

Route 152 Trade Corridor Summary Report [US 101 to Route 99]



Prepared for: 

Prepared by:   

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MOBILITY PARTNERSHIP



TABLE OF CONTENTS

1. INTRODUCTION..... 1

2. BACKGROUND..... 1

3. PROJECT PURPOSE AND OBJECTIVES 3

4. STAKEHOLDER COORDINATION..... 4

5. ROUTE DESCRIPTION..... 4

6. SIGNIFICANCE OF SR 152 AS A GOODS MOVEMENT CORRIDOR... 5

7. NEED FOR CORRIDOR IMPROVEMENTS 6

8. PROPOSED CORRIDOR IMPROVEMENTS 9

9. TRAFFIC AND REVENUE (T&R) ANALYSIS 11

10. OTHER CONSIDERATIONS..... 13

11. SUMMARY OF OUTREACH EFFORTS 15

12. ENVIRONMENTAL CONSIDERATIONS..... 16

13. CONCLUSIONS 17

LIST OF FIGURES

Figure 1 - Project Location and Regional Setting 2

Figure 2 - East-West Truck Crossings 8

Figure 3 - Corridor Improvements 10

Figure 4 - Financing Capacity Assessment 13

1. INTRODUCTION

At the request of the California Transportation Commission (CTC), Santa Clara Valley Transportation Authority (VTA), in coordination with the Council of San Benito County Governments (SBCOG) and California Department of Transportation (Caltrans), is studying the development of an east-west trade corridor on State Route (SR) 152 between US Route (US) 101 and SR 99 – the SR 152 Trade Corridor Project (Project). The study area limits are generally defined by US 101 to the west, and SR 99 to the east – a distance of 82 miles (see Figure 1).

SR 152 is a major east-west corridor for interregional traffic (commuter, commercial and recreational) connecting the South San Francisco Bay Area, North Central Coast and Central Valley regions. The closest east-west routes traversable by trucks are I-580 (60 miles to the north) and SR 46 (120 miles to the south). SR 152 is a vital artery for the State’s agricultural heartland of the San Joaquin Valley and Monterey Peninsula, and a major international trade highway corridor. Nearly 50 percent of the State’s \$36 billion in agricultural production takes place in counties along and adjacent to the SR 152 corridor. SR 152 is the only continuous east-west route connecting SR 99 and US 101, and also provides a viable alternative to the heavily congested I-580/I-238/I-880 east-west corridor.

Although SR 152 is part of the California Freeway and Expressway System and a Major International Trade Highway Corridor, significant portions of the corridor are not constructed to minimum facility standards nor capable of effectively moving the traffic we see today or expect in the future.

In the current economic climate of limited federal funding and shortfalls in state and local taxes, new methods of funding infrastructure improvements are being sought to get projects off the drawing boards and to keep traffic moving, commerce flowing and the economy growing. VTA is exploring the role of private capital and user fees, including tolling and congestion pricing, to move

transportation programs forward. Unlike previous studies, the SR 152 Trade Corridor Study is to identify not only the improvements needed to facilitate trade and improve mobility, but to study the viability of alternative means of financing the project.

This report summarizes the preliminary feasibility studies and stakeholder coordination performed to assess the feasibility of the Project for advancement to preparation of Environmental Document.

This report includes the results of a preliminary evaluation of highway improvements and the feasibility of tolling part of or the entire corridor to fund construction, operation, and maintenance of the facility.

2. BACKGROUND

During the implementation of the VTA 1996 Sales Tax Highway Program, members of the community often asked what was going to be done about SR 152 from US 101 to SR 156 near Casa de Fruta, especially about the SR 152 / SR 156 intersection with its safety and congestion issues. Other than widening the existing conventional highway in Gilroy, nothing else on SR 152 was included in the sales tax measure program at that time.

The existing SR 152 corridor between US 101 and SR 156 is a conventional highway with a four-lane section in Gilroy and two lanes between Gilroy and SR 156 - all within Santa Clara County. In 2000, VTA decided to tackle the SR 152 / SR 156 intersection on its own. VTA assembled local, state and federal funds to design, acquire right of way, and construct a new interchange at the SR 152 / SR 156 intersection which was successfully completed and opened to the public in 2009.

With that interchange project underway, VTA began to look at the SR 152 corridor within Santa Clara County from US 101 to SR 156. The existing corridor is a winding 2-lane rural road through hilly terrain



SR 152 TRADE CORRIDOR PROJECT (US 101 TO SR 99) PROJECT LOCATION AND REGIONAL SETTING

Source: California Transportation Plan 2025; and San Joaquin Valley National Agricultural Goods Movement Trade Corridor Rail Program Concept Paper, October 2008

Figure
1

and lined by numerous homes and farm buildings. To convert the corridor into a four lane limited access highway, a new alignment needed to be selected. Over the years, Caltrans had worked very hard at trying to identify a new alignment. However, the local agencies and members of the community could not reach an agreement on the location of the new alignment.

In 2006, VTA in coordination with the Council of San Benito County Governments (SBCOG) began the investigation of several new alignment alternatives for SR 152 between US 101 and SR 156. In 2008, SBCOG adopted a resolution restricting any new SR 152 alignment to the northwest corner of their county. In January 2010, VTA and SBCOG executed a Memorandum of Understanding (MOU) to study the feasibility of a public-private partnership for the SR 152 Trade Corridor from US 101 to SR 99, and authorize the formation of the SR 152 Mobility Partnership to provide policy oversight/direction to the Project. The members of the Mobility Partnership are two elected officials appointed by the SBCOG and two elected officials appointed by the VTA Board. VTA provides the staff for the Mobility Partnership in consultation with SBCOG staff.

A total of about \$10 million in funding has been allocated to the SR 152 Trade Corridor Project. The CTC provided \$5 million from the 2008 State Transportation Improvement Program (STIP), with VTA matching this with an additional \$5 million.

