



Date

Date

Approved By

Calban

Bijan Sartipi, District Director California Department of Transportation

Accepted By

Dianne Steinhauser, Executive Director Date Transportation Authority of Marin

Accepted By

Daryl K. Halls, Executive Director Solano Transportation Authority Accepted By

Suzanne Smith, Executive Director Date Sonoma County Transportation Authority

Caltrans District 4:

Lee Taubeneck, Deputy District Director Division of Transportation Planning & Local Assistance

Katie Benouar, Chief Office of System Planning

Joseph Aguilar, Senior Transportation Planner Office of System Planning

Prepared by:

Hélène Le Maître, Visiting Transportation Engineer/Planner Ecole Nationale des Travaux Publics de l'Etat (ENTPE) Universite de Lyon, France

Mike Jones, Associate Transportation Planner Office of System Planning

Silvia Buendia, Associate Transportation Planner Office of System Planning

Table of Contents

I.	 Corridor Planning Process
II.	Concept Summary 6
Ш.	 Corridor Overview
IV.	Corridor Segmentation 20
V.	Corridor Concept Development 25
	Appendices 30
	 A. Pertinent Federal, State, and Regional Transportation Plans, Programs, and Directives. B. Additional Corridor Data C. Ensurements

C. Freeway Agreements

I. Corridor Planning Process

Introduction

A Corridor Plan (CP) defines the "concept" or configuration of a State owned/operated facility, projecting to a 25-year planning horizon. The CP describes corridor characteristics such as the existing transportation network and land use, and projects the long-range corridor travel needs. A Corridor Plan is not meant to be an encyclopedia of corridor information, but rather a statement by the Department on what the future facility should be to better manage projected travel demand.

Corridor Plans are developed for all 56 statutorily identified State Routes in District 4. This Corridor Plan provides a concept for State Route 37 (SR 37) which traverses Marin, Sonoma, and Solano Counties in District 4. The route concept also addresses travel demand on the southern edge of nearby Napa County.

In order to recommend specific corridor improvements, an analysis is performed based on forecasted demand and growth in the corridor (current and planned land uses, existing operating conditions, and planned and programmed improvements). Long range performance expectations and potential deficiencies are identified. All conclusions are developed in conjunction with major internal functional units and external partners.

While considering the transportation network of the corridor as a whole, including other modes, Caltrans recognizes that its authority applies to the State Highway System. This report's major emphasis is on State highway facilities.

Purpose and Need for a Corridor Plan

Government Code 65086 states that "...the Department of Transportation as owner-operator of the State Highway System (SHS) shall carry out long term state highway system planning to identify future highway improvement." These reports are currently identified as Corridor Plans. Guided by regional, state, and federal policies and guidelines, this CP is focused on anticipating future improvements primarily needed to address a 25-year horizon of future congestion.

State's Interregional Responsibility

The State Highway System (SHS) serves primarily interregional and regional travel demand. While this is not to preclude SHS access to specific destinations such as public facilities or major tourist attractions, development and modification of the SHS is conducted in the context of the mobility of regional and statewide to-and-through movement of people and goods.

California Senate Bill 45 (SB45) of 1998 stipulates that the State will nominate transportation improvements that facilitate the movement of people and goods between the State's 43 transportation regions as well as to and through the State. To this end, the State is responsible for developing highway system performance standards pertinent to accommodating interregional travel demand, and specifying corridor facility concepts that improve interregional travel through the State Highway System. The

EXTERNAL REVIEW DRAFT 9-22-2010

corridor concepts indicated in Corridor Plans reflect the State's determination regarding the System accommodation of interregional, regional, and local travel needs.

Corridor Plan Consistency

Corridor Plans are constructed in light of several levels of government policy and direction. Applicable federal and state guidelines, such as the *Safe Accountable Flexible Efficient Transportation Equity Act (SAFETEA-LU)*, the *California Transportation Plan 2025 and 2030 Addendum (CTP)*, Metropolitan Transportation Commission's (MTC) Regional Transportation Plan 2035, and the Caltrans Interregional Transportation Strategic Plan (ITSP) 1998, provide the foundation for this Corridor Plan. The current State Highway Operation and Protection Program (SHOPP), a program of maintenance, safety, and rehabilitation improvements, and the State Transportation Improvement Program (STIP) are also considered in the development of this Corridor Plan.

A full list of federal, state, and regional transportation planning efforts and policies related to Corridor Plans is included as Appendix A.

II. Concept Summary

				Short term Concept Long ter			Long tern	m concept				
Segment Co.	Co.		Existing					Alternati	ve 1		Alternative	2 *
8		Description	Facility	5	State facility	Other modes		State facility	Other modes		State facility	Others modes
Segment A PM R11.20- MH 14.62 / SO PM 0.0-3.90	IRN/ ON	US 101 in City of Novato to junction with SR 121 near Sears Point in Sonoma Co.	4 E	4E		 Provide continuous bike paths Inter-city transit, connecting transit 	4E	- Causeway** and total wetland restoration or alternative 2	- Transit on causeway (rail or express bus	4E	- Elevate roadway* to protect the facility from flooding	
86757	ON/ OL	SR 121 near Sears Point to Mare Island in the City of Vallejo.	2 C	2C	- Intersection upgrades and channelization improvements	- 11S improvementshubs in Vallejo and Novato and San2C- Intersection upgrades and channelization improvements- Ferry from Vallejo to Larkspur and improve existing4.	4E	- Causeway** and total wetland restoration	between Solano and Sonoma Co.) - Class I bike path on the causeway - Pedestrian	2C/ 4C	- Elevate roadway* to protect the facility from flooding and potential widening to 4 lanes	- Rail alternative - Bike paths
Segment C PM R6.96- R11.73	OL	In the City of Vallejo, from Mare Island to its junction with I-80.	4 F	4F		ferry service - Improve bikes interface access	4F		access to wetland	4F		

F = Freeway

PM = Post Mile

* Elevating the roadway and eventually widen it with fill material would have large impacts on surrounding wetlands, and therefore induce high mitigation costs, especially as there are some state listed endangered species in these areas. It might also not be consistent with all current restoration projects along SR 37. Mitigation should be on-site and culverts should be added in order to facilitate water flow.

** A causeway is referenced here as a long, low bridge which would allow natural water flow. The construction of a causeway added to the remove of existing levees would therefore lead to a total wetland restoration. The Yolo Causeway*** on I-80 between Davis and West Sacramento in Yolo County and its related restoration project is a good example of what could be done on segments A and B of SR 37.

*** See the description of the Yolo Causeway page 15.

Concept Rationale

The main functions of SR 37 are to serve as a recreational route between the Wine Country (inclusive of Sonoma and Napa Counties) and Marin and Solano Counties and as a commute link between Solano County and Marin County. It also connects the East Bay to recreational destinations within the Golden Gate National Recreation Area in Marin County and special events at Infineon Raceway, but the main route to the central East Bay from Marin County is via the Richmond-San Rafael Bridge which is I-580. This dual function of a commute and recreational route requires efficient management both on weekdays and weekends. Such efficiency is constrained on SR 37 by the capacity gap that runs through wetlands in Solano County, where, heading west, a 4-lane freeway, transition into a 2-lane conventional facility, and then becomes a 4-lane expressway to US 101.

The existing facility will be difficult to widen due to environmental constraints of the surrounding wetland habitat. But long term consideration of the capacity gap combined with sea level rise and the impacts of the numerous wetland restoration projects in the vicinity of SR 37 leads to the need of a long term concept in addition to a short term concept.

In the short term, the Route Concept should look at operational improvements and alternative mode options to help meet demand by meeting the increasing capacity needs and improving the operational efficiency of SR 37.

Because of its critical environmental setting and constraints, long term needed improvements will need further study on their environmental impacts and induced mitigation costs. That is why 2 possible alternatives are described in the long term concept. The first alternative includes the construction of a causeway and the second alternative includes an elevation of the road with fill material. Both alternatives also consider transit, bicycle and pedestrian strategies. In the future, an alternatives analysis should be conducted with precise knowledge on each alternative's impact. A cost/benefit analysis including environmental costs would also be useful.

Short term concept

Operational Strategies

- Implement ITS (Intelligent Transportation Strategies) improvements at the junctions of SR 37 with US 101, SR 121, SR 29, and I-80 for operation during weekdays, weekends, and special events. For example, changeable message signs could be implemented to give real time travel information to travelers.
- Implement intersection improvements, especially at the SR 37 intersection with SR 121. For all intersection improvements providing a continuous safe path for bikes should be a goal.

Transit Strategies

- Establish inter-city transit connecting the City of Vallejo transit hub with other transit hubs in the Cities of Novato and San Rafael during commute hours. Recreational transit must also be considered as off peak congestion is a major issue on this corridor, and a transit line between the Vallejo transit hub and the San Rafael transit hub could be established, with a stop at the Infineon Raceway during raceway events. This line would connect Solano County to Sonoma County and Marin County, with a transfer to the SMART line at the San Rafael transit hub. San Rafael transit hub is a major transit hub in Marin County providing bus and shuttle service with 21 possible bus connections and service to SFO and Oakland airport.
- Expand the Vallejo Baylink ferry service to connect with the Larkspur Ferry Terminal in Marin County during commute hours. This connection would facilitate access to employment centers in San Rafael and a linkage to the SMART rail that will provide access to northern Sonoma County. The

EXTERNAL REVIEW DRAFT 9-22-2010

existing line could be improved by running later and on a more regular schedule, especially during week-ends and holidays for travelers traveling to the wine county.

Bicycle and Pedestrian Strategies

- Allow interface access between bicycle riders, railroad lines, ferry vessels, and buses.
- Provide safe pedestrian access to the Bay Trail

Long term concept

Because of important environmental constraints and the sensitivity of wetlands surrounding SR 37, the choice of a preferred alternative should be carefully documented.

The corridor overview and analysis done in this document lead to the consideration of the 2 main alternatives described below. A more documented cost/benefit analysis including precise environmental impacts and mitigation costs for each alternative should be conducted in the near future in order to make the best decision for the future of SR 37.

Alternatives

• Alternative 1: Construct a causeway and remove the levees or part of them, which would be mitigation itself but could also induce the loss of some specific habitat by changing some of their characteristics like the salinity of the water. The causeway could be built on segment B, from Sears Point Road (SR 121) to Napa River, and eventually also on segment A, from Black Point to US 101.

In this alternative, a bike and pedestrian path can be implemented on the causeway and the possibility of including a rail tracks or an express bus connecting Vallejo to the SMART line in San Rafael should be considered to improve the transit line described in short term concept. The last item would also respond to the Complete Streets guidelines. The pedestrian access to the wetland should also be considered. For instance, elevated walkways could be constructed for wetland tourism. The rail track and the related levees should also be removed in a total wetland restoration alternative. Removing SR 37 levees without removing the rail levees would not be efficient from a wetland restoration point of view.

