternative under consideration, and is now identified as the Preferred Alternative.

This FEIS/R also provides responses to all comments on the Marin 101 HOV Lane Gap Closure Project DEIS/R received during previous public comment periods. Approval of this FEIS/R will be followed by a 30-day public comment period. At the end of the public comment period, a Record of Decision (ROD) for the Marin 101 HOV Lane Gap Closure Project will be prepared including a response to all substantive comments on this FEIS/R. The ROD will summarize reasons for the Federal Highway Administration’s decision on the selection of an alternative for the Marin 101 HOV Lane Gap Closure Project.

S.2 Project Purpose

The Marin County Congestion Management Agency and the California Department of Transportation (Caltrans) are proposing to relieve recurring congestion on the US 101 corridor in Marin County by providing a continuous HOV lane in both directions. The Marin 101 HOV Lane Gap Closure Project will close the gap in the high occupancy vehicle (HOV) lane system between the Richardson Bay Bridge and Route 37, see **Figure 1-Map of US 101 Corridor in Marin County**. Currently there is a gap in the HOV lane system between Lucky Drive in Corte Madera and North San Pedro Road in San Rafael. Between Lucky Drive and North San Pedro Road, the existing facility is a six-lane freeway with narrow shoulders and narrow median, see **Figure 2-Marin 101 HOV Lane Gap Closure Limits**. To the south of Lucky Drive and to the

north of North San Pedro Road, US 101 has eight lanes with three mixed-flow lanes and one HOV lane in each direction. Completion of the HOV lane system will:

- reduce the traffic delay during peak traffic periods for HOV lane travelers,
- reduce the traffic delay during peak traffic periods for mixed-flow lane travelers,
- encourage the use of buses, vanpools and carpools,
- enhance existing inter-modal transportation options, and
- add mixed-flow lane capacity during off-peak periods.

The project would also improve highway operations and safety by the:

- addition of auxiliary lanes,
- standardization of ramp merging distances,
- reconstruction of existing substandard on and off-ramps, and
- standardization of lane widths and of median and shoulder widths.

S.3 Public Involvement

During the spring and early summer of 1997, an extensive public participation program was conducted including informational meetings, public mailings, newsletters, and the establishment of a City of San Rafael Citizens Advisory Group. An Open House for the Marin 101 HOV Lane Gap Closure Project was held on July 22, 1997 to provide information to the community on the scope of the project and its beneficial and adverse consequences. Public comments were received at a public hearing held on July 31, 1997. Comments raised at this public hearing included:

- the possibility of the Reversible Lane option,
- impacts of noise barriers and reflective noise,
- alternative modes of travel in the Northwestern Pacific Railroad right of way,
- project impacts on housing, and
- project impacts on the Francisco Boulevard West area.

Comments and responses from the public hearing and those received after the Draft Environmental Impact Statement/Report (DEIS/R) was circulated can be found in Volume II of the Final Environmental Impact Statement/Report (FEIS/R) for the Marin 101 HOV Lane Gap Closure Project.

S.4 Adverse Issues

The adverse environmental issues associated with the Marin 101 HOV Lane Gap Closure Project include:

- loss of residences and businesses,
- changes in highway landscaping and associated views,
- construction of additional noise barriers, and
- modification and loss of a small area of riparian and wetlands habitat.

S.5 Controversial Issues

There are several issues considered controversial enough to justify the preparation of an Environmental Impact Statement/Report (EIS/R). These issues have been evaluated and resolved (except reflective noise, which is still under study). The controversial issues and the appropriate sections of this FEIS/R are referenced below:

ISSUES	FEIS/R DISCUSSION		
Which side of the highway to widen in the northerly portion of the project area	Section S.8 Section 2.3.2	Alternatives Considered and Withdrawn East and Symmetrical Widening Alternative	
Taking of residences and businesses for highway construction	Section 4.13.6 Section 4.13.7	Residential and Business Relocation Relocation Mitigation	
Possible impacts on the Northwestern Pacific Railroad (NWPR) right of way	Section S.8 Section 2.3.5	Alternatives Considered and Withdrawn Use of the NWPR Right of Way Alternative	
	Section 2.3.12	Utilize the NWPR Right of Way as an HOV or Bus Corridor Alternative	
	Section 4.12.3	Railroad Impacts and Mitigation	
Alternatives to highway construction, such as development of the NWPR right of way for transit	Section S.10 Section 1.4 Section 2.3.9	Accommodation of Future Rail Transit Modal Interrelationships Transit Only Alternatives	
	Construction of new noise barriers	Section 3.14.1	Noise Sensitive Areas
		Section 3.14.2	Noise Abatement Criteria
Section 4.14.1		Noise Impacts	
Section 4.14.2		Noise Barriers	
Visual changes that may be perceived to have a negative impact on the traveling public and on neighborhoods	Section 3.15	Visual Environment	
	Section 4.15.3	Visual Impacts and Mitigation	
Reflective noise*	Section 3.14.3	Reflective Noise	
	Section 4.14.4	Reflective Noise	

*This has become a more controversial issue during the environmental evaluation process.

Reflective Noise

One of the issues raised in recent years concerning freeway travel and noise barriers is reflected noise. The complex nature of noise barrier reflections, the difficulties in measuring them, and the controversy surrounding the significance of their impacts is discussed in **Section 3.14.3-Reflective Noise**. Single and parallel barrier studies by Caltrans and by others, a previous Marin US 101 *Noise Impact Report-1981*, and a before and after noise barrier study on US 101 in San Rafael are presented. Data on the existing noise environment in the project area and the Marin 101 HOV Lane Gap Closure Project *Noise Impact Report* is summarized.

Public input over reflected and distant-receiver noise has led to the Marin Congestion Management Agency supporting an additional noise evaluation. In **Section 4.14.4-Reflected Noise**, the need for further evaluation of the existing and proposed noise barriers and the predicted future noise levels in the Marin 101 HOV Lane Gap Closure Project area is presented. The preliminary scope of the upcoming noise evaluation is also discussed.

S.6 Need for Action

Completion of the HOV lane system through Marin County has been a consistent goal of the *Marin Countywide Plan*, the *US 101 Corridor Strategic Plan*, the *Marin County Congestion Management Plan*, the Metropolitan Transportation Commission (MTC) *2005 HOV Master Plan* and the *MTC Regional Transportation Plan*. The Federal Highway Administration (FHWA) also supports HOV lanes as a safe, efficient, transportation method involving minimum harm to the environment.

Continuous HOV lanes in the US 101 corridor are needed because the delays experienced by motorists during the morning and evening peak commuting periods are among the worst in the Bay Area and are projected to become even worse in the future. The primary reasons identified for the increasing traffic congestion are travel behavior, job growth, approved and proposed housing and commercial development, and the jobs/housing imbalance.

US 101 through Marin County has periods of severe traffic congestion in the morning and evening commute periods:

- Existing southbound US 101 morning peak-period traffic results in delays of over 25 minutes for mixed-flow traffic with congestion primarily occurring from the Rowland Avenue on-ramp to the Mission Avenue off-ramp.
- Existing northbound US 101 afternoon peak-period traffic results in delays of nearly 8 minutes for mixed-flow traffic with congestion occurring primarily between Tiburon Boulevard/Route 131 and the Lincoln Avenue on-ramp.

The Marin 101 HOV Lane Gap Closure Project will increase HOV usage during peak periods and indirectly encourage the use of buses and ferries. Single occupancy vehicles commuting through the project area will receive secondary benefits.

S.7 Alternatives

This FEIS describes and evaluates four alternatives in detail. They are:

- the No-Build Alternative,
- the Southbound Only HOV Lane Gap Closure Alternative,
- the Ultimate HOV Lane Gap Closure Alternative, and
- the Southbound/Reversible HOV Lane Gap Closure Alternative.