The CTC funding was provided with the request that the SR 152 corridor be examined between US 101 and SR 99 and that a study of the feasibility of a public-private partnership to implement improvements be conducted.

3. PROJECT PURPOSE AND OBJECTIVES

The purpose of the Project is to develop an east-west trade corridor on SR 152 between US 101 and SR 99 so that the roadway facilities meet the goods movement, commuter and recreational travel needs for the region. The following project objectives were developed and agreed upon with interested stakeholders.

- Improve goods movement throughput between the North Central Coast and Central Valley
- Improve travel safety and travel time reliability
- Remove bottlenecks and improve traffic operations
- Upgrade the corridor to access control standards
- Reduce conflicts between cars and trucks
- Identify viable financing strategies for corridor improvements

4. STAKEHOLDER COORDINATION

A collaborative planning process is being used throughout the feasibility study through a series of Technical Working Group (TWG) meetings, workshops, and briefings. A broad array of stakeholders were involved, including:

- Caltrans Districts 4, 5, 6 and 10
- Cities of Gilroy, Hollister, San Juan Bautista, and Los Banos
- Counties of Santa Clara, San Benito, Merced, Madera and Monterey
- Santa Clara Valley Water District
- Council of San Benito County Governments (SBCOG)
- Transportation Agency for Monterey County (TAMC)
- Pajaro River Watershed Flood Prevention Authority
- California Trucking Association
- California Transportation Commission
- Metropolitan Transportation Commission;
- Madera County Transportation Commission (MCTC)
- California High Speed Rail Authority
- California Highway Patrol
- Merced County Association of Governments (MCAG)
- County Farm Bureaus

Project progress and direction was also monitored and guided by the Mobility Partnership.

The Project is also maintaining close coordination with adjacent projects including but not limited to the Los Banos Bypass, SR 25 Widening, US 101 Widening (Monterey Street to SR 129), and California High Speed Rail (Merced to San Jose segment).

5. ROUTE DESCRIPTION

SR 152 route characteristics vary dramatically within the study limits. From US 101 in the west, the route passes through Gilroy’s commercial and retail hub on a 4-lane signalized arterial; followed by a narrow, winding, 2-lane alignment between Gilroy and SR 156; climbs over the 1,000 feet high Pacheco Pass on a winding 4-lane divided expressway type facility; passes through 16 signalized

intersections on a 4-lane arterial in downtown Los Banos, and crosses the agricultural heartland of the Central Valley on a relatively straight, flat, 4-lane divided expressway alignment to SR 99 in the east. The figure below documents characteristics of the route over various segments of the corridor.

Segment	US 101 to SR 156	SR 156 to I-5	I-5 to SR 99
Length	12.1 miles (1.5 miles in Gilroy)	27.1 miles	42.7 miles (4 miles in Los Banos)
No. Lanes	2/4	4	4
Setting	<ul style="list-style-type: none"> •Narrow, curved, undivided highway •Passes through Gilroy commercial and retail centers •Predominantly no access control 	<ul style="list-style-type: none"> •Divided highway •Sustained grades ascending the Pacheco Pass •WB climbing lanes only •Predominantly access controlled 	<ul style="list-style-type: none"> •Divided highway •Passes through downtown Los Banos •Access control limited to interchange locations
Interchanges	US 101, SR 156	Casa de Fruta, SR 33 North, I-5	SR 33 South, SR 59, SR 233, SR 99
Local Road Intersections	13 (5 signalized)	6	54 (16 signalized)
Private Driveway Intersections	114	42	91 ¹

¹ Los Banos private driveway intersections are not included

6. SIGNIFICANCE OF SR 152 AS A GOODS MOVEMENT CORRIDOR

California is the sixth largest economy in the world and its economic status is dependent upon the safe and efficient movement of goods both locally, statewide, nationally, and internationally.

SR 152 between US 101 and SR 99 is part of the California Freeway and Expressway System, the Interregional Road System (IRRS), and a Terminal Access STAA² Route. SR 152 is classified by Caltrans as a Focus Route in the Caltrans Interregional Transportation Strategic Plan; meaning that the roadway is especially important for goods movement, has interregional and statewide significance, and has the highest priority for completion to minimum facility standards.

SR 152 serves commuter, recreational and commercial traffic. The route is a major international highway trade corridor linking the north-south trade corridor backbones of US 101, I-5 and SR 99, as shown on Figure 1. Along with the I-80 and I-580(I-205)/I-238/I880 corridors, SR 152 provides a critical east-west connection between the San Francisco Bay Area and the Central Valley. SR 152 is also a vital link for Monterey Peninsula traffic.

SR 152 is the only major east-west route between I-580 to the north and SR 46 to the south, a distance of 180 miles. SR 152 is the only continuous east-west route connecting SR 99 and US 101, and also provides a viable alternative to the heavily congested I-580 (I-205)/I-238/I-880 east-west corridor.



SR 152 is a vital artery for the movement of agricultural foods and other products, and serves California’s agricultural heartland of the San Joaquin Valley and Monterey County. In 2008, the value of agricultural production generated from counties along or adjacent to the SR 152 corridor was almost half of the total agricultural production for the entire State.

County	2008 Value of Agricultural Production (millions)	State Ranking
Santa Cruz	\$485	23 rd
Santa Clara	\$250	29 th
San Benito	\$260	27 th
Monterey	\$3,830	4 th
Merced	\$2,970	5 th
Stanislaus	\$2,460	6 th
Madera	\$1,310	12 th
Fresno	\$5,670	1 st
TOTAL	\$17,235 (47% State Total)	

Source: California Farm Bureaus Federation (<http://www.cfbf.com/counties/index.cfm>)

Trade corridors are critical to the regions agribusiness. Trucking is the dominant mode for transporting perishable goods, and shippers rely on the interconnected system of local and state routes in order to make it from farm-to-market in a timely manner.