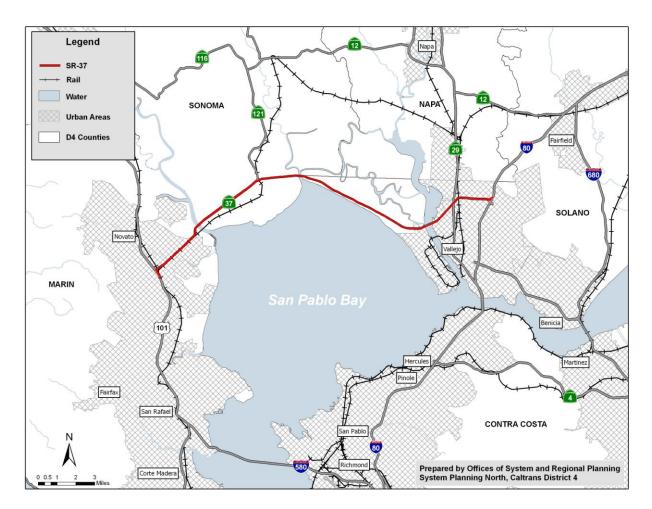
• Alternative 2: Elevate the road with fill material and eventually also add levees to protect the road from flooding and erosion. This alternative could include segment B widening to 4 lanes, which would require more fill material, so even more mitigation costs. Mitigation should be on site and culverts would facilitate water flow and reduce the number and magnitude of environmental impacts. This alternative will induce important impacts for the wetland because of the fill material added. Consequently, it will involve extensive mitigation measures and costs, especially as there are some state listed species living along SR 37 like the clapper rail, the Californian red frog and the salt marsh harvest mouse.

In this alternative, a rail alternative to SR 37 should be studied that would consist of reactivating the rail line that runs easterly from the junction of US 101 with SR 37 in the City of Novato through Marin County into Sonoma County. The railroad alignment runs parallel to SR 37 in Marin County and a portion of Sonoma County, then it veers in a northeasterly direction at the junction of SR 37 with SR 121, then passing by the Infineon Raceway to the town of Sonoma. This line could operate for passengers on weekends to service visitors both to the Wine Country and to the Infineon raceway events. On weekdays it could carry freight linked to the wine industry and farms in Sonoma County and eventually operate for passengers during commute hours. The expansion of the bicycle network could offer a viable alternative mode to visitors on weekends, and potentially commuters during weekdays but would also induce further route widening.

EXTERNAL REVIEW DRAFT 9-22-2010 III. Corridor Overview

Corridor Description

SR 37 constitutes a major regional east-west corridor in northern California, connecting the North Bay from Marin County US 101 to Solano County I-80. The statutory description defines the beginning segment of SR 37 from "Route 251 near Nicasio to Route 101 near Novato." This segment has not been constructed. Consequently the existing route in District 4 starts in the City of Novato at the junction with US 101, extending eastward through the Marin County line into Sonoma County, where it intersects with SR 121. It then proceeds to the Sonoma County line entering Solano County, where it ends in the City of Vallejo at its intersection with I-80. It traverses mostly rural terrain, with the exception of its beginning segment that runs through the eastern edges of the City of Novato, and then its ending segment that goes through the City of Vallejo. Its length is 21.18 miles.



SR 37 serves regional travel, including commute, recreational and some goods movement from the agricultural/wine industry originating in Sonoma County. It functions heavily as a major recreational corridor between the East Bay and the Golden Gate National Recreational Area destinations in Marin County. Also, it connects both Marin and Solano Counties to the numerous Wine Country destinations along the Sonoma and Napa valleys, leading to congestion particularly on weekends, summer months, and during special events at the Infineon Raceway.

Alignment and Terrain

Specific alignment and terrain information for the SR 37 corridor is described as follows (mileage is approximate)

County	Approx. Post Mile (PM)	Facility	Description
MRN	PM R11.20 -13.80	4 - lane Expressway	Straight alignment, through flat bay plains.
MRN	PM 13.80 -14.47	4 - lane Expressway	Slightly curvilinear and elevated alignment, through minor rolling hills.
MRN/SON	PM MRN 14.47-14.62/SOL 0.0-3.00	4 - lane Expressway	Straight alignment, through flat fluvial and bay plains.
SON	PM 3.00 - 4.00	4 - lane Expressway	Slightly elevated alignment, through minor rolling hills
SON/SOL	PM SON 4.00-6.25/ SOL 0.0-R6.96	2 - lane Conventional	Straight alignment, through flat marshes.
SOL	PM R6.96 - R8.44	4 - lane Freeway	Straight alignment & elevated structure, going over the Napa River and through some flat fluvial and bay plains.
SOL	PM R8.44 - 10.32	4 - lane Freeway	Straight alignment going through periphery of city streets.
SOL	PM 10.32 - R11.72	4 - lane Freeway	Straight and slightly elevated alignment, going through periphery of city streets.

Demographics

COUNTY	POPULAT	ION	# HOUSEH	IOLDS	#JOBS	
	2010	2035	2010	2035	2010	2035
Alameda	1,549,800	1,966,300	557,270	707,960	712,850	1,039,680
Contra Costa	1,090,300	1.322,900	392,680	480,480	376,820	555,650
Marin	256,500	274,300	104,550	112,170	135,600	158,280
Napa	138,800	148,800	51,260	54,640	70,770	91,480
San Francisco	810,000	969,000	346,680	415,000	568,730	806,830
San Mateo	733,300	893,000	264,400	322,620	346,320	505,860
Santa Clara	1,822,000	2,431,400	614,000	827,330	906,270	1,412,620
Solano	443,100	506,500	148,160	171,290	140,120	211,880
Sonoma	497,900	561,500	188,340	211,290	218,360	325,110
Total	7,341,700	9,073,700	2,667,340	3,302,780	3,475,840	5,107,390

Source ABAG 2009 Projections

The three counties traversed by SR 37 have very different demographic characteristics as indicated by the ABAG Projections table shown below. Marin County is quite affluent and housing costs are very high. In terms of population, by 2035 Marin will grow by only 7 percent and is expected to continue being one of the least populated counties in the region; it had the lowest population growth rates of all nine Bay Area counties between 1980 and 2000. One factor limiting Marin's growth is the county's aging population. By 2035, almost 40 percent of the county's population will be over 60 years of age, thus having implications for the provision of public and private services, such as transportation. Over 50 percent of Marin County is protected open space, being the highest proportion for any county in the Bay Area. Half of this open space consists of federal and state parks. Marin has the second lowest overall residential density in the region, and employment opportunities and retail land use are low as well.

EXTERNAL REVIEW DRAFT 9-22-2010

By contrast, Solano is growing faster, with an increase of 51% more jobs by 2035 and its population will increase by 14 percent between 2010 and 2035. Solano contains almost 50 percent of the region's farmland and more than half of the region's wetlands. Although once predominantly a rural county, Solano is urbanizing, primarily as a result of housing development. The county has also seen significant growth in retail, primarily along Interstate 80. Because of its transportation access, Solano County has always been very competitive for attracting distribution and manufacturing businesses. Food processing, warehousing, and transportation are important sectors of the economy. Significant household and employment growth is expected to occur in the downtown areas of Vallejo, Benicia, Fairfield, Suisun City, Vacaville, and Dixon as well as moderate employment growth along the I-80 corridor.

Sonoma County is geographically the largest of the nine Bay Area counties, with the most undeveloped acreage. Urban development is concentrated in the southern half of the county along the US 101 corridor in the cities of Petaluma, Cotati, Rohnert Park, Santa Rosa, and Windsor. Almost two-thirds of the county's population lives in these five cities. With a population of 162,500, Santa Rosa is the largest city between San Francisco and Eugene, Oregon. Santa Rosa will increase by 26,500 in the next twenty-five years for a total population of 189,000 by 2035. During that same period, the rural areas, as a whole, will increase by only 9,100 — amounting to only ten percent of the county's growth. In the rural area, the wine industry and its complementary visitor-serving businesses are the main engines that support the Sonoma County economy. The area also produces other food products, but wine is the most important. Sonoma County saw a boom in technology jobs during the '90's. Unfortunately, the decline in the technology sector five years ago resulted in a significant decline in the county's technology sector employment. It is assumed that the new commuter rail line SMART will be developed to extend along the old Northwestern Pacific railroad right-of-way, from Cloverdale in northern Sonoma County to Larkspur in Marin County. This would create a variety of opportunities, at relatively low densities, for mixed-use developments and employment centers in Sonoma County. But despite these economic prospects, in 2035 Sonoma County will still represent a smaller share of the region's population than it did in 2005.

Land Use

In Marin County, SR 37 passes through bay and alluvial plains with some agricultural uses on its northern edge and some light residential, industrial, and recreational developments along its southern edge, such as the unincorporated Bel Marin Keys Neighborhood and the Stonetree Golf Course.

As it enters Sonoma County, SR 37 crosses the Petaluma River, passing through the Port of Sonoma and its recreational marina; it proceeds through more wetlands and some farmland as it approaches its junction with SR 121, which is the main detour and access road to the Sonoma Wine Country. Also, in the vicinity of this juncture is the Infineon Raceway.

Proceeding through the Solano County line, SR 37 crosses the Sonoma Creek at the mouth of the San Pablo Bay, where it continues along bay plains and marshes with recreational areas, until it reaches the City of Vallejo. It passes through the decommissioned naval base of Mare Island, where some new commercial and housing developments are beginning to replace military structures. SR 37 crosses the Napa River, traversing the City of Vallejo through some residential, light commercial and recreational venues (Six Flags Discovery Kingdom, Six Flags Marine World, and the Solano County Fairgrounds) and ending at the junction with I-80.

Each District monitors the development of large private projects through their review of California Environmental Quality Act (CEQA) documents by lead agencies for projects having major impacts on the State's transportation system. This could require mitigation measures, or the collection of fair share fees. While release of environmental documents for large private projects has slowed, there are still projects actively engaged in acquiring project approval throughout the District.