Numerous alternatives were evaluated in the Draft Environmental Impact Statement/Report (DEIS/R). The Ultimate HOV Lane Gap Closure Alternative and the Southbound Only HOV Lane Gap Closure Alternative were evaluated in detail in the DEIS/R. The DEIS/R also described the Southbound/Reversible HOV Lane Gap Closure Alternative as "considered but withdrawn." However, the Southbound/Reversible HOV Lane Gap Closure Alternative is now being retained as an alternative under consideration and has been identified as the Preferred Alternative. This is the result of:

- public interest in a reversible HOV lane alternative,
- newly available funding,
- the environmental impacts from the Southbound Only HOV Lane Gap Closure Alternative and the Southbound/Reversible HOV Lane Gap Closure Alternative are nearly identical, and
- the Southbound/Reversible HOV Lane Gap Closure Alternative meets the stated goals of closing the HOV gap in both the northbound and the southbound directions.

The total project length on US 101 is 7.2 kilometers (4.5 miles) and on I-580 it is 1.6 kilometers (1.0 mile).

No-Build Alternative

The No-Build Alternative would not implement any changes or construction within the project limits. The No-Build Alternative does not fulfill the project purpose and need because it does not contribute towards a continuous HOV lane system on US 101 in Marin County, nor does it reduce delay, relieve congestion or encourage the use of buses, vanpools and carpools.

The Ultimate HOV Lane Gap Closure Alternative

The Ultimate HOV Lane Gap Closure Alternative proposes to close the gap in the existing HOV lane system on US 101 between Lucky Drive and North San Pedro Road in Marin County by adding a northbound and a southbound lane. The proposed improvements would widen the existing six-lane freeway to accommodate one additional lane in each direction, which would operate as HOV lanes during peak traffic periods. In addition to the northbound and southbound HOV lanes, the proposed work includes construction of northbound and southbound auxiliary lanes and improvements to the US 101/I-580 Interchange, including a northbound US 101 to eastbound I-580 direct connector. This would allow redirection of East Bay bound traffic from Sir Francis Drake Boulevard avoiding traffic congestion at the Larkspur Ferry Terminal. The replacement of the existing northbound San Rafael Viaduct structure is included in this project. The 1998 estimated costs of the Ultimate HOV Lane Gap Closure Alternative are \$153,000,000. Currently programmed funds are inadequate to build the Ultimate Gap Closure alternative.

The Southbound Only HOV Lane Gap Closure Alternative

The Southbound Only HOV Lane Alternative would add one southbound lane on US 101, between North San Pedro Road and Lucky Drive, for a total of four southbound through lanes, three mixed-flow lanes and one HOV lane, during the morning peak period. There would be a continuous HOV lane system on southbound US 101 in Marin County starting at State Route 37 in Novato and ending at State Route 1 in Mill Valley. The operating time for the HOV lane would be the morning peak traffic period, and the remainder of the time the lane would be used as a mixed-flow lane.

In two areas, adjacent to Francisco Boulevard West and along Lincoln and Brookdale Avenues, sufficient highway right of way for the Ultimate HOV Lane Gap Closure Alternative will be acquired as a part of the Southbound Only HOV Lane Gap Closure Alternative.

The 1998 estimated cost of the Southbound Only HOV Lane Alternative is \$62,201,000.

The Southbound/Reversible HOV Lane Gap Closure

This alternative was revived due to considerable interest expressed during review of the Draft Environmental Impact Statement/Report (DEIS/R) and because additional funds became available. Additionally, information on the operation of a reversible HOV lane with a moveable barrier became available. A southbound HOV lane would be constructed as a first stage and put into operation. In the second stage, this southbound HOV lane would be converted to a reversible lane with a moveable barrier to provide an HOV lane in the northbound or southbound directions along US 101. This system would provide an HOV lane for the peak traffic period in each direction. The right of way acquired for the construction of the southbound HOV lane is sufficient for the construction of the reversible HOV lane. The lane would operate as a mixed-flow lane during off-peak periods (including midday, nights and weekends).

The reversible lane would be converted from northbound to southbound or vice versa by a transport vehicle that transports moveable barrier. As the vehicle moves down the reversible lane it picks up and relocates the moveable barrier from one side of the reversible lane to the

other. The transport vehicle reaches one end of the project opening the reversible lane in the opposite direction.