The Central Valley’s centralized location lends itself to the location of distribution centers and intermodal switching hubs (see Figure 1) where products are packaged for transport by truck or rail to destinations nationally and overseas. Rail/truck transfer and rail

² The Surface Transportation Assistance Act of 1982 allows large trucks, referred to as STAA trucks, to operate on routes that are part of the National Network

intermodal facilities are critical components of the goods movement network. These types of facilities further increase the number of trucks using the highway system. For example, the Crows Landing facility (located northeast of Los Banos) is expected to generate up to 16,000 truck trips per day by 2019. Similar facilities exist or are planned in Salinas and Fresno. SR 152 has the potential to be the primary east-west truck route serving these facilities.

SR 152 is also a vital route for the movement of goods into and out of the State. For example, perishable goods packaged in Monterey County are trucked to the East Coast, with the SR 152 corridor as one of the first or last legs of the trip.

7. NEED FOR CORRIDOR IMPROVEMENTS

Major improvements are needed to the SR 152 corridor to provide an effective east-west trade route. Key deficiencies that need to be addressed are categorized as follows and detailed below:

- Bottlenecks
- Socioeconomic Impacts
- Goods Mobility
- Route Concept and Access Control
- Safety
- Traffic Operations
- System Connectivity

Bottlenecks

The winding, 10-mile long two-lane segment from just east of Gilroy to the SR 152/156 interchange is in itself a major bottleneck. Another major bottleneck is the eastbound ascent to Pacheco Pass where no climbing lane is provided.

Delays at the 21 signalized intersections in the cities of Gilroy and Los Banos also create bottlenecks to the free flow of traffic.



Congestion and travel delays at these locations have worsened over the years and are expected to become more severe in the future.

Traffic operations at bottlenecks are impacted by surges in traffic demand and by traffic incidents (i.e. collisions and breakdowns) resulting in delays to overall traffic, increased travel time, diversions to other routes, and higher fuel costs.

Safety

Over 2,880 traffic collisions were recorded on SR 152 within the study limits between 2003 and 2008, including 81 fatalities and 1,718 persons injured. During that period, actual collision rates exceeded the statewide average between Gilroy and SR 156; at the US 101, SR 156, I-5 and SR 233 interchanges; at Ferguson Road; and at 16 intersections in Los Banos. Collision rates are expected to be lowered with corridor improvements that reduce congestion, eliminate conflicts between slow and fast moving vehicles, and bring the facility up to access control standards.

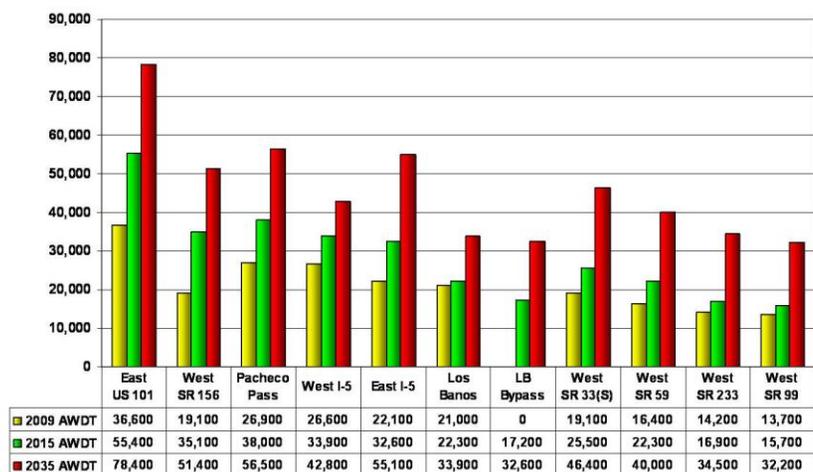
Socioeconomic Impacts

The route passes through the cities of Gilroy and Los Banos combining interregional traffic (including commuter, commercial and recreational traffic) with local traffic. Heavy congestion occurs during peak hours due to queuing at multiple signalized intersections.

Congestion and conflicting traffic movements (including pedestrians and bicyclists) at multiple controlled and uncontrolled intersections have generated strong safety and general quality of life concerns within the community. Access to local businesses is also affected during periods of congestion.

Traffic Operations

The figure below shows current and future average weekday daily traffic on SR 152. In 2009, average weekday daily traffic varied from 36,600 vehicles per day (vpd) near US 101 to 13,700 vpd near SR 99. By 2015, volumes along some portions of the corridor are forecast to increase by over 40 percent, and nearly double by 2035. Under current conditions, Gilroy and Los Banos experience significant congestion during both weekday and weekend periods. SR 152, east of Gilroy and on the eastbound ascent to Pacheco Pass is nearing capacity.