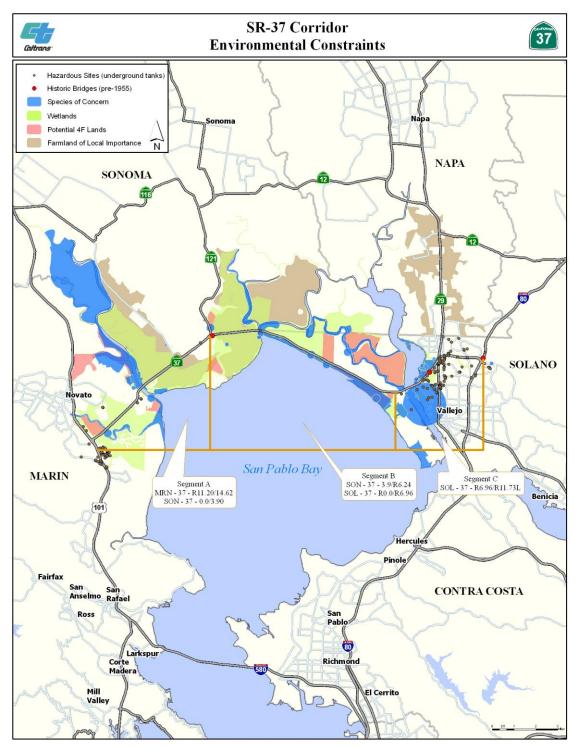
Caltrans continues to encourage the collection of regional traffic impact fees with Congestion Management Agencies (CMAs). In recognition of the connection between transportation system and land use conversion from open/agricultural space to residential/commercial land use, the Association of Bay Area Governments (ABAG) has pioneered in the development of Priority Development and Conservation Areas (PDAs and PCAs). The Association has actively worked with municipalities and transit districts throughout the Bay Area to foster this program.

There are, also, two projects that may impact traffic demand in the long run. One is in Sonoma County, the Paradise Vineyards Winery, by the junction of SR 37 and SR 121. It is proposed as a hospitality center providing for wine tasting, general retail, public tours and special events, with a maximum capacity for 300 guests.

The other proposed development is in Mare Island in the City of Vallejo in Solano County. Mare Island is a former naval shipyard now developed through a public/private partnership between the City of Vallejo and Lennar Mare Island, LLC. Currently, there are 90 businesses, nearly 2,000 jobs and 3 million square feet of occupied commercial space on Mare Island. The project has entitlements for over 7 million square feet of industrial and office use and plans for recreational amenities and residential development in the future (almost 1,400 homes to eventually be built on the Island). Touro University has over 900 full time students at its campus on Mare Island and the Touro Cancer Treatment and Research Center proposes 125,000 square feet of research and development distributed among 2-3- and 4-story buildings, with parking structure for 444 vehicles. A part of Mare Island (western part) including wetland has also been transferred to the US Fish and Wildlife Service. The city of Vallejo also has proposed an interchange improvement project North of Mare Island, on SR 37 and Walnut Avenue interchange, to accommodate expected higher traffic from and to Mare Island.

Environmental Constraints

This environmental map illustrates known environmental constraints for the corridor. These may include the presence of hazardous materials or facilities, habitats of threatened or potentially threatened species, fragile wetlands, and/or the presence of historic bridges or other structures. This information needs to be taken into consideration when proposing any improvements or modifications to state facilities within the corridor.



As shown on the map on environmental constraint on the previous page, SR 37 extends through wetlands and is in the vicinity of the habitat of some state listed endangered species such as the California clapper rail and the salt marsh harvest mouse. The presence of these special status species must be considered in any project on the road facility and will induce specific mitigation measures.

A project of total wetland restoration should also consider the potentially contaminated sediments which could be moved by the flow, especially in the vicinity of Mare Island, which is a former U.S. Navy Communications base.

Wetland restoration projects

There are three major current projects to restore and develop tidal wetlands for the wetlands along segment B, at Cullinan Ranch, Sears Point and Skaggs Island.

- The Sears Point restoration project is in the vicinity of SR 37 intersection with 121. This 2,327 acre restoration project includes new trails extending the San Francisco Bay Trail, the construction of a pavilion for environmental education near the San Pablo Bay National Wildlife Refuge headquarters and a native plant nursery south of SR 37.
- Cullinan Ranch is located north of SR 37, on Solano County just west of the Napa Bridge on SR 37. The objective of this project is to restore 1,549 acres of estuarine marsh and 26 acres of associated uplands. It also includes parking for 10 vehicles and it will be accessible only from SR 37 Westbound.
- Skaggs Island is a former US Navy Communications base, next to Sonoma Creek, decommissioned since 1993. The project of restoring Skaggs Island is a partnership between Caltrans, Bay Area Transportation Authority (BATA), the California Transportation Commission (CTC), the U.S. Navy, the U.S. Fish and Wildlife Service and the San Francisco Bay Conservation and Development Commission (BCDC). The Navy received funds from the state to clean up buildings from hazardous materials and transfer Skaggs Island to the San Pablo Bay National Wildlife refuge.

Climate change and flooding

The concern over global warming has brought into consideration the future impacts of rising sea levels on land use and transportation facilities along this corridor. Sensitive environmental areas, such as the wetlands along which SR 37 runs, have the potential for major flooding, especially as several parts of SR 37 are at very low levels (for instance around Novato Creek, Petaluma River and Tolay Creek, as shown on the San Francisco Bay Conservation and Development Commission (BCDC) maps about Shoreline Areas Vulnerable To Sea Level Rise). By 2050, sea level is expected to rise 12 to 18 inches (30 to 45 cm) and of 20 to 55 inches (50 to 140 cm) by 2099¹. These are the data used by both BCDC², and the IPCC³ (Intergovernmental Panel on Climate Change). Wetland restoration will also increase the flooding risk especially during high wind events and high tides, although this issue is considered in these restoration projects: for instance the Cullinan Ranch project includes a buttress levee to protect SR 37.

Mitigation measures and environmental costs

In the next 30 years, SR 37 will at least have to be protected from flooding due to sea level rise and wetland restoration. Because of major environmental constraints such as the presence of endangered species along SR 37, these projects will involve high mitigation costs. Implementation of any proposed improvements/new infrastructure along Segment B of SR 37 should include the risk factor and cost/benefit analysis including environmental costs.

¹ 2009 Scenarios project, from 2009 California Climate Adaptation Strategy

² Draft Staff Report. Living With A Rising Bay: Vulnerability And Adaptation In San Francisco Bay And On the Shoreline, April 7, 2009

³ 2009 California Climate Adaptation Strategy

Causeway and wetland restoration

In this document, a causeway refers to a long, low bridge that would allow natural water flow in the surrounding wetlands. The construction of a causeway and the removal of existing levees would therefore enable a total wetland restoration, which is presently constrained by the presence of levees. Also, the construction of a causeway and the restoration of its surrounding wetlands would create an attractive alternative to that of SR 12, that parallels SR 37 to the north, and could also benefit other East Bay corridors by creating a more efficient North Bay east/west travel alternative .

The Yolo Causeway and the related restoration project are good examples of what could be done on segments A and B of SR 37. The Yolo Causeway is a 3.2-mile long elevated highway viaduct on Interstate 80 that crosses the Yolo Bypass floodplain and connects the cities of Sacramento and Davis, in Yolo County. The causeway was built in response to the seasonal flooding of the former road between Sacramento and the Bay Area. The Yolo Wildlife Area is one of the largest public/private restoration projects with 3,700-acres of land in the Yolo Bypass floodway restored to wetlands and other associated habitats. This project allows agricultural uses during the summer and fall months. It includes a Class I bike path.

Freeway & Expressway (F&E)	Seg. A from US 101 in MRN to SR 121 in SON (PM 11.20 - 3.90); Seg. C in SOL from Mare Island to I-80 (PM R6.96-R11.73).
Functional Classification	Principal Arterial
Trucking Designations	STAA (Surface Transportation Assistance Act) Terminal Access Route
Trucking Facilities	Weigh Station in the vicinity of the Lakeville Road junction, WB only.
National Highway System (NHS)	Yes
Scenic Highway	No
Lifeline Corridor	Recovery Highway Route (Backup to I-580 & SR 12)
Traffic Operations System (TOS) facilities	Seg. A: 1 CMS, 2 EMS, 4 CCTV, 2 HAR, and 3 Monitoring Stations; Seg. B: 1 CCTV and 1 Monitoring Station.
Interregional Road System (IRRS)	Yes
Metropolitan Planning Organization/ (MPO) /Regional Transportation Planning Agency (RTPA) /Congestion Management Agency (CMA)	MPO/RTPA: Metropolitan Transportation Commission (MTC); CMAs: Transportation Authority of Marin (TAM), Sonoma County Transportation Authority (SCTA), and Solano Transportation Authority (STA).

Route Designations

Trip Information

Commuting

SR 37 serves commute traffic between Solano County and Marin County. The predominant directional split in the morning is Westbound and Eastbound in the afternoon/evening. Going Westbound, the facility transitions in Solano County from a 4-lane freeway into a 2-lane conventional highway through Sonoma County, and then into a 4-lane expressway in Marin County. Marin County employment centers attract many trips from more affordable housing in Solano County, increasing demand and causing delays during commute hours along the 2-lane conventional facility.

In the future, two factors that could contribute to adding more commute trips along this route is that Solano County is expected to have the highest population growth in the Region by 2035, thus generating more trips to jobs outside the county. Also, the SMART rail line along both Marin and Sonoma Counties will create opportunities for creation/expansion of employment clusters, especially in the City of Santa Rosa. Sonoma County might be ripe to establish new businesses, and the SMART rail line might give rise to new employment centers, attracting more trips from adjacent counties, such as Solano.

Goods Movement

SR 37 functions as a commercial route to transport goods from the wine industry and other farm-based industries in Sonoma County to distribution centers in Solano County. The percentage of trucks on Segment C, 6.46 %, is almost double that of Segment A, being 3.71%. About 72% of the truck traffic on Segments B and C is for 5-axle trucks. These numbers indicate that most of the truck movements are between Solano and Sonoma Counties, possibly transporting goods from the Sonoma wineries and farmlands to distribution centers in Solano County.

SR 37 could be considered an essential goods movement connector to other major goods movement corridors, such as US-101, I-80 and SR 29. With heavy congestion on I-80 and US-101, SR 37 could serve as a reliever route for international, domestic and local goods and provide based freight distribution within the North Bay Area.

Recreational

SR 37 is heavily used as a regional recreational corridor to the Sonoma and Napa wine-country destinations and to the numerous Golden Gate National Recreational areas in Marin County. Recreational traffic is more prevalent on weekends and during the summer months. SR 37 is the main link between the Sonoma and Napa Valleys for visitors to the Wine Country from the Peninsula and from the East Bay. The Wine Country will continue to attract many visitors to Sonoma and Napa counties, especially on weekends as the wine industry continues to expand and diversify into a more sophisticated tourist venue. Also, the Infineon Raceway facility, located close to the junction with SR 121 on Arnold Drive, can hold up to 102,000 spectators and will continue to generate large volumes of traffic at its popular events. In addition to major events, this raceway is used all year round as a motorsports complex. Due to its high spectator capacity, the raceway is a major traffic generator when events are held. Traffic at or near the facility regularly creates bottlenecks, because of the capacity change from 2 lanes to 1 lane at Sears Point and because of the traffic lights regulating the traffic at this intersection. Special traffic management is required on race days to manage access to and from the raceway.