In two areas, adjacent to Francisco Boulevard West and along Lincoln and Brookdale Avenues, sufficient highway right of way for the Ultimate HOV Lane Gap Closure Alternative will be acquired as a part of the Southbound/Reversible HOV Lane Gap Closure Alternative.

The 1998 estimated costs for the Southbound/Reversible HOV Lane Alternative are \$88,490,000. This includes \$2,200,000, the estimated operating and maintenance costs of the moveable barrier capitalized over 20 years.

S.8 Alternatives Considered and Withdrawn

Many alternatives were withdrawn due to reasons described in detail in this FEIS/R, see **Section 2.3-Alternatives Considered and Withdrawn**. These options were rejected because of engineering criteria, roadway geometrics, larger right of way impacts, increased cost and increased environmental impacts. These discarded options include: an 8.0 meter (26 foot) median with east or west side widening options; a 1.8 meter (6 foot) median with east and symmetrical widening options; constructing a double deck through San Rafael; constructing a depressed section through San Rafael; a southbound only HOV lane with east side widening; using part of NWPR right of way for a southbound only HOV lane; a reversible HOV lane option on the northbound side at the I-580 interchange; a reversible HOV lane with continuous fixed barrier; building the northern portion and purchasing right of way for the central portion; transit options - rail, ferry, buses; traffic systems management (TSM); converting existing lanes to HOV lanes; converting NWPR right of way to busway; and using NWPR right of way for HOV lanes.

S.9 Impacts of Project Alternatives

All of the Marin 101 HOV Lane Gap Closure Project build alternatives have long term and temporary effects on the natural and human environment in the project area. These effects are summarized for each alternative in **Table S-1-Comparison of Alternatives** on the following pages.

Table S-1 Comparison of Alternatives

Summary

Issue	No-Build Alternative	Ultimate HOV Lane Gap Closure Alternative	Southbound Only HOV Lane Gap Closure Alternative	Southbound/Reversible HOV Lane Gap Closure Alternative
Project Purpose and Need	Does not reduce delay Does not encourage use of HOVs Does not relieve congestion Does not improve operations and safety	Reduces delay in both directions Encourages use of HOVs Relieves congestion Improves operations and safety	Reduces southbound delay Encourages use of HOVs Relieves southbound congestion Improves southbound operations and safety	Reduces delay in both directions Encourages use of HOVs Relieves congestion Improves operations and safety
HOV Lane Time Savings Year 2010	None	southbound-4 minutes northbound-26 minutes	southbound-4 minutes northbound-0 minutes	southbound-4 minutes northbound-26 minutes
Project Costs 1998 Estimate	\$0	\$153 million	\$63 million	\$88 million
Relocated Housing Units	None	45	* 45	* 45
	* Includes the acquisition of sufficient right of way for the Ultimate HOV Lane Gap Closure Alternative at Francisco Boulevard West and at Lincoln and Brookdale Avenues and includes sufficient right of way for the relocation of the NWPR corridor at Lincoln and Brookdale Avenues			
Relocated Businesses	None	51	** 11	** 11
	** Includes the acquisition of sufficient right of way for the Ultimate HOV Lane Gap Closure Alternative at Francisco Boulevard West and at Lincoln and Brookdale Avenues and includes sufficient right of way for the relocation of the NWPR corridor at Lincoln and Brookdale Avenues			
Noise	No change - existing Leq. peak hour of 57-75 dBA	Reduced to <67 dBA at most locations	Reduced to <67 dBA at most locations	Reduced to <67 dBA at most locations
Air Quality	No CO exceedences	No CO exceedences	No CO exceedences	No CO exceedences