Current and Future Average Weekday Daily Traffic Volumes on SR 152

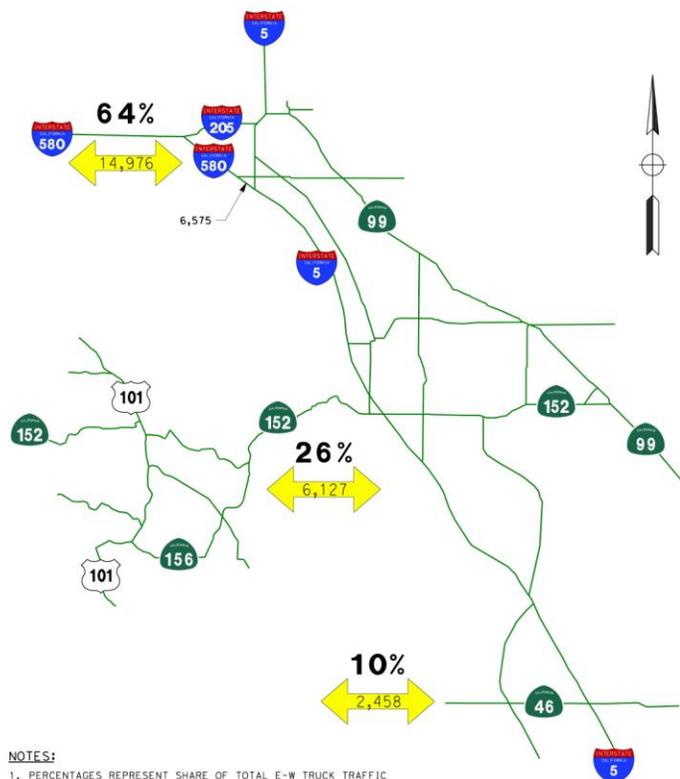
Based on the high level analysis conducted to date³, this congestion is expected to increase in the future. By 2015, SR 152, east of Gilroy and on the eastbound ascent to Pacheco Pass will exceed capacity. Over the entire corridor, total delay would increase four-fold by 2015 and to over 30 times current levels by 2035. Planned development in the region, such as the Crows Landing multimodal facility, and city/county general plan build-out could further increase congestion requiring additional lanes along portions of the corridor to meet projected traffic demand.

Goods Mobility

In 2007, daily truck volumes exceeded 6,000 vpd and 17 percent of the traffic mix on some segments of the corridor. Comparing the total number of trucks crossing the three east-west crossings of SR 152, SR 46, and I-580, 26 percent used SR 152, 10 percent used SR 46, and 64 percent used I-580 (west of the I-205 merge). Although I-580 carries the highest truck volumes, the portion of I-580 south of SR 132 carries similar truck volumes to SR 152, suggesting that Central Valley truck movements south of SR 132 are split evenly between these two routes.

³ SR 152 Trade Corridor Project, Existing Conditions Analysis, prepared by Wilbur Smith Associates, dated November 2009

Figure 2. East-West Truck Crossings



- NOTES:**
1. PERCENTAGES REPRESENT SHARE OF TOTAL E-W TRUCK TRAFFIC
 2. TRUCK VOLUMES ARE 2007 AADT
 3. I-580 VOLUMES INCLUDE I-205 VOLUMES

The efficient flow of goods along the SR 152 corridor is impacted by signal delays in Gilroy and Los Banos, steep grades on the ascent to Pacheco Pass, and the two-lane bottleneck east of Gilroy. As the region recovers from the current economic recession, truck volumes are expected to increase. Delays to trucks are of particular concern because the economy is highly dependent on reliable and cost-effective truck-freight transportation. Truck delays add to the cost of freight shipments, increasing the cost of doing business in the region and the cost of living.

System Connectivity

Portions of the route exhibit poor connectivity with the adjoining state highway system. West of the SR 152/SR 156 interchange, for example, the route splits from a four-lane expressway type facility to the two-lane conventional highways of SR 152 and SR 156 before reaching US 101. Rural, two-lane undivided highways are not capable of effectively moving the traffic we see today or expect in the future. The resulting congestion causes some traffic to divert onto local roads such as Ferguson Road. A continuous four-lane freeway or expressway type facility would significantly improve system connectivity throughout the corridor.

Route Concept and Access Control

Although SR 152 is part of the California Freeway and Expressway System and Interregional Road System (IRRS), only a small portion of the route currently meets freeway or expressway standards. Providing improved or full access control and upgrading the geometric design of the facility are key requirements to meet freeway or expressway standards and improve safety and traffic operations.

To provide full access control, potentially over 300 uncontrolled access points along the route would need to be closed and traffic diverted to grade separated intersections using frontage roads and overcrossings. Access control rights along the majority of the corridor would also need to be acquired. Improvements to meet expressway or freeway standard would include providing geometrics with a design speed of 65 mph or higher; standard lane, shoulder, median, and clear recovery zone widths; sufficient lanes to accommodate future traffic demand, accommodating STAA truck movements, and removing private utilities from State right of way.

These improvements to SR 152 are critical to the overall improvement of goods mobility between the Central Valley and North Central Coast regions. Corridor improvements benefitting goods movement would also improve SR 152 as a viable alternative to the heavily congested I-580/I-238/I-880 corridor.

8. PROPOSED CORRIDOR IMPROVEMENTS

To address the goals and objectives of the Project, the study identified three major improvements (see Figure 3) that would significantly improve goods movement and general mobility of traffic along the SR 152 corridor. These major improvements are listed below with their key benefits:

New SR 152 Alignment between US 101 and SR 156

- Complete SR 152 as a continuous four-lane facility
- Upgrade twelve miles of the route to freeway standard
- Provide an alternative route for interregional traffic to potentially lessen the burden of carrying such traffic on Gilroy and local roadways
- Improve system connectivity between US 101 and I-5

Los Banos Bypass⁴

- Upgrade ten miles of the route to freeway standard
- Provide an alternative route for interregional traffic to potentially lessen the burden of carrying such traffic on downtown Los Banos roadways
- Improve system connectivity between I-5 and SR 99