Current Traffic	SR 37 Segment A	SR 37 Segment B	SR 37 Segment C
AADT 2007	WB=18,706 EB= 21,425	WB= 20,705 EB= 19,846	WB= 27,704 EB= 29,679
Truck % of Total AADT 2007	3.68 - 3.71%	6.46 - 12.55%	5.86 - 12.55%
5-Axle Trucks as % Total Trucks	50.34%	75.11%	72.12%
Traffic Projections			
AADT 2035	WB=35,470 EB=30,918	WB=36,421 EB=30,400	WB=55,190 EB=42,400
Vehicle Hours of Delay	170	WB=70 EB=220	N/A

Traffic on SR 37 east of the Napa River through Vallejo (Segment C) has the highest AADT ranging from 27,704 to 29,679, of which about 12.6% is truck traffic. West of the Napa River (Segment B), even though it is a 2-lane conventional facility, has a similar AADT as the 4-lane expressway on Segment A, ranging from 19,846 to 20,705.

Transit Services

Traffic Information

SMART line

Currently, the Sonoma - Marin Area Rail Transit (SMART) is proposing a 70-mile passenger railroad service and a parallel bicycle-pedestrian path along the Northwestern Pacific Railroad right of way that extends through the two counties. The rail line will run from Cloverdale, at the north end of Sonoma County, to Larkspur, where the Golden Gate Ferry connects Marin County with San Francisco. Along the way SMART will have stations serving the major population and job centers of the North Bay. One potential location being considered for a station is the Ignacio Wye in Novato, where two rail lines intersect at the junction of US 101 and SR 37. SMART will be funded by Measure Q, a one-quarter percent sales tax increase approved in November 2008 by 69.6 percent of Marin and Sonoma voters. Train service is scheduled to begin in 2014.

Buses

In Marin and Sonoma Counties, the Sonoma County Transit Route 38 is a bus service connecting the Sonoma Valley with the Transit Center in the City of San Rafael. This is a fixed commute route, running during weekdays on SR 37 along the segment between US 101 and SR 121. There is no transit service from Vallejo to Sonoma County. The Solano Express Intercity Transit Connections, Route 85, provides bus service connecting Vallejo, Fairfield, and the Solano Community College. This bus route runs on SR 37. In Vallejo, the 78 Vallejo Bus and 78 Vallejo/Benicia Bus provide frequent access from Vallejo to San Francisco via El Cerrito Del Norte and Walnut Creek Bart station respectively, every hour or every 30 minutes until 7 pm, except on Saturday where the frequency is lower, every 2 hours until 6:30 pm.

Ferries

In Solano County the City of Vallejo provides ferry service to San Francisco and to Angel Island. The Ferry Terminal is located on Mare Island Way, in close proximity to SR 37 and across from Mare Island. This public ferry service known as the Baylink is owned by the City of Vallejo and operated by the Blue & Gold Fleet. On the Vallejo-San Francisco route, there are currently 12 trips in each direction during workdays and 8 trips in each direction during the week-ends, from 7:00 am to 7:30 pm from Vallejo. There is no transit line from Vallejo to Sonoma or Marin. Route 200 Vallejo Baylink Express Bus also

EXTERNAL REVIEW DRAFT 9-22-2010

provides access between San Francisco and Vallejo until 9:30 pm from Vallejo ferry terminal. Baylink also provides special service for events like the San Francisco Marathon or the SF Giants games and could provide a bus service from Vallejo transit hub to the Infineon Raceway during special events. A new transit center is being built in Vallejo, connected to the Vallejo Ferry terminal by a pedestrian path. The project also includes 2 levels parking with 1,190 parking stalls for ferry patrons. The Vallejo Ferry terminal is also being redesigned to facilitate transit users' information, with real-time travel information for instance. This transit center will provide a better connection between the two main transit lines between San Francisco and Vallejo, the ferry line and the 78 Vallejo Bus, and the combination of the two schedules will provide an extended choice for travelers between San Francisco and Vallejo.

A ferry service in Port Sonoma is being considered in Water Emergency Transportation Authority (WETA) plans. Port Sonoma is a recreational port next to a part of the Bay Trail already built. It is located next to SR 37 intersection with SR 121, and it could be used to access the Infineon Raceway. The Transportation 2035 Plan for the San Francisco Bay Area includes a study of the environmental impacts of a future Port Sonoma ferry service and facility (Project # 21908).

In Marin County, a ferry line goes from Larkspur to San Francisco. A SMART station will also be located in Larkspur. Due to the proximity of the proposed SMART station to the ferry terminal, users have an option of walking or riding a free shuttle between the SMART station and the ferry terminal.

Rail

There is one rail line from Ignacio to Fairfield/Suisun via Sonoma, one freight track owned by the North Coast Railroad Authority (NCRA) from Ignacio to the Napa River, south of Napa, next to the intersection of the tracks with SR 29. Then from there to Fairfield Suisun, there is another freight line, used by 3 to 5 freight trains per day and owned by Union Pacific (UP) leased to California Northern.

This is also a one track freight line, used by 3 to 5 freight trains per day and owned by UP leased to California Northern.

The Regional Rail Plan considers a corridor preservation plan for these railroad tracks from 2015 to 2030. To be used for passengers, the tracks would have to be improved to allow higher train speed on the tracks in service (10 MPH allowed currently), and a part of the track line would have to be protected from flooding, especially as the wetland restoration projects and sea level rise will induce a higher water level in Sears Point.

Bicycle and Pedestrian Facilities

Bicycles are restricted from the freeway sections of SR 37 in Vallejo except for the Napa River Bridge. Recent shoulder widening makes bicycling a practical alternative in the non-freeway sections.

The Bay Trail Plan, adopted by the Association of Bay Area Governments (ABAG) in 1989, proposed the development of a regional hiking and bicycling trail around the perimeter of the San Francisco and San Pablo Bays. SR 37 falls within the identified proposed alignment of the Bay Trail. The Map of the Bay Trail shows the following proposed and existing trails either on SR 37 or by its vicinity:

Proposed Trails:

One trail will run parallel to SR 37 along the railroad tracks, beginning in the vicinity of the Novato Creek, crossing over the Petaluma River, and ending at Port Sonoma-Marin marina by the Sonoma Baylands Tidal Marsh Restoration Area. There, it will join a shared-use paved/gravel path, ending at the Sears Point Restoration Area, where the continuation of the proposed trail follows the railroad tracks up to the junction of SR 37 with SR 121 in the vicinity of Tolay Creek.

Tubbs Island, bordered by SR 37 on the eastbound side (aka Sears Point Rd.) and the Tolay Creek, has a eight-mile partial loop hike trail along a dirt/gravel levee. This is a protected marsh system within the San Pablo Bay National Wildlife Refuge. The trail can only be accessed from the eastbound direction of SR

37. To access it from the westbound direction requires getting to SR 121 and turning back into SR 37 Eastbound.

The last segment of the planned Bay Trail is in the City of Vallejo along SR 37, connecting Sonoma Blvd. (known as SR 29) and Broadway.

Existing Trails:

There are some existing segments in the City of Vallejo which are considered part of the Bay Trail. One is an unimproved road (no bike lanes/sidewalks) that loops in the vicinity of SR 37 after crossing the Napa River on the Sears Point Bridge. And from there, another trail segment runs alongside SR 37 (aka Marine World Parkway) on an off-street and shared-use path.

Unbuilt Trails:

The MTC's 2001 Regional Bicycle Plan, which was a component of the 2001 Regional Transportation Plan, shows "Existing and Unbuilt" bikeways for the nine Bay Area Counties. These Bikeway Network Maps were updated by MTC in January 2008. The Marin, Sonoma, and Solano Counties Bikeway Network Maps show an unbuilt bikeway along the entire alignment of SR 37, with the exception of one existing bikeway in Solano County beginning in Mare Island and ending at the junction with SR 29.

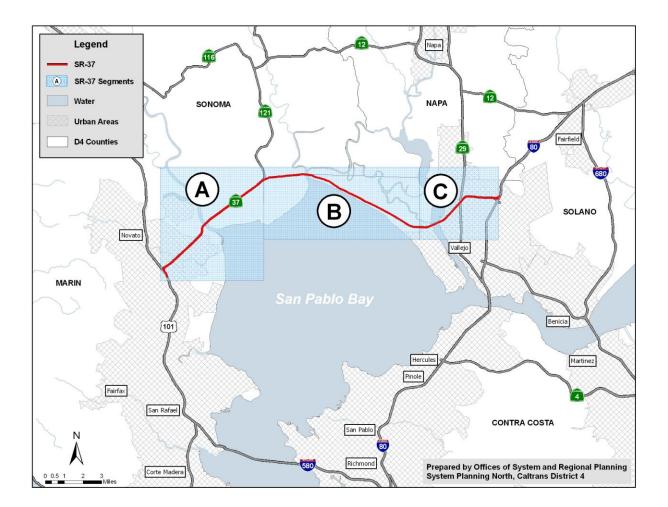
The 2004 Solano Countywide Plan includes a Class I bike path on the SR 37 alignment from the Sonoma/Solano County line to the junction with SR 29. Sonoma County Transportation Authority Countywide Bicycle & Pedestrian Master Plan includes a Class II bike path on SR 37 which connects with several bike paths in Sonoma, including two Class I bike paths, to Sonoma and Petaluma where a station for the SMART will be built.