Table S-1 Comparison of Alternatives

Summary

Issue	No-Build Alternative	Ultimate HOV Lane Gap Closure Alternative	Southbound Only HOV Lane Gap Closure Alternative	Southbound/Reversible HOV Lane Gap Closure Alternative
Floodplain Encroachment Issues	No additional floodplain encroachment	No "significant" floodplain encroachment due to project	No "significant" floodplain encroachment due to project	No "significant" floodplain encroachment due to project
Natural Community / Habitat Issues	None	Loss of 0.5 hectare (1.2 acres) of riparian and oak/bay woodland habitat 1,940 square meters of shading of waters of the U.S. at Corte Madera and San Rafael Creeks 28 piles (approx. 8.4 square meters) in waters of the U.S. at Corte Madera Creek 111 square meters of fill in waters of the U.S. at Irwin Creek	***Loss of 400 square meters (0.1 acre) of oak/bay woodlands 993 square meters of shading of waters of the U.S. at Corte Madera and San Rafael Creeks 20 piles (approx. 6.0 square meters) in waters of the U.S. at Corte Madera Creek ***No fill in Irwin Creek	***Loss of 400 square meters (0.1 acre) of oak/bay woodlands 993 square meters of shading of waters of the U.S. at Corte Madera and San Rafael Creeks 20 piles (approx. 6.0 square meters) in waters of the U.S. at Corte Madera Creek ***No fill in Irwin Creek
	*** There may be additional impacts including: fill in Irwin Creek (111 m2), loss of Oak/Bay Woodland (570 m2) and loss of Irwin Creek Riparian Habitat (810 m2) due to the relocation of the NWPR corridor at Lincoln and Brookdale Avenues. These impacts would occur when the NWPR right of way is relocated.			
Species of Concern and Migration Corridor Issues	No impacts to species of concern No effects on Corte Madera Creek at all	Impacts to 2 plant species of concern No impacts in Corte Madera Creek during winter spawning season	No impacts to species of concern No impacts in Corte Madera Creek during winter spawning season	No impacts to species of concern No impacts in Corte Madera Creek during winter spawning season
Coastal Zone Issues	No new effects	Generally conforms to Coastal Zone Management Plan	Generally conforms to Coastal Zone Management Plan	Generally conforms to Coastal Zone Management Plan

Table S-1 Comparison of Alternatives

Summary

Issue	No-Build Alternative	Ultimate HOV Lane Gap Closure Alternative	Southbound Only HOV Lane Gap Closure Alternative	Southbound/Reversible HOV Lane Gap Closure Alternative
Rail Transit Issues	None	Relocates full width of rail corridor to the west	Relocates full width of rail corridor to the west	Relocates full width of rail corridor to the west
Hazardous Waste Issues	No change in existing exposure to hazardous wastes	<p>Impacts eight contaminated sites at Francisco Blvd West</p> <p>Requires excavations for footings in potentially contaminated soils beneath San Rafael Viaduct for widening the southbound structure</p> <p>Requires demolition and replacement of the northbound structure of the San Rafael Viaduct affecting potentially contaminated soils</p>	<p>Impacts eight contaminated sites at Francisco Blvd West</p> <p>No effects at the southbound San Rafael Viaduct</p> <p>No effects at the northbound San Rafael Viaduct</p>	<p>Impacts eight contaminated sites at Francisco Blvd West</p> <p>Requires excavations for footings in potentially contaminated soils beneath San Rafael Viaduct for widening the southbound structure</p> <p>No effects at the northbound San Rafael Viaduct</p>
Parking Issues	No loss of parking spaces	Loss of approximately 220 parking spaces	Potential loss of 220 parking spaces if the Ultimate HOV Lane Gap Closure Alternative and the NWPR rail transit project are built	Potential loss of 220 parking spaces if the Ultimate HOV Lane Gap Closure Alternative and the NWPR rail transit project are built
Pedestrian and Bicycle Issues	None	<p>Temporary realignment of bicycle and pedestrian traffic</p> <p>No loss of continuity for the S.F. Bay Trail</p>	<p>Temporary realignment of bicycle and pedestrian traffic</p> <p>No loss of continuity for the S.F. Bay Trail</p>	<p>Temporary realignment of bicycle and pedestrian traffic</p> <p>No loss of continuity for the S.F. Bay Trail</p>