Eastbound Pacheco Pass Climbing Lane

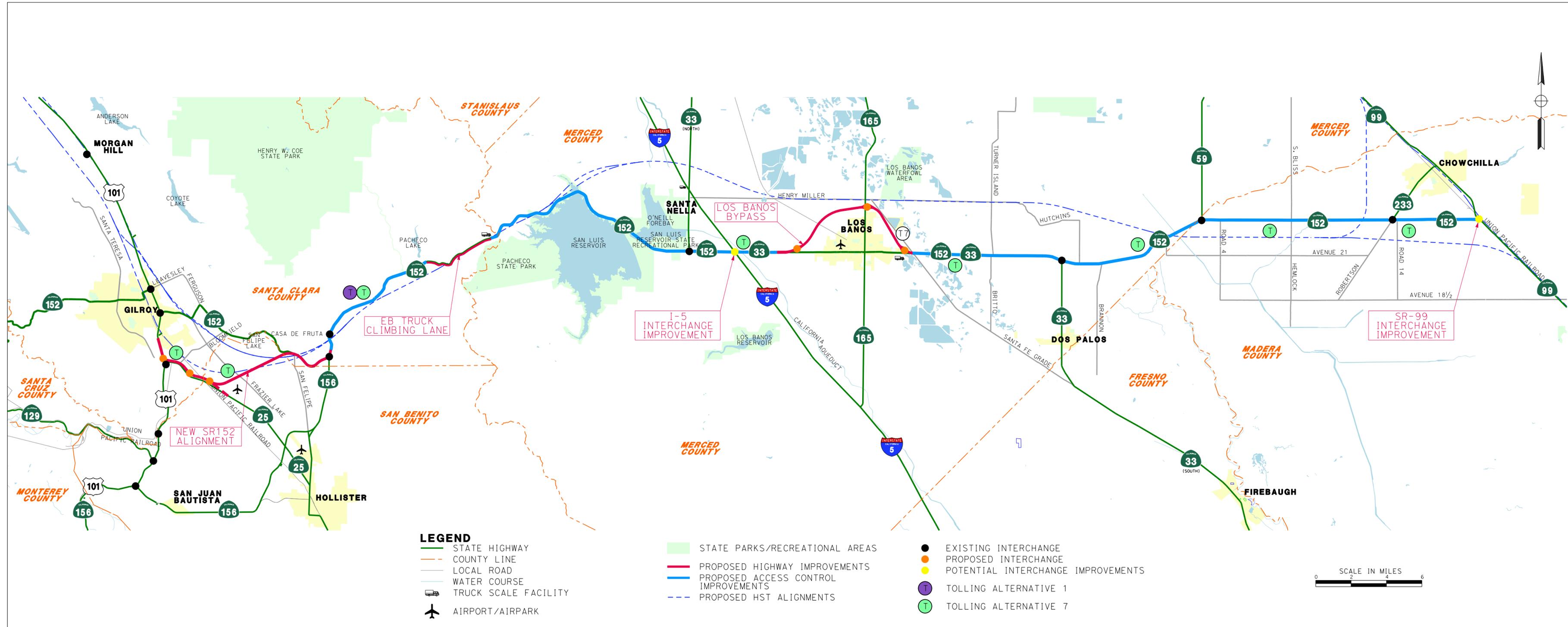
- Upgrade four miles of the route to freeway standard
- Separate fast and slow moving vehicles on the steep ascent to the summit, and compliment the existing westbound climbing lane

- Opportunity for other safety improvements including curve corrections

Several additional improvements could also further benefit SR 152 as a major east-west trade corridor and satisfy completion of the route to meet the needs of the users of the route.

- Access control improvements to complete the route as an expressway/freeway facility
- Interchange modifications to enhance traffic operations and safety, and accommodate STAA truck turning movements, including construction of (a) direct connector ramps at the SR 152 / I-5 interchange to eliminate weaving conflicts at loop ramp merge/diverge locations, and (b) additional ramps at the SR 152 / SR 99 interchange to accommodate all traffic movements
- Curve correction improvements on Pacheco Pass to improve or eliminate nonstandard design features and better accommodate STAA truck maneuvering
- Roadway widening as needed to meet future traffic demand.
- Upgrade or develop new truck stops or freight villages
- Promote opportunities for modified hours of truck operation
- Relocate or modify truck inspection facilities
- Install and integrate Intelligent Transportation Systems (ITS) facilities such as traffic management, traveler information, incident management and commercial vehicle operations systems to enhance goods movement and corridor mobility

⁴ According to Caltrans, there is only a Record of Decision on the Environmental Document for a signal controlled facility.



LEGEND

- STATE HIGHWAY
- COUNTY LINE
- LOCAL ROAD
- WATER COURSE
- TRUCK SCALE FACILITY
- AIRPORT/AIRPARK
- STATE PARKS/RECREATIONAL AREAS
- PROPOSED HIGHWAY IMPROVEMENTS
- PROPOSED ACCESS CONTROL IMPROVEMENTS
- PROPOSED HST ALIGNMENTS
- EXISTING INTERCHANGE
- PROPOSED INTERCHANGE
- POTENTIAL INTERCHANGE IMPROVEMENTS
- T TOLLING ALTERNATIVE 1
- T TOLLING ALTERNATIVE 7



**SR 152 TRADE CORRIDOR PROJECT (US 101 TO SR 99)
CORRIDOR IMPROVEMENTS**

**Figure
3**

#REQUEST

Order of Magnitude Cost Estimates

Order of magnitude project costs for the major corridor mobility improvements are summarized below.

	Improvement Project	Capital	Right of Way	Support	Total
1	New SR 152 Alignment (US 101 to SR 156)	\$465	\$46	\$133	\$644
2	EB SR 152 Pacheco Pass Climbing Lane	\$35	\$6	\$10	\$51
3	Los Banos Bypass	\$360	\$48	\$97	\$505
PROJECT TOTAL		\$860	\$100	\$240	\$1,200

Notes:

1. Cost estimates are in 2009 dollars.
2. Escalation to mid-year of construction, toll facility, and O&M costs are not included.

Funding

The transportation needs for the State continue to outpace funding available through traditional sources. Bonds for Proposition 1B funds and local sales tax measures have been threatened by the ongoing economic downturn.

The reality is that current funding mechanisms have been and will continue to be unable to support the extent and size of the Project. To address this critical issue, the financial feasibility of generating revenue through tolling to help fund construction of corridor improvements was assessed.