EXTERNAL REVIEW DRAFT 9-22-2010 IV. Corridor Segmentation

The transportation corridor, for purposes of the Corridor Plan, is divided into segments based on a range of criteria, some of which are listed below

- District boundaries
- County boundaries
- Urban/Rural boundaries
- Major changes in traffic volume

- Changes in the number of lanes
- Significant changes in grade/terrain
- Changes in route function including recreational, trucking, commuting, etc.
- Freeway Agreements

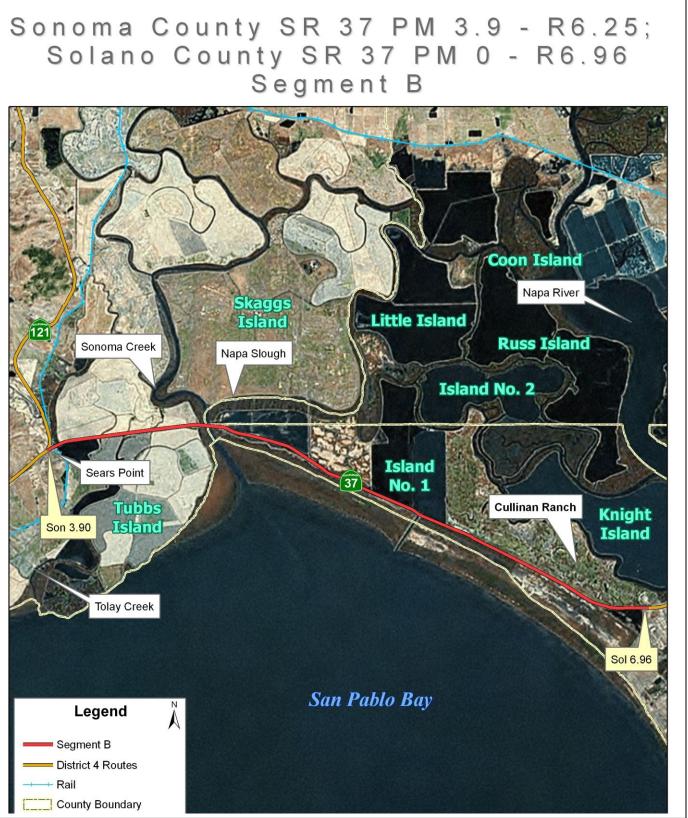


Features	Data
County, city	Marin Co., City of Novato, and Sonoma Co.
Facility Type	Expressway, Principal Arterial (Controlled Access)
Existing Facility	4 E
2035 Year Concept	4 E
Segment Characteristics	
Segment Limits	From the junction with US 101 in the City of Novato in Marin Co. to the junction with SR 121 near Sears Point in Sonoma Co.
Begin/ End Post Mile	MRN R11.20 - 14.62 to SON 0.00 - 3.90
Length	7.32 miles
Terrain	Mostly flat, with some minor rolling hills.
HOV lanes (PM to PM)	None
Grade % (PM to PM)	Pending
Truck Facilities Weigh Stations	Yes, close to the Lakeville Road junction (mini-site)
Truck Facilities Truck Parking	None
Existing ITS	1 CMS, 2 EMS, 4CCTV, 2 HAR, and 3 Monitoring Stations
2035 concept ITS	None
Multi Modal	
Bicycle Facilities	None
Transit-Oriented Developments (TODs)	None
Park and Ride Facilities	Yes, the Black Point Lot, north of SR 37, at Atherton Avenue (PM 13.8), in Unincorporated Novato. There are 29 spaces, 2 of them ADA.
Fraffic Data	
Average Annual Daily Traffic (AADT) 2007(W/E)	18,706/21,425
AADT 2030(W/E)	35,470/30,918
Hours of Delay 2007	PM (e/b) = 580
Peak Hour Volumes 2007 (AM ahead/back - PM ahead/back)	2,039/1,031—1,114/2,456
Peak Hour Volumes 2030 (AM ahead/back - PM ahead/back)	3,748/1,300-2,176/3,976
Volume to Capacity (V/C) Ratio 2007	AM = 0.38 $PM = 0.44$
V/C Ratio 2030	AM = 0.63 $PM = 0.77$
Level of Service (LOS) 2007	AM = B $PM = B$
LOS 2030	AM = C $PM = D$
Truck Volumes 2007	1,362 - 1,391
Truck Traffic Truck Percentage of AADT (range)	3.68 - 3.71
5+ Axle Truck Percentage of Truck AADT (range)	50.34 - 42.37%
Accident Data* (Sep 04- Aug 07)	
Fatality + Injury Rate	0.32
Statewide Fatality + Injury Rate	0.45
Total Accident Rate	0.71
Statewide Total Accident Rate	1.00



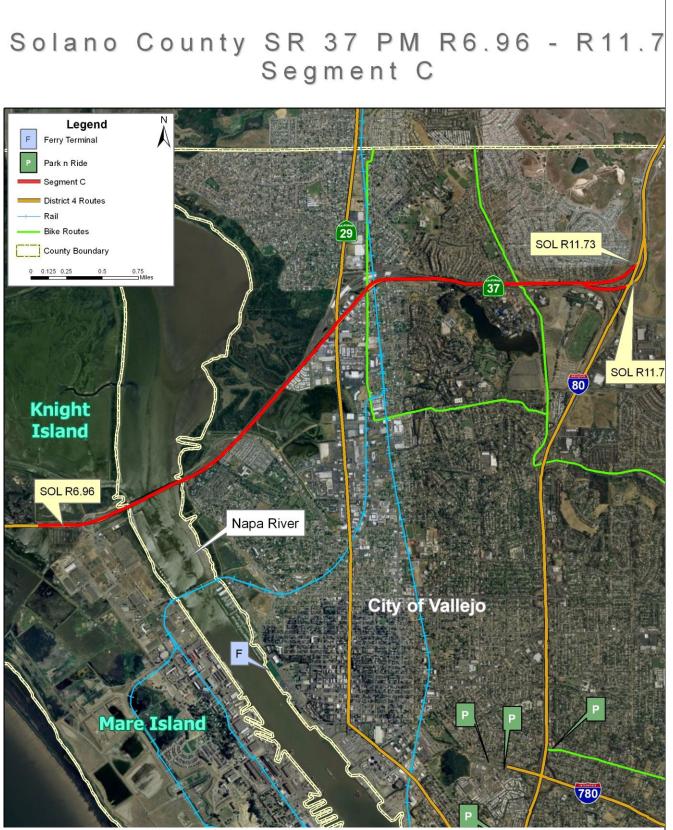
* per million vehicle miles

Segment B	
Features	Data
County, city	Sonoma County and City of Vallejo in Solano County.
Facility Type	Conventional Route, Principal Arterial
Existing Facility	2C
2035 Year Concept	Alternative 1 (with causeway):Alternative 2 :4E2C / 4C
Segment Characteristics	
Segment Limits	From the junction with SR 121 in the vicinity of Sears Point to Mare Island in the City of Vallejo.
Begin/ End Post Mile	SON 3.90-R6.25 to SOL 0.0-R6.96
Length	9.31 miles
Terrain	Flat marshes.
HOV lanes (PM to PM)	None
Grade % (PM to PM)	0%
Truck Facilities Weigh Stations	None
Truck Facilities Truck Parking	None
Existing ITS	1 CCTV and 1 Monitoring Station
2035 Concept ITS	None
Multi Modal	
Bicycle Facilities	Some segments by the railroad tracks and Tubbs Island.
Transit-Oriented Developments (TODs)	None
Park and Ride Facilities	None
Traffic Data	
Average Annual Daily Traffic (AADT) 2007(W/E)	20,705/19,846
AADT 2030(W/E)	36,421/30,400
Hours of Delay 2007	AM (w/b): 290 & 530 (at SR 12)
Peak Hour Volumes 2007 (AM ahead/back - PM ahead/back)	WB = 1,642 (AM) 1,328 (PM) EB = 1,100 (AM) 1,670 (PM)
Peak Hour Volumes 2030 (AM ahead/back - PM ahead/back)	WB = 2,751 (AM) $2,446 (PM)$ $EB = 1,312 (AM)$ $3,094 (PM)$
Volume to Capacity (V/C) Ratio 2007	N/A
V/C Ratio 2030	N/A
Level of Service (LOS) 2007	F
LOS 2030	N/A
Truck Volumes 2007	2,293-4,455
Truck Traffic Truck Percentage of AADT (range)	6.46-12.55%
5+ Axle Truck Percentage of Truck AADT (range)	71.31-75.11%
Accident Data* (Sep 04- Aug 07)	
Fatality + Injury Rate	0.13
Statewide Fatality + Injury Rate	0.45
Total Accident Rate	0.39
Statewide Total Accident Rate	0.93
* per million vehicle miles	

