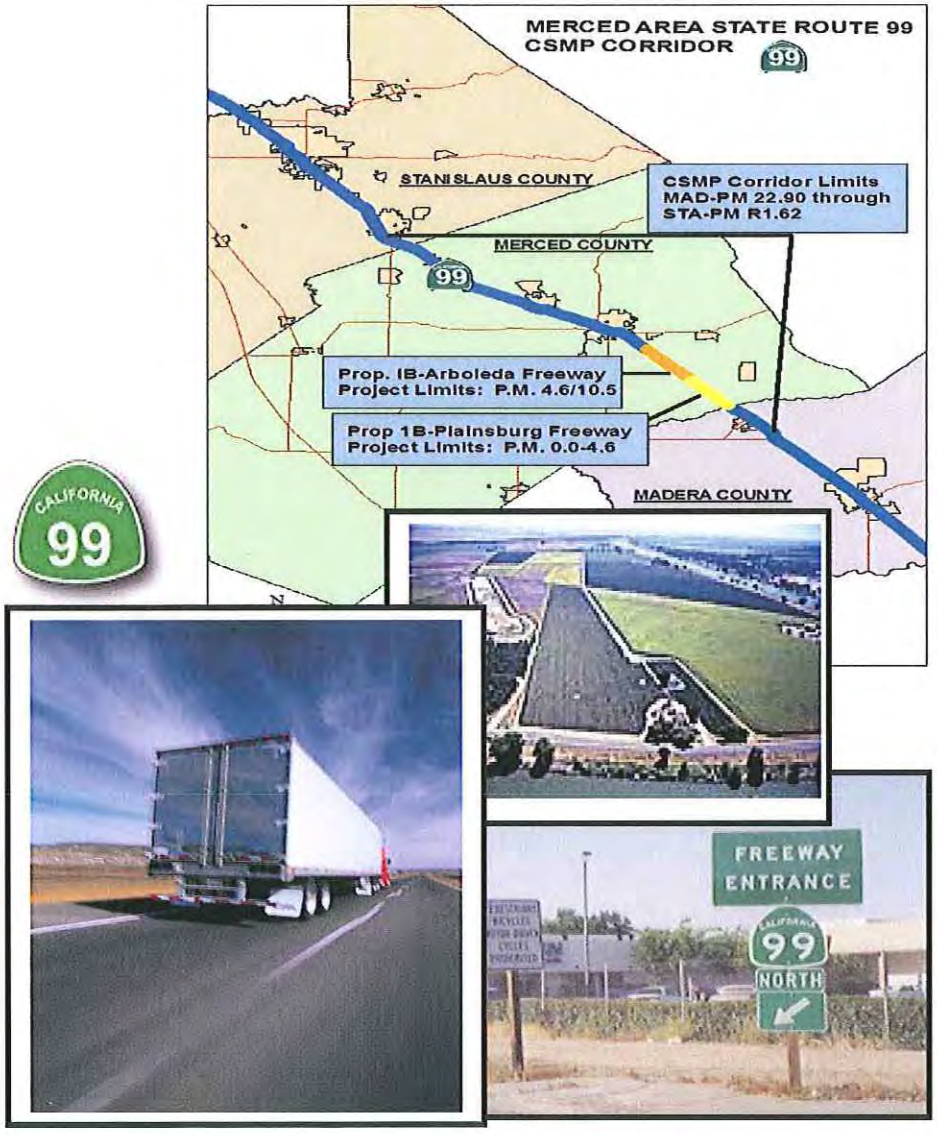
State Route 99
Corridor System Management Plan
Merced County and portions of Madera & Stanislaus Counties
For the Arboleda and Plainsburg Freeway Projects

From the Junction of SR-152 in Madera County south of the City of Chowchilla to the Junction of SR-165 in Stanislaus County in the lowest portion of the City of Turlock
California Department of Transportation, District 10
Post Mile: MAD–99–PM 22.72 through STA–99–PM–R1.62



October 2008

District 10
State Route 99
Corridor System Management Plan
Merced County and portions of Madera & Stanislaus Counties
Post Mile: MAD–99–PM 22.72 through STA–99–PM–R1.62

Recommend Approval:

KEN BAXTER — *Date* 10/1/08
Deputy District Director
Planning and Local Assistance
Caltrans – District 10

Recommend Approval:

DINAH BORTNER — *Date* 10/1/08
Deputy District Director
Maintenance & Traffic Operations
Caltrans – District 10

I approve this Corridor System Management Plan as the overall Policy Statement and Strategic Plan that will guide transportation decisions and investments for this State Route 99 Corridor.