9. TRAFFIC AND REVENUE (T&R) ANALYSIS

Potential Toll Alternatives

The preliminary T&R Study completed in early 2010 analyzed the revenue potential from tolling the above corridor improvement projects. Individual and combined toll locations were considered and ten toll alternatives were developed for the preliminary T&R analysis. Tolls were assumed to be collected electronically by means of either electronic toll collection (ETC) transponders or with video license plate recognition. This method of toll collection is also referred to as open road tolling. Cash collection was not included. Tolls were assumed to be collected in both directions of travel. The following toll locations were retained for further analysis in the preliminary T&R Study.

No.	Toll Location by Corridor Improvement Project
New SR 152 Alignment (US 101 to SR 156)	
T-1	SR 152, East of Casa de Fruta Interchange
T-2	On New SR 152 Alignment
T-3	US 101, North of Gilroy
T-4	SR 152 (East of Casa de Fruta) and I-580 (West of I-5)
Los Banos Bypass	
T-5	SR 152, East of I-5 Interchange
T-6	On Los Banos Bypass, East and West of SR 165 Interchange
New SR 152 Alignment, Los Banos Bypass, and EB Pacheco Pass Climbing Lane	
T-7	Multiple Locations on SR 152 between US 101 & SR 99 (VMT)
T-8	I-580 (West of I-5) and SR 152 (East of Casa de Fruta)
New SR 152 Alignment, Los Banos Bypass, EB Pacheco Pass Climbing Lane, and 6-Lane Widening (SR 33 North to SR 59)	
T-9	Multiple Locations on SR 152 between US 101 & SR 99
T-10	SR 152 (East of Casa de Fruta) and I-580 (West of I-5)

Travel Time Savings

A motorists’ willingness to pay a toll is dependent on the benefits received in using the toll facility. These benefits can include mileage savings, improved quality of travel, enhanced safety, reduced congestion, and reduced travel time.

Approximate annual time savings for key segments of the corridor are shown in the table below.

Corridor Segment	Approximate Annual Travel Time Saving ¹	Approximate Annual Travel Time Saving ¹
	2015	2035
US 101 to I-5	1,500,000	3,900,000
I-5 to SR 99	300,000	1,100,000
US 101 to SR 99	1,800,000	5,000,000

Notes:

1. Measured in vehicle-hours
2. Based on Toll Alternative 7 scenario

Travel time savings also represent a cost saving to the motorist.

The aggregate cost savings for the improved corridor from 2015 to 2035 is estimated to be of the order of \$1,500 million.

T&R Analysis Results

A T&R analysis was performed to develop planning level traffic and toll revenue forecasts for the major corridor improvements and ten tolling configurations. The purpose of the analysis was to establish if there existed tolling configurations that would lead to a scenario in which the corridor mobility improvements could be fully funded through a combination of fund sources.

Travel demand modeling for the study area was performed using a combined VTA, MCAG and San Joaquin Goods Movement model. Average weekday daily traffic forecasts were developed under toll free and tolled conditions. Toll rates for the T&R analysis were chosen

from a toll sensitivity analysis for similar new toll facilities. Assumed toll rates were approximately \$0.15 per mile in 2015 and \$0.20 per mile in 2035. Commercial vehicles were assumed to be tolled per axle.

Annual toll transactions and accumulated toll revenues were estimated for the 20-year period from 2015 to 2035, and a conceptual-level financial feasibility analysis conducted for each toll alternative assuming a 50-year bonding period.

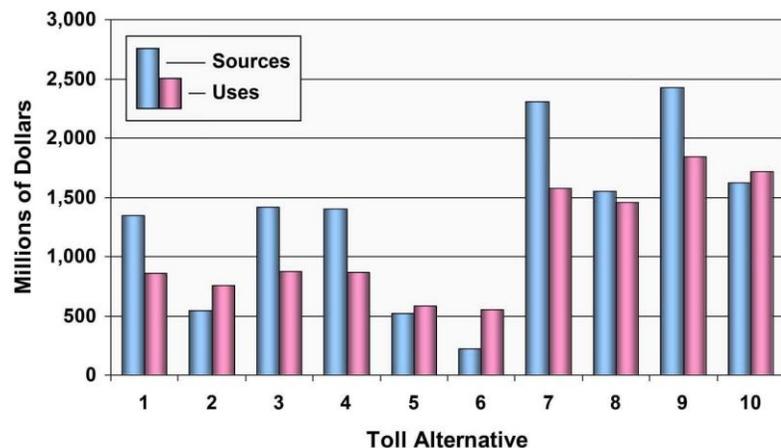
The financial analysis considered highway construction costs, as well as capital and annual operating costs for tolling facilities. The analysis was based on typical financial structures utilized on similar toll-based financings, including Transportation Infrastructure Finance and Innovation Act (TIFIA) financing and Private Activity Bonds (PABs).

The results of the analysis showed that six of the ten tolling configurations studied could be financially feasible (see Figure 4). The most promising toll alternatives were found to be:

- Toll Alternative T1 - Construct the new SR 152 Alignment between US 101 and SR 156 with a toll facility located just east of Casa de Fruta. Under this scenario only the portion of the corridor between SR 156 and I-5 would be tolled
- Toll Alternative T7 - Construct all major corridor improvements with multiple toll locations. Under this scenario the entire corridor would be tolled

The T&R Study also found that toll locations placed on the new SR 152 Alignment (Alternative T2) or on the Los Banos Bypass (Alternative T6) would not generate sufficient toll revenue to fully fund these improvements as standalone projects.

Figure 4. Financing Capacity Assessment



Notes:

1. Assumed sources of funding include toll revenues and private investments
2. Uses of funding include costs to construct, operate and maintain the facility
3. Where Sources exceed Uses, toll alternative could lead to the development of a financing approach that could result in the amount of available funding being greater than the costs to construct improvements.