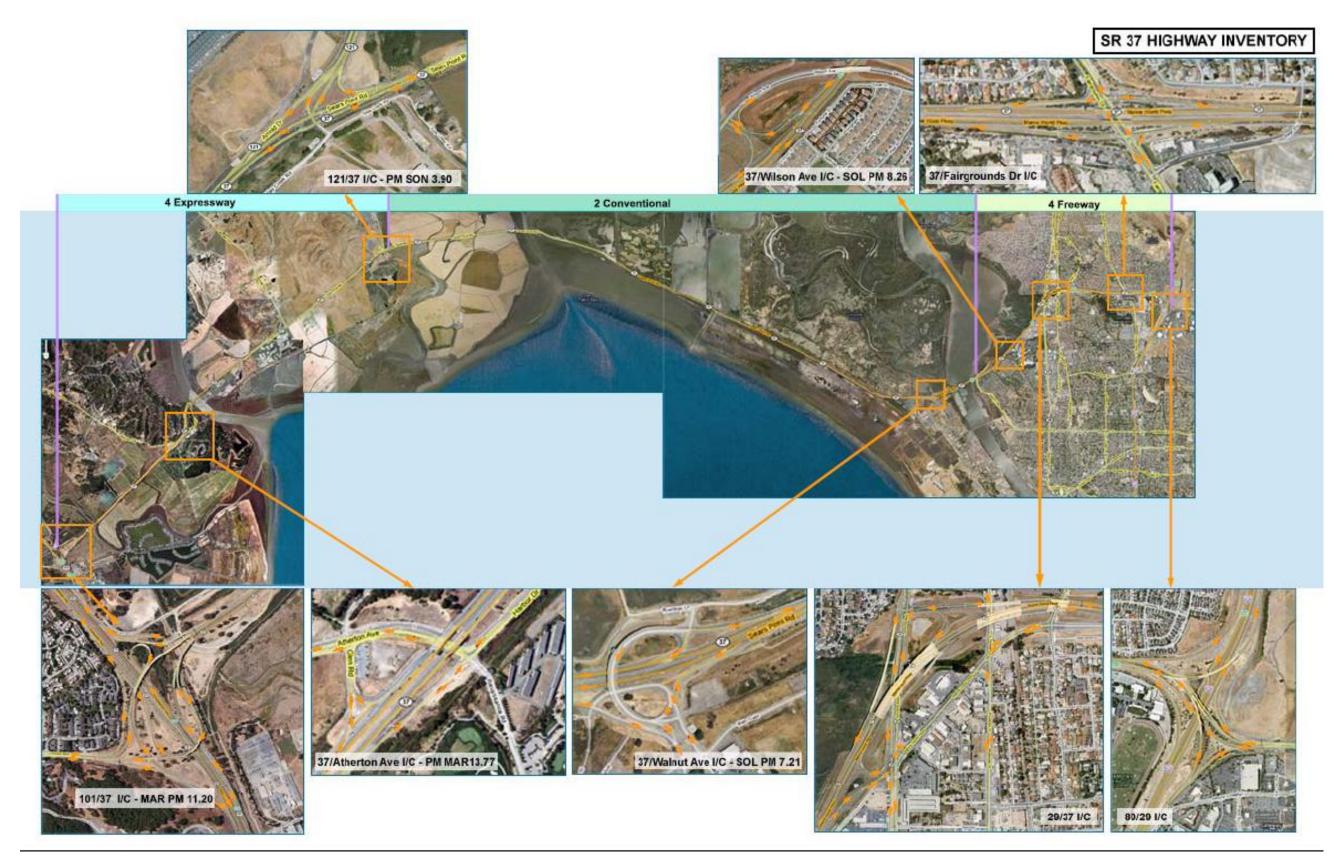


* per million vehicle miles

Segment C Features	Data
County, city	Solano County and City of Vallejo.
Facility Type	Freeway
Existing Facility	4F
2035 Year Concept	4F
Segment Characteristics	
Segment Limits	In the City of Vallejo, from Mare Island to the junction with I-80.
Begin/ End Post Mile	SOL R6.96-R11.73
Length	4.77 miles
Terrain	Elevated structure and flat through city streets.
HOV lanes (PM to PM)	None
Grade % (PM to PM)	0-6%
Truck Facilities Weigh Stations	None
Truck Facilities Truck Parking	None
Existing ITS	None
2035 Concept ITS	None
Multi Modal	
Bicycle Facilities	Just short segments along parallel roads to the highway.
Transit-Oriented Developments (TODs)	Proposed TODs at Vallejo Waterfront (by the Ferry).
Park and Ride Facilities	Vallejo Ferry Terminal Park & Ride lot, located south of SR 37 at Mare Island Way & Georgia St. There are 900 spaces.
Traffic Data	
Average Annual Daily Traffic (AADT) 2007(W/E)	27,704 / 29,679
AADT 2030(W/E)	55,190/42,400
Hours of Delay 2007	0
Peak Hour Volumes 2007 (AM ahead/back - PM ahead/back)	WB = 2,082 (AM) 1,720 (PM) $EB = 1,591 (AM)$ 2,259 (PM)
Peak Hour Volumes 2030 (AM ahead/back - PM ahead/back)	WB = $3,704$ (AM) $3,779$ (PM) EB = $2,003$ (AM) $3,600$ (PM)
Volume to Capacity (V/C) Ratio 2007	AM = 0.46 $PM = 0.50$
V/C Ratio 2030	AM = 0.71 $PM = 0.92$
Level of Service (LOS) 2007	AM = B $PM = B$
LOS 2030	$AM = \mathbf{D}$ $PM = \mathbf{D}$
Truck Volumes 2007	4,455-5,040
Truck Traffic Truck Percentage of AADT (range)	12.55-5.86%
5+ Axle Truck Percentage of Truck AADT (range)	52.8-71.91%
Accident Data* (Sep 04 - Aug 07)	
Fatality + Injury Rate	.21
Statewide Fatality + Injury Rate	.39
Total Accident Rate	.59
Statewide Total Accident Rate	1.01
* per million vehicle miles	



EXTERNAL REVIEW DRAFT 9-22-2010



EXTERNAL REVIEW DRAFT 9-22-2010 V. Corridor Concept Development

The Corridor Concept conveys Caltrans' vision for a route with respect to corridor capacity and operations for a 25-year planning horizon. The concept takes into account factors that create interregional, regional, and local travel demand, including commuting, freight movement, recreational needs, and nearby land use.

The route concept is derived from

- Facility "route concepts" established in 1980s Route Concept Reports
- Facility and operational concepts established for 24 main Bay Area routes in an effort conducted by Caltrans Planning and Operations in 2001-02
- Information contained in Caltrans plans developed for strategies established system wide
- Local and regional input
- Freeway Agreements
- Caltrans Planning staff investigation and analysis

EXTERNAL REVIEW DRAFT 9-22-2010

			Short term Concept			Long term concept						
Segment	Co.	Segment	Existing				Alternative 1			Alternative 2 *		
0		Description	Facility	S	State facility	Other modes		State facility	Other modes		State facility	Others modes
Segment A PM R11.20- 14.62 / PM 0.0-3.90	SON	US 101 in City of Novato to junction with SR 121 near Sears Point in Sonoma Co.	4 E	4E		 Provide continuous bike paths Inter-city transit, connecting transit 	4E	- Causeway** and total wetland restoration or alternative 2	- Transit on causeway (rail or express bus	4E	- Elevate roadway* to protect the facility from flooding	
R6257		SR 121 near Sears Point to Mare Island in the City of Vallejo.	2 C	2C		hubs in Vallejo and Novato and San Rafael - Ferry from Vallejo to Larkspur and improve existing	4E	- Causeway** and total wetland restoration	- Class I bike		- Elevate roadway* to protect the facility from flooding and potential widening to 4 lanes	- Rail alternative - Bike paths
Segment C PM R6.96- R11.73	SOL	In the City of Vallejo, from Mare Island to its junction with I-80.	4 F	4F		ferry service - Improve bikes interface access	4F		access to wetland	4F		

C = Conventional Highway

E = Expressway

F = Freeway

PM = Post Mile

* Elevating the roadway and eventually widen it with fill material would have large impacts on surrounding wetlands, and therefore induce high mitigation costs, especially as there are some state listed endangered species in these areas. It might also not be consistent with all current restoration projects along SR 37. Mitigation should be on-site and culverts should be added in order to facilitate water flow.

** A causeway is referenced here as a long, low bridge which would allow natural water flow. The construction of a causeway added to the remove of existing levees would therefore lead to a total wetland restoration. The Yolo Causeway*** on I-80 between Davis and West Sacramento in Yolo County and its related restoration project is a good example of what could be done on segments A and B of SR 37.

*** See the description of the Yolo Causeway page 15.

Rationale

As mentioned in the Concept Summary on page 4, the main function of SR 37 is to serve as a recreational route between the Wine Country (inclusive of Sonoma and Napa Counties) with Marin and Solano Counties, and as a commute link between Solano County and Marin County. It also connects the East Bay to recreational destinations within the Golden Gate National Recreation Area in Marin County and special events at the Infineon Raceway. This dual function of a commute and recreational route requires efficient operation both on weekdays and weekends. Such efficiency is constrained on SR 37 by the capacity gap that runs through wetlands in Solano County, where a 4-lane freeway transitions into a 2-lane conventional facility and then becomes a 4-lane expressway to US 101.

Existing facility will be difficult to widen due to environmental constraints of the wetland habitat but long term consideration of the capacity gap combined with sea level rise and the numerous wetland restoration projects in the vicinity of SR 37 leads to the need of a long term concept in addition to a short term concept. In the short term, the Route Concept should be operational improvements and alternative mode options to help fill the capacity needs and improve the operational efficiency of SR 37.

Because of the complexity of the site and its high environmental value, long term needed improvements will need further study on their environmental impacts and mitigation costs induced. That is why two possible alternatives are described here. The first alternative includes the construction of a causeway and the second alternative includes an elevation of the road with fill material. Both alternatives also include transit, bicycle and pedestrian strategies. In the future, an alternatives analysis should be conducted with precise knowledge on each alternative's impact. A cost/benefit analysis including environmental costs would be a useful tool.

Short term concept

Operational Strategies

- Implement Intelligent Transportation Systems (ITS) improvements at the junctions of SR 37 with US 101, SR 121, SR 29, and I-80 for operation during weekdays, weekends, and special events. For instance, changeable message signs could be implemented to give real time travel information to travelers.
- Implement intersection improvements, especially SR 37 intersection with SR 121. For all intersection improvements providing a continuous safe path for bikes should be a priority.

Transit Strategies

- Establish inter-city transit connecting the City of Vallejo transit hub with other transit hubs in the Cities of Novato and San Rafael during commute hours. Recreational transit must also be considered as off peak bottlenecks are a major issue on this corridor, and a transit line between Vallejo transit hub and the SMART line, to San Rafael transit hub could be established, with a stop at the Infineon Raceway during raceway events. San Rafael transit hub is a major transit hub in Marin County providing bus and shuttle service with 21 possible bus connections, service to SFO and Oakland airport and connection to the SMART line in the future. This line could also run during day time and connect Solano County to Sonoma County.
- Expand the Vallejo Baylink ferry service to connect with the Larkspur Ferry Terminal in Marin County during commute hours. This connection would facilitate access to employment centers in San Rafael and a linkage to the SMART rail that will provide access to northern Sonoma County. The existing line could be improved by running later in the evening and on a more regular schedule, especially during weekends and holidays for travelers going to the wine county.

Bicycle and Pedestrian Strategies

- Allow interface access between bicycle riders, railroad lines, ferry vessels, and buses.
- Provide safe pedestrian access to the Bay Trail

Long term concept

In longer term, SR 37 will need to be adapted to minimize flooding risk and accommodate increased travel demand, and related improvements will induce important mitigation cost. Because of important environmental constraints and increasing focus on wetlands, the choice of a preferred alternative should be carefully documented. The corridor overview and analysis done in this document lead to the consideration of the 2 main alternatives described below. Then, a more documented cost/benefit analysis including precise environmental and mitigation costs for each alternative should be conducted in order to make the best decision for the future of SR 37.

Long term alternatives:

- Alternative 1: Construct a 4 lanes causeway and remove the levees or part of it, which would be mitigation itself but could also induce the destruction of some specific habitat. The causeway would integrate a Class 1 bike path and new pedestrian access to wetlands would have to be considered.
- Alternative 2: Elevate roadway with fill material and culverts to protect the facility from flooding while facilitating water flow and reducing environmental impacts. On-site mitigation should be conducted for this alternative.

In the first alternative, a causeway would be a mitigation measure itself and would in the same time supply the current capacity gap of SR 37. It could be built on segment B, from Sears Point Road (SR 121) to Napa River, and eventually also on segment A, from Black Point to 101. Total wetlands restoration could be conducted in this alternative if all the levees are removed, including the levees for the rail tracks, completing the current restoration projects for the wetlands surrounding SR 37. Destroying the levees could also lead to the destruction of specific habitat and decrease the biodiversity which has developed in this area especially by changing the salinity of the wetlands.

The causeway would also be an opportunity to use both the complete street approach and respond to the San Francisco Bay Conservation and Development Commission (BCDC) requirements on public access. A Class 1 bike and pedestrian path could be added on the causeway. A bike path was considered in the plans of Solano and Sonoma Counties along SR 37, but its implementation on the existing facility would be expensive due to mitigation costs of widening the road for bike lanes. This elevated facility is an opportunity to build a safe bike path, which would also allow people from the ferry terminal in Vallejo to travel to Sonoma County safely and complete the north part of the Bay Trail. The possibility of including a rail service or an express bus connecting Vallejo to the SMART line in San Rafael should be considered to improve the transit line described in short term concept.

The second alternative, even without widening SR 37 to 4 lanes on segment B, will induce important impacts for the wetland because of the fill material added. Consequently, it will involve extensive mitigation measures and costs, especially as there are some state listed species living along SR 37 like the clapper rail, the Californian red frog and the salt marsh harvest mouse. It might also not be compatible with current wetland restoration projects conducted in this area. Mitigation for this road should be on site and culverts would facilitate water flow and reduce the number and magnitude of environmental impacts.