KOME AJISE — *Date* 10/8/08
District Director
Caltrans – District 10

JESSE BROWN — *Date* 10-2-08
Executive Director
Merced County Association of Governments

Prepared in cooperation with:

Caltrans

MADERA CTC
Madera County Transportation Commission

Excellence in Regional Planning
StanCOG
Stanislaus Council Of Governments

MCAG

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Section 1 Introduction

Corridor System Management Plans (CSMP) provide for the integrated management of travel modes and roadways in order to facilitate the efficient and effective movement of people and goods within our most congested transportation corridors. The corridor management planning strategy is based on the integration of system planning and system management. Each CSMP presents an analysis of existing and future traffic conditions and proposes transportation management strategies, capital and operational improvements to maintain and enhance mobility within each corridor.

CSMPs for State Route (SR-99) were developed for defined corridor segments throughout two regions in California; beginning in the Central Valley Region from Tulare, Fresno and Madera counties (District 6) through Merced, (including the southern portion of Stanislaus County), and San Joaquin counties (District 10); to the Northern Region in Sacramento, Sutter, Butte and Tehama counties (District 3). A cohesive and coordinated approach was used by the districts to develop nine CSMPs. Each CSMP, including *The State Route 99 Corridor System Management Plan* (SR-99 CSMP) in the Merced area, was developed in concert with, and in consideration of respective state, local and regional goals, including but not limited to, local and regional mobility, transportation system connectivity, regional blueprint planning and context sensitive transportation solutions.

1.0 Route 99 Background

SR-99 begins at Interstate 5 (I-5), near the base of the Tehachapi Mountains in Kern County, passes through the counties of Tulare, Fresno, Madera, Merced, Stanislaus, San Joaquin, Sacramento and Sutter counties, and ends at SR-36 near Red Bluff in Tehama County.

This state highway serves the primary population centers in the San Joaquin Valley (SJV), as well as much of the rural agricultural areas. It is the major transportation backbone for the movement of agricultural products and other commercial goods, and also serves as a major link for recreation-bound traffic. SR-99 is the primary link that connects the SJV with the Sacramento metropolitan area and, via I-5, with the Los Angeles area. In its capacity as an interregional thoroughfare for the movement of people and goods, it is critical to the economic vitality of the State.

This SR-99 CSMP focuses on the urbanized areas of the cities of Chowchilla, Merced, Atwater, Livingston and the City of Turlock at its northern-most parameter. The corridor is approximately 45.5 miles long, 6.6 miles in Madera County, 37.3 miles in Merced County, and north 1.6 miles into Stanislaus County. This CSMP encompasses the existing urban land uses along SR-99 and it identifies the transportation-related needs along the corridor for congestion relief, improvement in the movement of goods, and the promotion and enhancement of economic development.

1.1 Purpose and Need

Over the next 30 years, California's population is expected to increase by an average of 500,000 residents per year. This means by 2020, the State's population will reach nearly 44 million, and by 2030, nearly 48 million. The preparation of the CSMP is a California Transportation Commission (CTC) requirement for the use of "Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006" funds, approved by the voters as Proposition 1B on November 7, 2006. The purpose of the CSMP is to reduce congestion within the SR-99 CSMP corridor limits, improve safety, and to preserve the mobility gains of the Proposition IB investments. Proposition 1B funds have been allocated for two projects within the corridor encompassed by this CSMP. These improvement projects in Merced County are partially funded through

this program: *The SR-99 Arboleda Widening Project – construction to begin in 2010 and the SR-99 Plainsburg Widening Project – construction to begin in 2011.*

1.2 Stakeholder Participation

The precise limits of the SR-99 CSMP in Merced County area were determined through a collaborative cooperative process between District 10, the Merced County Association of Governments (MCAG), Madera County Transportation Commission (MCTC) and the Stanislaus Council of Governments (StanCOG). The SR-99 corridor begins at SR-152 in Madera County near the City of Chowchilla and continues up to SR-165 in Stanislaus County.

The CSMP project development team consists of representatives from Caltrans District 10 (Planning, Traffic Operations, Traffic Safety, Maintenance, and Program Project Management). Team members also include representatives from MCTC, MCAG, StanCOG, the California Highway Patrol (CHP), the cities of Merced, Atwater, Turlock and Chowchilla, County of Merced and the transit agencies within the project's parameters. Caltrans District 10 and MCAG have signed a Letter of Intent to demonstrate the commitment to participate in this collaborative effort. This letter is included in the Appendix as FIGURE 1.

The development and successful implementation of this CSMP is dependant upon the close participation and cooperation of all major stakeholders. A project development team of key stakeholders formed and meets periodically to discuss, provide technical assistance, review, and comment on the development of the CSMP.