10. OTHER CONSIDERATIONS

Toll Conversion

To date in California (and largely nationwide), conversion of existing highways to tolled facilities has been restricted to bridge crossings and express lanes (i.e. where drivers have a choice of taking either the tolled express lanes that are priced to be less congested, or the free, more congested lanes).

One recent example of an existing route being planned for conversion to a tolled facility is the I-80 Toll Conversion Project in Pennsylvania. The primary purpose of that project is to generate the necessary additional funding through tolling to reconstruct and rehabilitate the aging interstate facility. A statutory requirement for the I-80 project is

that toll revenues are not permitted to be diverted to fund other highway improvements.

Similarly, considerations that would need to be addressed for toll conversion of SR 152 include:

- Upgrading the corridor to a standard that will benefit goods movement and corridor mobility - such as reduced travel times and delays, enhanced safety, and improved access
- Identifying alternative east-west non-toll routes of equitable travel time and distance.
- Consideration of potential traffic diversion from SR 152 to local roads; to ensure that tolling does not lead to widespread diversion of traffic. The location of toll facilities and need for local road improvements are critical factors
- Consideration of toll discounts for low-income users to minimize the personal economic impact on individuals who rely on SR 152 every day to go to work, run errands or visit friends and family. Conversely, differential pricing could be perceived as inequitable by the trucking industry that relies on the SR 152 corridor to transport freight
- Consideration of the economic impact, particularly on those businesses that ship and receive goods via the SR 152 corridor

Public-Private Partnerships

State Bill (SB) 4 was signed by Governor Schwarzenegger in February 2009 allowing the creation of an unlimited number of public-private partnerships in transportation, initiated a design-build program, and authorized Caltrans and regional transportation agencies to enter into public-private partnership (P3) agreements.

Public-private partnerships often provide greater flexibility in implementing improvements to transportation facilities through the use of innovative financing, design, construction, maintenance and management techniques. As a result, these partnerships have the

potential to reduce project costs and deliver higher quality transportation projects more quickly than with traditional financing and contracting methods.

In addition to leveraging TIFIA funds, public-private partnerships can leverage other forms of investment capital up front which they recoup over time from toll revenues.

Other Sources of Financing Options

Other sources of financing for the Project that could also be considered are as follows:

TIFIA Funding

The Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides credit assistance for qualified projects of regional and national significance. Many large-scale, surface transportation projects are eligible for assistance. Eligible applicants include state and local governments, transit agencies, railroad companies, special authorities, special districts, and private entities. The TIFIA credit program is designed to fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital.

The program's fundamental goal is to leverage Federal funds by attracting substantial private and other non-Federal co-investment in critical improvements to the nation's surface transportation system. TIFIA was created because state and local governments that sought to finance large-scale transportation projects with tolls and other forms of user-backed revenue often had difficulty obtaining financing at reasonable rates due to the uncertainties associated with these revenue streams. Toll and other project-based revenues are difficult to predict, particularly for new facilities. Although tolls can become a predictable revenue source over the long term, it is difficult to estimate how many road users will pay tolls, particularly during the initial "ramp-up" years after construction of a new facility. Similarly, innovative revenue sources, such as proceeds from tax increment financing, are difficult to

predict. TIFIA credit assistance is often available on more advantageous terms than in the financial market, making it possible to obtain financing for needed projects when it might not otherwise be possible.

Pre-Construction Tolling

Once a construction project reaches the design phase, there are good reasons to initiate tolling before construction begins. Public acceptance of pre-construction tolling could be problematic, however, and timing would be critical. Extending the tolling period to cover several years prior to the start of construction allows a longer duration of tolling and lower toll rates to raise the toll-generated portion of project funding. The gain on invested toll revenue adds financial support for the project. Furthermore, overall project costs are reduced by lowering bond debt and possible avoidance of interest payments during construction. If tolling becomes a reality for the project, pre-construction tolling could be considered (Note: The Washington State Legislature recently passed a bill to use pre-construction tolling for the SR 520 Bridge Replacement Project to reduce total financing costs).

Development Impact Fees

Development impact fees have been important on some toll road projects in contributing up-front revenue for the traditionally risky pre-construction phase during which raising capital from the bond market can be costly or impossible. Revenue collected from development impact fees can be used to fund design of the project. In addition, the use of such fees can demonstrate local political support for the project, generate private-sector support, and enhance the marketability of bond issues by providing a revenue source other than tolls that can be used for debt service.

Other Corridor Specific Revenue Sources

Other potential revenue sources to defray financing or operating and maintenance costs associated with the corridor that could be

considered are truck and rest stop concessions, power generation facilities, and billboards.

Privatized commercial truck and rest stop areas could generate revenue from parking, lodging, fueling, recreation, shops, restaurants, banking, and shower facilities. Fueling facilities could also include services for emerging technologies such as hydrogen cell or electric driven vehicles.

Establishing power generation from wind mills or solar panels located within the right of way could be used to supply electricity to highway facilities along the corridor (such as lighting and signs) thereby reducing highway operating costs. Surplus energy could also be sold back to the grid as a revenue generator. Providing power generation from renewable resources would also contribute to the overall “greening” effort of the Project and reduction of greenhouse gases.

In 2008, Caltrans announced plans to study advertizing on overhead changeable message signs as a method of generating revenue. Billboards can rent for tens of thousands of dollars per month depending on how many vehicles travel the route. This rent is paid to outdoor advertising companies by the advertiser.

Vehicle Miles Traveled (VMT) Fee System

Drastically fluctuating oil prices have affected nearly every transportation mode and have made fuel taxes a less than reliable revenue source. Drivers are reducing fuel consumption by switching their principal vehicle, driving less or choosing more efficient vehicles. The combined impact of the State’s current economic condition, increased costs, declining revenue from fuel tax, and growing awareness of the cause and impacts of climate change, compels a reassessment of how infrastructure is publicly financed.