In this alternative, alternative transportation modes should be considered. A rail alternative to SR 37 should be studied which would consist in reactivating the rail line that runs easterly from the junction of US 101 with SR 37 in the City of Novato through Marin County into Sonoma County. The railroad alignment runs parallel to SR 37 in Marin County and a portion of Sonoma County, and then it veers in a northeasterly direction at the junction of SR 37 with SR 121, then passing by the Infineon Raceway all the way to the town of Sonoma. This line could operate for passengers on weekends to service visitors both to the Wine Country and to the Infineon raceway events. On weekdays it could carry freight linked to the wine industry and farms in Sonoma County and eventually provide passenger service during commute hours. The expansion of the

EXTERNAL REVIEW DRAFT 9-22-2010

bicycle network could offer a viable alternative mode to visitors on weekends, and potentially commuters during weekdays but would also induce further route widening.

Corridor Project List

County	Begin PM	End PM	Source	EA
		2008 Stat	e Transportation Improvement Program (STIP)	
SOL	R6.96	R6.96	Interchange Improvements	284701
SOL	R7.98	10.0	Mitigation Planting	0T14F1
	2	010 State Hi	ighway Operations & Protection Program (SHOPP)	1
MRN	R11.20	R11.20	Traffic control, dewatering, clean up	3S5801
MRN	11.7	12.2	Reconstruct levee, near Novato, at Novato Creek Bridge (2008 SHOPP List, HQS)	3\$580
SON	0.9	2.6	Drainage system rehabilitation	4A8211
SOL	R6.9	R6.9	Planting at Guadalcanal viewing area	0G000
SOL	R7.98	R7.98	Treat Bridge Decks	1E470
			2009 10-Year SHOPP	
MRN	12.0	14.5	Bridge rail replacement/upgrade.	None
SON	0.00	2.00	Capital Preventive Maintenance (CAPM) – MRN/SON Co. line to Lakeville Road	None
SON	4.10	6.30	CAPM – Tolay Creek Bridge to SON/SOL Co. line.	None
SOL	9.90	12.00	CAPM - North of SR 29 to I-80	None
SOL	0.00	8.30	CAPM – SON/SOL Co. line to Wilson Avenue	None
SOL	0.00	11.73	Install Transportation Management System (TMS) Elements – SOL Co. line to county line.	3A220 K
		Transpor	tation 2035 Plan for the San Francisco Bay Area	
MRN			Project # 230431: Construct intermodal transit hub in Southern Marin Priority Development Area and/or in the city of Novato	None
SON			Project # 21908: Study the environmental impacts of a future Port Sonoma ferry service and facility	None
SOL			Project # 22629: Construct new Vallejo Baylink Ferry terminal (includes additional parking, upgrade of bus transfer facilities and pedestrian access improvements)	None
MRN			Project # 21302: Implement Marin County's bicycle and pedestrian program	None
SOL			Project # 230708: Solano County-wide: Improve local interchanges and auxiliary lanes and make local streets and roads improvements (includes street channelization, overcrossings, bicycle and pedestrian access, and safety improvements)	None

Projects that support future concept

Appendices

Appendix A - Pertinent Federal, State, and Regional Transportation Plans, Programs, and Directives

Federal

Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users (SAFETEA-LU)

This federal law authorizes transportation funding through 2009 and establishes new requirements for statewide and metropolitan transportation planning. The act authorizes all federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009.

Federal Transportation Improvement Program (FTIP)

All federally funded projects, and regionally significant projects (regardless of funding), must be listed in the FTIP per federal law. A project is not eligible to be programmed in the FTIP until it is programmed in the *State Transportation Improvement Program* (STIP) or in the *State Highway Operations and Protection Program* (SHOPP). Other types of funding (Federal Demonstration, Congestion Mitigation and Air Quality (CMAQ), Transportation Enhancement Activities (TEA), and Surface Transportation Program (STP) must be officially approved before the projects can be included in the FTIP.

State

California Transportation Plan, April 2006

The "CTP 2030" is a statewide, long-range transportation policy plan that provides for the movement of people, goods, services, and information. The CTP offers a blueprint to guide future transportation decisions and investments that will ensure California's ability to compete globally, provide safe and effective mobility for all persons, better link transportation and land use decisions, improve air quality, and reduce petroleum energy consumption.

Interregional Transportation Strategic Plan (ITSP)

Caltrans prepared the 1998 ITSP to consolidate and communicate key elements of its ongoing long- and short-range planning. It serves as a counterpart to the Regional Transportation Plans prepared by the 43 Regional Transportation Planning Agencies in California. Caltrans addresses the State Highway system in detail, with special emphasis on the statutorily-identified Interregional Road System (IRRS). The IRRS serves interregional movement of people and goods. There are currently 87 IRRS routes.

State Transportation Improvement Program (STIP)

The STIP is a listing of all capital improvement projects that are expected to receive an allocation of state transportation funds. The California Transportation Commission (CTC) biennially adopts and submits the STIP to the Legislature and Governor. The STIP is a resource management document to assist state and local entities to plan and implement transportation improvements and to utilize available resources in a cost-effective manner.

Regional Transportation Improvement Program (RTIP)

The Regional Transportation Improvement Program is a sub-element of the State Transportation Improvement Program (STIP). The Metropolitan Transportation Commission is responsible for developing regional project priorities for the RTIP for the nine counties of the Bay Area. The biennial RTIP is then submitted to the California Transportation Commission for inclusion in the STIP.

Interregional Transportation Improvement Program (ITIP)

The ITIP is a sub-element of the State Transportation Improvement Program. The statutes of 1997, Chapter 622-Senate Bill (SB) 45- established the Interregional Improvement Program (IIP) which includes projects to improve State highways, intercity passenger rail system, and projects to improve interregional movement of people and goods.

State Highway Operation and Protection Program (SHOPP)

Caltrans prepares the SHOPP for the expenditure of transportation funds for major capital improvements necessary to preserve and protect the State Highway System. The SHOPP is a four-year funding program. SHOPP projects include capital improvements for maintenance, safety, and rehabilitation of State highways and bridges.

Senate Bill 45

SB 45 establishes guidelines for the California Transportation Commission to administer the allocation of funds appropriated from the Public Transportation Account for capital transportation projects designed to improve transportation facilities.

California Strategic Growth Plan, January 2007

The Governor and Legislature have initiated the first phase of a comprehensive Strategic Growth Plan to address California's critical infrastructure needs over the next 20 years. California faces over \$500 billion in infrastructure needs to meet the demands of a population expected to increase by 23 percent over the next two decades. In November 2006, the voters approved the first installment of that 20-year vision to rebuild California by authorizing a series of general obligation bonds totaling \$42.7 billion.

Transportation System Development Plan (TSDP)

The TSDP is a listing of Caltrans recommended capacity- increasing improvements on State Highways. The purpose of the TSDP is to identify a comprehensive, reasonable and effective range of transportation improvements in modal categories to improve interregional and regional mobility and intermodal transfer of people and goods on State Highways and major travel corridors.

District System Management Plan (DSMP)

The DSMP provides a vehicle for the development of multi-modal and multi-jurisdictional transportation strategies. These strategies must be based on an analysis that is developed in partnership with regional and local agencies. The DSMP is the State's counterpart to the Regional Transportation Plan (RTP) for the region.

Goods Movement Action Plan (GMAP), January 2007

The Goods Movement Action Plan is a key component of California's Strategic Growth Plan and will guide allocation of \$3.1 billion of the \$19.9 billion approved by voters in the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 (Proposition 1B). The GMAP identifies projects for consideration in the California Transportation Commission's allocation of \$2.5 billion for infrastructure investment. The Air Resources Board will allocate the remaining \$1 billion for emission reduction projects related to goods movement.

California State Rail Plan, October 2007

California's Vision for Intercity Passenger Rail Transportation in California is guided by the Governor's *Strategic Growth Plan, The Global Warming Solutions Act*, Assembly Bill (AB)32, the California Transportation Plan (2025), and the Department of Transportation's Mission/Vision and Strategic Goals. Caltrans prepares a ten-year Rail Plan that includes both passenger and freight rail elements. The Rail Plan is updated every two years.

Caltrans Deputy Directive 64

Caltrans fully considers the needs of non-motorized travelers including pedestrians, bicyclists and persons with disabilities in all programming, planning, maintenance, construction, operations, and project development activities and products.

State Assembly Bill 32 (AB 32) - Global Warming Solutions Act, September 2006

This bill requires the State's greenhouse gas emissions to be reduced to 1990 levels by the year 2020. Caltrans' strategy to reduce global warming emissions has two elements. The first is to make transportation systems more efficient through operational improvements. The second is to integrate emission reduction measures into the planning, development, operations and maintenance of transportation elements.

Caltrans - Climate Action Plan

Greenhouse gas (GHG) emissions and the related subject of global climate change are emerging as critical issues for the transportation community. The California Department of Transportation (Caltrans) recognizes the significance of cleaner, more energy efficient transportation. On June 1, 2005 the State established climate change emissions reduction targets for California which lead to development of the Climate Action Program. This program highlights reducing congestion and improving efficiency of transportation systems through smart land use, operational improvements, and Intelligent Transportation Systems (objectives of the State's Strategic Growth Plan). The Climate Action Plan approach also includes institutionalizing energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

Corridor Mobility Improvement Account (CMIA)

The California Transportation Commission adopted the \$4.5 billion Corridor Mobility Improvement Account (CMIA) program, the first commitment of funds from the \$19.9 billion transportation infrastructure bond approved by California voters as Proposition 1B in November 2006. The statewide CMIA program includes nearly \$1.3 billion in Bay Area projects, plus an additional commitment of \$405 million through the State Highway Operations and Protection Program (SHOPP) for replacement of Doyle Drive in San Francisco. This brings the total amount programmed for Bay Area transportation projects to roughly \$1.7 billion. *Source www.mtc.ca.gov*

In 2007 the California Transportation Commission adopted a resolution stating that "...the Commission expects Caltrans and regional agencies to preserve the mobility gains of urban corridor capacity improvements over time that will be described in Corridor System Management Plans (CSMPs)." A CSMP is a transportation planning document that will study the facility based on comprehensive performance assessments and evaluations. The strategies are phased and include both operational and more traditional long-range capital expansion strategies. The strategies take into account transit usage, projections, and interactions with arterial network, and connection to State Highways. Each CSMP presents an analysis of existing and future traffic conditions and proposes traffic management strategies and capital improvements to maintain and enhance mobility within each corridor.