Table S-1 Comparison of Alternatives

Summary

Issue	No-Build Alternative	Ultimate HOV Lane Gap Closure Alternative	Southbound Only HOV Lane Gap Closure Alternative	Southbound/Reversible HOV Lane Gap Closure Alternative
Traffic Access and Circulation Issues	None	<p>Improves traffic circulation in Francisco Boulevard West area conforming to local redevelopment plans</p> <p>Improves access to and from the freeway and local streets and commercial areas in several locations including to and from I-580 at the new Irene Street Interchange</p> <p>Allows reconfiguration of local streets beneath the San Rafael Viaduct in downtown San Rafael</p> <p>Replaces one lane connector from southbound US 101 to eastbound I-580 with a two lane connector</p> <p>Includes a new northbound US 101 to eastbound I-580 connector</p>	<p>Improves traffic circulation in Francisco Boulevard West area conforming to local redevelopment plans</p> <p>Improves access to and from the freeway and local streets and commercial areas in several locations but not to and from I-580</p> <p>No reconfiguration of local streets beneath the San Rafael Viaduct</p> <p>Replaces one lane connector from southbound US 101 to eastbound I-580 with a two lane connector</p> <p>No northbound US 101 to eastbound I-580 connector</p>	<p>Improves traffic circulation in Francisco Boulevard West area conforming to local redevelopment plans</p> <p>Improves access to and from the freeway and local streets and commercial areas in several locations but not to and from I-580</p> <p>No reconfiguration of local streets beneath the San Rafael Viaduct</p> <p>Replaces one lane connector from southbound US 101 to eastbound I-580 with a two lane connector</p> <p>No northbound US 101 to eastbound I-580 connector</p>
Temporary Construction Issues	<p>No temporary piles in Corte Madera Creek</p> <p>No shading in Corte Madera Creek</p>	<p>Approx. 160 temporary piles in Corte Madera Creek</p> <p>Temporary trestle shading of 4,300 m² (46,280 sq. ft.) of Corte Madera Creek</p>	<p>Approx. 105 temporary piles in Corte Madera Creek</p> <p>Temporary trestle shading of 2,736 m² (29,500 sq. ft.) of Corte Madera Creek</p>	<p>Approx. 105 temporary piles in Corte Madera Creek</p> <p>Temporary trestle shading of 2,736 m² (29,500 sq. ft.) of Corte Madera Creek</p>

Table S-1 Comparison of Alternatives

Summary

Issue	No-Build Alternative	Ultimate HOV Lane Gap Closure Alternative	Southbound Only HOV Lane Gap Closure Alternative	Southbound/Reversible HOV Lane Gap Closure Alternative
Temporary Construction Issues (cont.)	No pile driving	Pile driving for bridge widening and temporary trestles	Pile driving for bridge widening and temporary trestles	Pile driving for bridge widening and temporary trestles
	No air pollution from construction equipment	Air pollution from construction equipment	Air pollution from construction equipment	Air pollution from construction equipment
	No increased marine activity around Larkspur Ferry Terminal	Increased marine activity around Larkspur Ferry Terminal	Increased marine activity around Larkspur Ferry Terminal	Increased marine activity around Larkspur Ferry Terminal
	No temporary lane closures	Temporary lane closures	Temporary lane closures	Temporary lane closures
	No bicycle lane closures or detours	Bicycle lane closures and detours	Bicycle lane closures and detours	Bicycle lane closures and detours
	No restricting public access to some areas along Corte Madera Creek	Temporary restriction of public access to some areas along Corte Madera Creek	Temporary restriction of public access to some areas along Corte Madera Creek	Temporary restriction of public access to some areas along Corte Madera Creek
	No construction-caused congestion on US 101	Temporary construction congestion on US 101	Temporary construction congestion on US 101	Temporary construction congestion on US 101