1.3 What is a Corridor System Management Plan?

A transportation corridor is not limited to the highway but encompasses all jurisdictions and transportation components. This includes the highway system, major local parallel arterials, local road intersections, ramps, signal controls, transit, bicycle, pedestrian and rail. A CSMP identifies the recommended management strategies for a given transportation corridor. Section 5 of the CSMP provides one unified concept for managing, operating, improving, and preserving a corridor across all modes and jurisdictions for the highest productivity, mobility, reliability, accessibility, safety and preservation outcomes.

The CSMP allows the State, along with the regional agencies and local jurisdictions, to manage and operate the transportation corridor for the highest sustained productivity and reliability based on the assessment and evaluation of performance measures. The strategies include both operational and more traditional longer-range capital expansion strategies. This represents a shift from the traditional approach of identifying localized freeway problem areas and finding solutions that are often expensive and focused on capital improvements. The CSMP approach places greater emphasis on performance assessments and operational strategies that yield higher benefit-to-cost results.

1.4 Consistency with the Governor's Strategic Growth Plan

The Governor's *Strategic Growth Plan* is committed to reducing congestion. The key steps are further described below. Corridor productivity can only be restored and maintained through a coordinated planning and management effort of all transportation partners. This CSMP identifies a number of elements essential for this goal. The "System Management Pyramid" can best visualize these elements. Each element, while represented separately, works as an essential part of the whole. The elements may be summarized as follows:

THE SYSTEM MANAGEMENT PYRAMID

FIGURE 1.4: System Management Strategy

1.4.1 System Monitoring and Evaluation

The basic foundation of successful system management is system monitoring and evaluation. This is accomplished through comprehensive performance assessment and analysis. Understanding how a corridor performs and why it performs the way it does is critical to developing appropriate strategies.

The first step in this effort is to analyze the system that we now have available. This will include an analysis of incidents, what types are occurring and their locations, and an identification of current bottlenecks (areas of congestion), their causes, and the impact that these individual bottlenecks have on the whole of the corridor.

The SR-99 CSMP evaluates congestion, delay, safety, and performance of the corridor by analyzing the existing and future level of service (LOS) and accident rates. It also provides the expected benefits from the Proposition 1B 99 Bond Act (Arboleda Widening and Plainsburg Widening) projects.

The CSMP also lists improvements already identified in programming and planning documents that impact SR-99. It is expected that improvements proposed by the CSMP development team will be evaluated and considered at the next available update of planning and programming processes.

1.4.2 Maintenance and Preservation

Maintaining an optimal system will require the participation of all partners. The corridor does not operate in isolation, but is part of an overall transportation/circulation network. All transportation partners must work together to determine the best strategies to maximize operations of the entire system.

1.4.3 Smart Land Use, Demand Management/Value Pricing

Land use decisions are the prerogative of local government. These decisions impact the transportation system. Appropriate planning can reduce this impact. Preserving right-of-way (ROW) to allow for future, planned, capacity-enhancing projects will reduce the time to deliver projects and their overall cost. Approving only those developments that are compatible with an adjacent or nearby transportation system, be it a freeway, airport, or transit station, will help to protect the system.

The extent of the usefulness of demand management strategies, and which ones will be most effective, will be part of the process of describing the current system and the current Intelligent Transportation Systems (ITS) components available on the system. Demand Management strategies may be more available to the corridor in the future, depending on the priority placed on ITS by Caltrans and the partner agencies.

1.4.4 Operational Improvements

Operational improvements such as the use of auxiliary lanes, ramp improvements, improved signs and lights, and other system refinements help to reduce delay, and enhance performance.

1.4.5 System Completion and Expansion

System completion and expansion provides the connectivity originally envisioned for the State Highway System (SHS) and expands the overall capacity of the transportation system to accommodate growing demands. These projects include the addition of new highway or roadway lanes, transit facilities and other projects.

While this item is at the top of the System Management Pyramid, the process of system management does not stop here. Effective system management will be an ongoing process, and may in fact begin all over again at the bottom of the pyramid. New needs will be identified; new technology available, and Caltrans and the local partners will need to remain flexible and responsive. The CSMP is to be a living document and must also remain flexible and responsive, with updates as necessary.

Section 2 Corridor Definition

The SR-99 corridor is a high capacity north-south facility that provides a consistent high level of service for interregional movement and connectivity of people and goods to and through the urban and rural areas of the central, north, and south parts of the state. The corridor is also a major connector to all east/west routes throughout the SJV, providing a convenient north/south linkage for commuter and recreational traffic between the San Francisco Bay Area and the Sierra Nevada Mountains.