While other funding sources may be available in the future, fees based on the number of Vehicle Miles Traveled (VMT) may hold the most potential for replacing fuel taxes. Several states, including California have asked Congress to mandate a transition from the gas tax to a

funding system tied more directly to road use and impacts on the roadway system. Measurement and collection of VMT fees could potentially occur either through devices installed in vehicles or at the gas pump. The State of Oregon has begun pilot studies and public outreach to assess the feasibility of replacing fuel tax with VMT fees. Ultimately, federal approval would be required to enact this change.

11 SUMMARY OF OUTREACH EFFORTS

A series of stakeholder briefings were conducted during the feasibility study to update decision makers on the project background, objectives and study findings. These presentations were made to staff from the majority of the agencies listed in Section 4. Presentations were also made to executive staff of the four Caltrans districts.

Opportunities for the public and media to attend several of the elected official briefings were also provided, as follows:

- MCAG Board of Directors, Los Banos September 24, 2009
- Mobility Partnership, Gilroy February 19, 2010
- Mobility Partnership, Hollister April 14, 2010
- SBCOG Board of Directors, Hollister April 15, 2010
- San Juan Bautista City Council May 18, 2010
- MCAG Board of Directors, Los Banos May 20,2009
- VTA Congestion Management Program and Planning Committee, San Jose August 20, 2010
- VTA Board of Directors, San Jose September 2, 2010
- VTA Policy Advisory Committee, San Jose September 9, 2010
- Mobility Partnership, Gilroy September 30, 2010

Public outreach for the Project is led by the VTA and a project website is available for public access at:

http://www.vta.org/inside/boards/committee_pab/route152/agendas_minutes/route152_current_list.html

Given the magnitude of the proposed project and the potential for federal funding, preparation of a combined Environmental Impact Report (EIR) under CEQA and Environmental Impact Statement (EIS) under NEPA is likely.

12. ENVIRONMENTAL CONSIDERATIONS

The Project will require assessment of several potential environmental impacts, some of which may require that mitigation be incorporated into the project where feasible. Based upon a preliminary review of existing studies and environmental documents, evaluation of the following is likely:

- Conversion of prime farmland, including lands under Williamson Act contracts
- Loss of suitable habitat for threatened/endangered species
- Loss of riparian habitat at creek crossings
- Impacts to existing floodplains
- Water quality impacts due to increases in impervious surfaces
- Visual and aesthetic impacts
- Impacts to buried prehistoric and/or historic resources

The determination of the significance of the projects' impacts will require the completion of the following analyses:

- | | |
|--|------------------------------------|
| • Air Quality Technical Study | • Natural Environment Study |
| • Archeological Survey Reports | • Noise Study Report |
| • Community Impact Assessment | • Paleontological Technical Review |
| • Geotechnical Design Report | • Storm Water Data Report |
| • Hazardous Materials Waste Assessment | • Traffic Report |
| • Historic Property Survey Report | • Visual Impact Assessment |

13. CONCLUSIONS

This feasibility study set out to answer four key questions regarding SR 152 as a trade corridor.

What is the significance of the route?

SR 152 is a major east-west corridor for interregional traffic (commuter, commercial and recreational) connecting the South San Francisco Bay Area, North Central Coast and Central Valley regions. The closest east-west routes traversable by trucks are I-580 (60 miles to the north) and SR 46 (120 miles to the south). SR 152 is a vital artery for the State’s agricultural heartland of the San Joaquin Valley and Monterey Peninsula, and a major international trade highway corridor. SR 152 is the only continuous east-west route connecting SR 99 and US 101, and also provides a viable alternative to the heavily congested I-580 (I-205) / I-238 / I-880 east-west corridor.

Is there a need for highway improvements?

Although SR 152 is part of the California Freeway and Expressway System, an STAA Terminal Route, and Major International Trade Highway Corridor, the corridor is not constructed to minimum facility standards nor capable of effectively moving existing traffic or traffic expected in the future.

Improvements to SR 152 are critical to the overall improvement of interregional goods mobility and would relieve the burden on more heavily congested east-west trade corridors such as the I-580 (I-205) / I-238 / I-880 corridor.

The major impacts to the efficient flow of goods movement are:

- Reduced speeds in Gilroy, Los Banos, and across Pacheco Pass
- The bottleneck created by the two-lane undivided and windy corridor segment between Gilroy and SR 156
- Poor system connectivity with US 101, I-5 and SR 99

Problems at these locations are expected to become more severe in the future. Delays to trucks are of particular concern because the economy is highly dependent on reliable and cost-effective truck-freight transportation. Truck delays add to the cost of freight shipments, increasing the cost of doing business in the region and to the cost of living.

What highway improvements are needed?

The study identified three major improvements that would significantly improve goods movement and general mobility of traffic along the SR 152 corridor.

- (1) New SR 152 Alignment between US 101 and SR 156
- (2) Los Banos Bypass
- (3) Eastbound Pacheco Pass Climbing Lane

Several additional improvements are recommended that would further benefit SR 152 as a major east-west trade corridor and satisfy completion of the route to meet its intended purpose, including:

- Access Control Improvements
- Interchange Improvements
- Curve Correction Improvements on Pacheco Pass

Would tolling part or all of the corridor generate sufficient revenue to construct the needed improvements?

A traffic and revenue study was completed in early 2010 that analyzed the aforementioned major improvements as tolled facilities to establish if they could be self funded with toll revenues. A total of ten alternatives were analyzed and the results confirmed that six of the ten toll alternatives studied could be self funding. An independent check by a major financial institution confirmed that at least two of the alternatives could be financially feasible.