The *Freeway Performance Initiative* (FPI) is the Metropolitan Transportation Commission's effort to improve the operations, safety and management of the Bay Area's freeway network by deploying system management strategies, completing the HOV lane system, addressing regional freight issues, and closing key freeway infrastructure gaps. Information from the FPI will be incorporated into CSMPs.

Ports Infrastructure, Security & Air Quality Program

Proposition 1B established the Ports Infrastructure, Security & Air Quality Program that included a total of \$3.1 billion for goods movement-related programs, of which \$2.5 billion is set aside for the Trade Corridors Improvement Fund (TCIF) for infrastructure improvements along designated trade corridors of national significance.

Region

Regional Transportation Plan (RTP)

The Metropolitan Transportation Commission is responsible for adopting the RTP for the nine-county San Francisco Bay Area. The RTP defines a vision for the region's transportation network. The Plan is updated every four years.

Regional Rail Plan

The regional transportation plan is a joint effort from The Metropolitan Transportation Commission, the Peninsula Corridor Joint Powers Board (Caltrain), the Bay Area Rapid Transit District (BART), and the California High-Speed Rail Authority (CHSRA) to develop a long range vision for improving the passenger rail service in the San Francisco Bay Area.

Regional Bicycle Plan

The MTC Regional Bicycle Plan represents the sustained efforts of MTC staff, the Plan Oversight Committee, local agencies, advocacy groups, and countless dedicated citizens in the Bay Area. It is intended to be a resource document for Bay Area town, city, and county planners and advocates. This plan is regional in focus and provides a framework for identifying regional priorities for routes and facilities and recommends a series of activities and policies to encourage bicycling at the regional level.

Bay Trail Plan

The plan for the Bay Trail proposes development of a regional hiking and bicycling trail around the perimeter of San Francisco and San Pablo Bays. The Plan was prepared by the Association of Bay Area Governments pursuant to Senate Bill 100, which mandated that the Bay Trail: provide connections to existing park and recreation facilities, create links to existing and proposed transportation facilities, and be planned in such a way as to avoid adverse effects on environmentally sensitive areas.

County

Countywide Plans Marin—<u>Moving Forward: A 25-Year Transportation Vision for Marin County</u>, adopted in February 2003. This document provides a vision for a multi-modal future to manage and minimize congestion in Marin County. It builds on current projects to address congestion and provides more transportation choices to make significant and lasting change in the county's transportation system. It was prepared in by the then Congestion Management Agency (CMA), in collaboration with the Marin Board of Supervisors, and with the

Marin County Transit District. Now the Transportation Authority of Marin (TAM), which is a joint powers agency among the cities, towns, and county, and was created to administer the Measure A ¹/₂ sales tax for transportation, has also become the CMA.

The <u>Marin Countywide Plan</u>, adopted on November 6, 2007, guides the conservation and development of the county under the framework of Planning Sustainable Communities. The plan breaks up the county into four designated environmental corridors: The Coastal Corridor, the Inland Rural Corridor, the City-Centered Corridor, and the Baylands Corridor.

The <u>Marin County Unincorporated Area Bicycle and Pedestrian Master Plan</u> adopted on March 25, 2008, is the framework for the development of the bicycle and pedestrian network in the unincorporated areas of Marin County.

Countywide Plans Sonoma—<u>2004 Countywide Transportation Plan</u> (*CTP*). This is a 25-year plan that articulates how Sonoma County's entire transportation infrastructure will be maintained and improved. The Sonoma County Transportation Authority (SCTA) is responsible for the preparation and update of the Sonoma CTP every four years. SCTA is currently in the process of updating their Comprehensive Transportation Plan, and initiated this process by holding public workshops during April 2008.

The <u>SCTA Countywide Bicycle & Pedestrian Master Plan</u> adopted in May 2008 identifies priorities for bicycle and pedestrian improvements; develops strategies for the implementation of associated projects and programs; and fosters countywide bicycle and pedestrian coordination through long-term planning

Countywide Plans Solano—<u>*The Solano Comprehensive Transportation Plan (CTP 2030)*</u>, adopted on June 8, 2005, is a 25-year planning document that envisions, directs, and prioritizes the transportation needs of Solano County. The Solano Transportation Authority (STA), as the Transportation Planning and Congestion Management Agency, is responsible for the preparation and update of the CTP.

The <u>Solano Countywide Bicycle Plan</u>, adopted in 2004 and updated in March 2010 encourages the development of a unified bicycle system throughout Solano County, with an emphasis on a network that supports everyday bicycle travel.

Appendix B - Additional Corridor Data for SR 37 – Marin, Sonoma and Solano Counties

Route Characteristics	Data							
State Route and Interstate Intersections	US 101 (PM R11.20); SON SR 121 (PM 3.90); SOL SR 29 (PM 9.53), and SOL I-80 (PM R11.73)							
Cities Traversed	Novato and Vallejo							
Parallel Arterials	In Novato, it intersects with Atherton Ave.; in Sonoma County, it intersects with Lakeville Highway; and in Vallejo, it intersects with five arterials: Walnut Ave., Wilson Ave., Sacramento St., Broadway St., and Fairgrounds Dr.							
Existing Congestion	Top AM Peak Period Congestion: At Skaggs Island Road and at Sonoma/Solano county line; Postmile 4 to Skaggs Island Road and Railroad Avenue (Mare Island) to Postmile 6.							
	Top PM Peak Period Congestion: At Route 121.							
Environmental								
Air Quality Basin	San Francisco Bay Area Air Basin							
Air Quality District	Bay Area Air Quality Management District							
BAAQMD attainment - Attained	Pending							
BAAQMD attainment - Not Attained	Pending							
Intermodal								
Park & Ride Lots	There are two: the Black Point Lot with 29 spaces in Unincorporated Novato, and the other in Vallejo at the Ferry Terminal with 900 spaces.							
Transit Oriented Developments (TODS)	None							
Modal Split (Source: 2008 American Community Survey 1-year estimates)								
Bicycle	MRN= 1.5% SON= 1.7% SOL= 0.2%							
Walk	MRN= 2.4% SON= 3.2% SOL= 1.3%							
Drive Alone	MRN= 68.8% SON= 74.5% SOL= 74.9%							
Carpool	MRN= 9.9% SON= 10.1% SOL= 14.5%							
Public Transit (excluding taxicab)	MRN= 8.0% SON= 2.3% SOL= 3.3%							
Work at Home	MRN= 8.6% SON= 6.7% SOL= 3.4%							
Taxicab, motorcycle, or other means	MRN= 0.9% SON= 1.4% SOL= 2.4%							
Summary of Existing Studies in Corridor								
	Marin County MTC's Regional Rail Plan for the San Francisco Bay Area, September 2007. The Plan has 3 time frames: 2015, 2030, and 2050; it further divides the area into 12 corridors. In the North Bay Corridor (Marin-Solano), under the 2050 time frame, the Plan considers a rail service from Fairfield and Sacramento to Novato via Sonoma County, connecting to the SMART rail system.							

	Moving Forward: A 25-Year Transportation Vision for Marin County, February 2003, considers improvements at the US 101 & SR 37					
	Interchange, and new traveler information system along SR 37.					
	Sonoma County The Sonoma-Marin Area Rail Transit District – SMART – will build a					
	70-mile passenger railroad and parallel bicycle-pedestrian path along the					
	publicly owned Northwestern Pacific Railroad right of way through the					
	two counties. The rail line runs from Cloverdale, at the north end of					
	Sonoma County, to Larkspur, where the Golden Gate Ferry connects					
	Marin County with San Francisco. Along the way, SMART will have					
	stations at the major population and job centers of the North Bay: San					
	Rafael, Novato, Petaluma, Cotati, Rohnert Park, Santa Rosa, Windsor and					
	Healdsburg.					
	Solano County					
	I-80/I-680/I-780 Major Investment & Corridor Study (2004)					
	Prioritizes a list of Mid-Term Projects and Long-Term Projects into the					
	year 2030.					
	The I-80/I-680/I-780 Transit Corridor Study (2004)					
	Provides short and long range transit plans.					
	Solano Transit Consolidation Study					
	Evaluates consolidating some or all of the six city-operated Solano transit services.					

Appendix C - State Route 37 Freeway Agreements

The Freeway Agreement documents the understanding between Caltrans and the local agency relating to the planned traffic circulation features of the proposed facility. Agreements are often executed many years before construction is anticipated and they form the basis for future planning, not only by Caltrans but by public and private interests in the community.

The legislative intent for requiring Freeway Agreements is to obtain local agency support of local road closures, changes to the local circulation system, and to protect property rights and assure adequate service to the community. The agreements may be modified at any time by mutual consent of the parties involved as may become necessary.

Freeway Agreement #	Adopted Date	County	Post Miles	Description	Comments
1146	11/27/56	MRN	R11.8 - 14.6	Rte. 101 & County Line	Agreement with Marin Co. to designate SR 37 as a Freeway from the City of Novato to the Marin/Sonoma County line. It modifies the October 25, 1948, agreement.
1394	2/26/57	SON	0.0 - 3.5	County Line & 0.5 miles W of Sears Point	Agreement with Sonoma County to close, relocate, and reconstruct county and frontage roads, at the State's expense, to allow construction of a Freeway between the Marin/Sonoma County line and ½ mile west of Sears Point.
1395	11/5/62	SON	3.5 - 4.0	Rte 37 & County Line (Proposed alignment); 0.5 mi W of Sears Point & 0.1 mi W of Rte 121	Agreement with Sonoma County to close, relocate, and reconstruct county and frontage roads, at the State's expense, to allow construction of a Freeway and interchanges from ½ mile west of Sears Point to the Sonoma/Napa County line.
1334	1/27/98	SOL	R8.0 -10.5	Napa River Bridge & 0.8 mi E of Mini Dr. (City portion)	Agreement with the City of Vallejo to close, relocate, and reconstruct city streets and frontage roads, at the State's expense, to allow the upgrade and construction of SR 37 to a Freeway facility. This agreement supersedes this portion of SR 37 as described on the June 10, 1986, Freeway Agreement.

Freeway Agreement #	Adopted Date	County	Post Miles	Description	Comments
1135	2/10/98	SOL	R8.4 -R9.7	0.6 mi E of Napa River Bridge & Chabot Creek	Agreement with Solano County to close, relocate, and reconstruct county and frontage roads, at the State's expense, to allow the upgrade and construction of SR 37 to a Freeway facility.
1336	6/10/86	SOL	10.0 - 11.4	Mini Drive and Rte 80	Agreement with the City of Vallejo to close, relocate, and reconstruct city streets and frontage roads, at the State's expense, to allow the upgrade and construction of SR 37 to a Freeway facility. This agreement supersedes the June 23, 1971, Freeway Agreement.

EXTERNAL REVIEW DRAFT 9-22-2010