SR-99 is part of the National Highway System (NHS) and is one of ten Focus Routes identified in the State's Interregional Transportation Strategic Plan (ITSP). The Route is the most important transportation corridor in the SJV, and it is the only highway which links the Valley's major urban areas. SR-99 is a critical corridor for freight movement with truck volumes comprising twenty to twenty seven percent of total traffic ITSP Focus Routes.

2.0 Corridor Limits

The CSMP begins at State Route 152 (SR-152) in Madera County and continues through all of Merced County, and a small portion of Stanislaus County ending at State Route 165 (SR-165). The corridor is approximately 45.5 miles long, 6.6 miles in Madera County, 37.3 miles in Merced County and 1.6 miles in

Stanislaus County. This CSMP focuses on the urbanized areas of the cities of Chowchilla, Merced, Atwater, Livingston and Turlock. These corridor limits encompass the existing urban and rural land use along this section of SR-99, and will connect at SR-152 with District 6 preparing the SR-99 CSMP for the region south of that location. The corridor limits were chosen to ensure consistency across the County and the Caltrans District boundaries.

2.1 Corridor Width – CSMP Sphere of Influence

In further defining the CSMP corridor, all parallel facilities within a one-mile parameter of SR-99 and all modes of transportation serving SR-99 will be included. Transit lines run the entire length of the CSMP corridor. There are plans for a transit route between Chowchilla and Merced to improve connectivity. However, currently local transit provider coverage is limited to within the major cities of Turlock, Modesto, Chowchilla and Madera, with limited service throughout the day and weekends. Greyhound bus and Amtrak do add to the coverage between the major cities. There are park-and-ride facilities within the vicinity of SR-99 in Merced and several more planned along the corridor. There are two rest areas on SR-99 for both northbound and southbound traffic near Turlock and one being planned off of SR-99 near the City of Chowchilla. Both the Merced County Municipal Airport as well as Amtrak connect to Merced's THE BUS, which in turn connects to the Yosemite Area Regional Transit System (YARTS) for transportation into Yosemite National Park. A description of the land uses located within the SR-99 corridor sphere of influence and development projects impacting the CSMP corridor are provided in Section 2.8 on page 27.

2.2 Corridor Function

SR-99 is considered the "Main Street" of the San Joaquin Valley (SJV) and a corridor of statewide and national significance. SR-99 serves an essential connectivity function throughout the SJV. Urban areas tend to be widely separated from one another and SR-99 provides the conduit for travel between many of these communities. The SJV is tied primarily to agricultural production, and SR-99 serves as a "farm-to-market" transportation route. The facility provides mobility of goods and services in a north-south direction throughout the SJV. It is used by interregional travelers, commuters, recreational travelers, and to move goods by truck and rail. SR-99 faces many challenges now and in the years ahead. The most significant of these challenges include: increases in Average Annual Daily Traffic (AADT) and truck traffic, encroaching development, and lack of adequate funding. In Merced County, AADT ranges from 39,300 to 64,000 with trucks constituting 20.0% – 27.3% of the ADT.

2.2.1 Corridor Designation

SR-99 is on the Freeway and Expressway System in its entirety, is designated as a High Emphasis Focus Route in the ITSP, and is a "Priority Global Gateway" for goods movement in the Global Gateways Development Program (January 2002). SR-99 is classified as a principal arterial and is a part of the NHS as a Strategic Highway Network (STRAHNET) Route. The Department of Defense has identified STRAHNET routes as critical for supporting defense requirements and they are mandatory components of the NHS. It is also on the national network from the Surface Transportation Assistance Act (STAA) for large trucks, and is a High Emphasis, Focus, and Gateway Route and is within the Interregional Roadway System (IRRS). SR-99 is an Intermodal Corridor of Economic Significance (ICES) between I-5 south of Bakersfield and SR-50 in Sacramento and is considered to be of regional significance. SR-99 is an important interregional route, bearing a number of different classifications. Refer to TABLE 2.2.1 on the following page for additional information on SR-99 corridor classification and designation.