S.10 Accommodation of Future Rail Transit

The Southbound/Reversible HOV Lane Gap Closure Alternative will be constructed to accommodate future rail transit in the discontinued rail corridor. Between Mission Avenue and the Lincoln Avenue interchange, a portion of the NWPR right of way is required for each of the build alternatives. In areas where highway-widening activities will encroach into the existing rail corridor, the full width of the NWPR right of way will be relocated further west. This will ensure the full NWPR right of way width will be available for future transit development. A rail transit project for this portion of the NWPR right of way is not currently funded, nor is it a component of the *Regional Transportation Plan*. In order to maintain the full width of the rail right of way for future rail transit, as well as to acquire sufficient highway right of way for the Ultimate HOV Lane Gap Closure Alternative, the acquisition of parcels on the east side of Brookdale Avenue and on Lincoln Avenue and acquisition of off-street parking on Lincoln Avenue is required.

S.11 Community Involvement

Community information meetings were held during the preparation of the EIS/R. These meetings were conducted to solicit public comments and to provide project information. The initial coordination began with the Highway 101 Corridor Plan adopted by the 101 Corridor Action Committee in June 1989. The issuance of the Notice of Intent/Notice of Preparation (NOI/NOP) in March 1993 began an intensive period of coordination followed in June 1993 with the first Open House/Scoping Meeting followed by the second Open House/Scoping Meeting in December 1993. These meetings were followed by focused organizational meetings with the Marin Coalition, the North Bay Council, the Dominican Neighborhood Association, the Marvelous Marin Breakfast Club, and several meetings with the San Rafael Citizens Advisory Committee.

Additional coordination and communication occurred between Caltrans and the San Rafael Planning Director, the Director of the San Rafael Redevelopment Agency, the Marin County Bikeways Committee, the Northwestern Pacific Railroad Task Force, Marin County, the Town of Corte Madera and the City of Larkspur. Other communication occurred with individual homeowners affected by the project.

S.12 Agency Coordination and Consultation

Caltrans consulted with other public agencies during preparation of this document, including:

- Marin County Congestion Management Agency (Marin CMA)
- Environmental Protection Agency (EPA)
- U.S. Coast Guard (USCG)
- U.S. Fish and Wildlife Service (USFWS)
- National Marine Fisheries Service (NMFS)
- Army Corps of Engineers (ACOE)
- State Historic Preservation Officer (SHPO)
- State Lands Commission (SLC)
- San Francisco Bay Conservation and Development Commission (BCDC)
- California Department of Fish and Game (CDFG)
- California Regional Water Quality Control Board-San Francisco Bay Region (SFBRWQCB)
- Metropolitan Transportation Commission (MTC)
- Bay Area Air Quality Management District (BAAQMD)
- Association of Bay Area Governments (ABAG)
- City of San Rafael

Agencies with jurisdiction over water quality issues within the project limits include: U.S. Environmental Protection Agency (EPA), San Francisco Bay Regional Water Quality Control Board (RWQCB), U.S. Army Corps of Engineers (ACOE), and the Bay Conservation and Development Commission (BCDC).

BCDC is granted authority through the McAteer-Petris Act to protect San Francisco Bay and to implement the Coastal Zone Management Act. A portion of the proposed project crossing Corte Madera Creek is within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC). Coordination has been ongoing with BCDC regarding activities in, above, and adjacent to Corte Madera Creek to preserve public access and to minimize Bay fill. A permit from the BCDC will be required for activities in BCDC jurisdictional areas at Corte Madera Creek.

S.13 Other Federal and State Actions Required

The construction of the Marin 101 HOV Lane Gap Closure Project may require:

- Section 404 permits from the Army Corps of Engineers (nationwide permits),
- Section 401 Certification (or Waiver) from the Regional Water Quality Control Board (RWQCB),
- Rivers and Harbors Act, Section 9 permit from the United States Coast Guard,
- a consistency determination and Bay Plan permit from the San Francisco Bay Conservation and Development Commission under their Coastal Zone Management Program,
- concurrence from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for effects on listed species,
- Streambed Alteration Permit 1601 from the California Department of Fish and Game, and
- an Amendment to the existing State Lands Commission permit, PRC 512,
- FHWA approval of a new point of access to the Interstate system (I-580 Irene Street Interchange)