TABLE 2.2.1: SR-99 CSMP Corridor Classification and Designation

Segment Location	Functional Classification	National Highway System (NHS) Y/N	Freeway/ Expressway System Y/N	Regionally Significant Y/N	STRAHNET Y/N	IRRS (Yes: HE=High Emphasis, F=Focus, G=Gateway or No)	NTN (Yes: STAA, TA=Terminal Access or No)	Scenic (Yes: OD=Officially Designated, E=Eligible or No)	ICES (Intermodal Corridor of Economic Significance) Y/N	General Plan/ RTP Standard Highway Classification	General Plan/ RTP LOS Standard	Bike Use Allowed Y/N
SR-152 to Madera/Merced County Line ***PM 22.72/29.35***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Freeway	LOS "C"	No
Madera/ Merced County Line to Buchanan Hollow Rd. ***PM 0.0/04.60***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	Only PM 1.57/4.6*
Buchanan Hollow Rd to 0.31-mi N. of McHenry Rd ***PM 04.60/10.50***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	Yes
0.31-mi. N. of McHenry Rd to 0.15 mi. S. of Childs Ave. ***PM 10.50/12.80***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	Only PM 10.5/12.37*
0.15 mi south of Childs Ave to JCT. SR-140 (E) ***PM 12.80/13.90***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	No
JCT SR-140 (E) to Atwater Blvd. OH ***PM 13.90/16.53***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	No
Atwater Blvd. OH to Buhach Rd. ***PM 16.53/20.52***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	No
Buhach Rd. to 0.43-mi. N. of Atwater Blvd. OH ***PM 20.52/23.80***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	No
0.43 mi. N. of Atwater Blvd. OH to 0.30-mi. S. of Arena Way ***PM 23.8a0/R26.50***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	Yes
0.30-mi. S. of Arena Way to Hammatt Ave. ***PM R26.50/R28.80***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	Only PM 26.5/R28.48*
Hammatt Ave. to Merced/Stanisluas County Line ***PM R28.80/R37.30***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	Only PM R28.80/36.4*
Merced/ Stanislaus County Line to JCT SR-165 ***PM 0.0/01.63***	Principal Arterial	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Freeway	n/a	No

* Only until freeway construction begins.

2.2.2 SR-99 Interstate Status

In August 2005, legislation was enacted that designated the section of SR-99 from Bakersfield to Sacramento as a future potential interstate. The statutory language is contained in Section 1304 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). At this time, it is unclear how the existing non-standard features on SR-99 would be treated if it were to be added to the interstate system. The regulations do make a "provisional" interstate designation available, provided that the facility is brought up to standards by 2030. Recently, the SJV RTPA Executive Directors and Caltrans approved the development of a study to determine the economic benefit of designating SR-99 as an interstate.

2.3 Existing Facility

SR-99 is a four-lane freeway from the southern termini of SR-99 at SR-152 to the Madera-Merced County line (P.M. 22.72-29.36). It continues into Merced County, as a four-lane freeway, but ends after less than 0.2 miles (P.M 0.00 to 0.163). It changes to a four-lane expressway until 0.2 miles before the Childs Avenue over-crossing (P.M. 0.16-P.M.12.81) in Merced. From the Childs Avenue over-crossing it becomes a four-lane freeway until just after the West Atwater Overhead (OH) (P.M12.81-23.98). It becomes an expressway again up to the Livingston city limits (P.M.23.98-P.M 28.58). After Dwight Way at P.M. 28.69 it becomes a four-lane freeway. After the south Turlock over-crossing at P.M. 36.516, it becomes a six-lane freeway and continues beyond the Stanislaus County line as a six-lane freeway to and beyond the end of the project limits at State Route 165 (SR-165). There are currently five programmed projects and one planned project to widen the CSMP corridor under study to six lanes including the Arboleda and Plainsburg Freeway Widening projects.

2.3.1 Existing Route Concept Facility and Rationale

The IRRS Focus Route concept is to provide a four to eight lane freeway from south of Bakersfield to the Route 99/70 junction. The concept LOS for the 20-year planning horizon for the corridor is 'C' in rural areas and 'D' in urban/developed areas. In District 6, LOS 'D' is assigned to the Bakersfield, Visalia, and Fresno areas due to the urbanized nature of these segments and LOS 'C' is assigned to the rural portions of SR-99 because of the high traffic volumes and regional and statewide importance of this corridor. Because of this, Segment 1 in Madera County's concept level of service is 'C.' In the Route 99 Corridor Business Plan, it states that "the 2030 facility objective is a minimum of 6-lane freeway. In addition, there are proposed improvements to an 8-lane freeway in urbanized areas of Bakersfield, Fresno, Modesto and Stockton. The estimated cost to accomplish the 2030 concept facility throughout the corridor is about $6 billion in 2005 dollars."

2.4 CSMP Transportation Network

TABLE 2.4 and FIGURE 2.4 located on pages 8 through 10 illustrate the transportation network that serves the SR-99 corridor. The CSMP transportation network includes all modes of transportation: the state highway system, major arterials and parallel roads, rail and transit, park-and-ride lots, and bike routes.

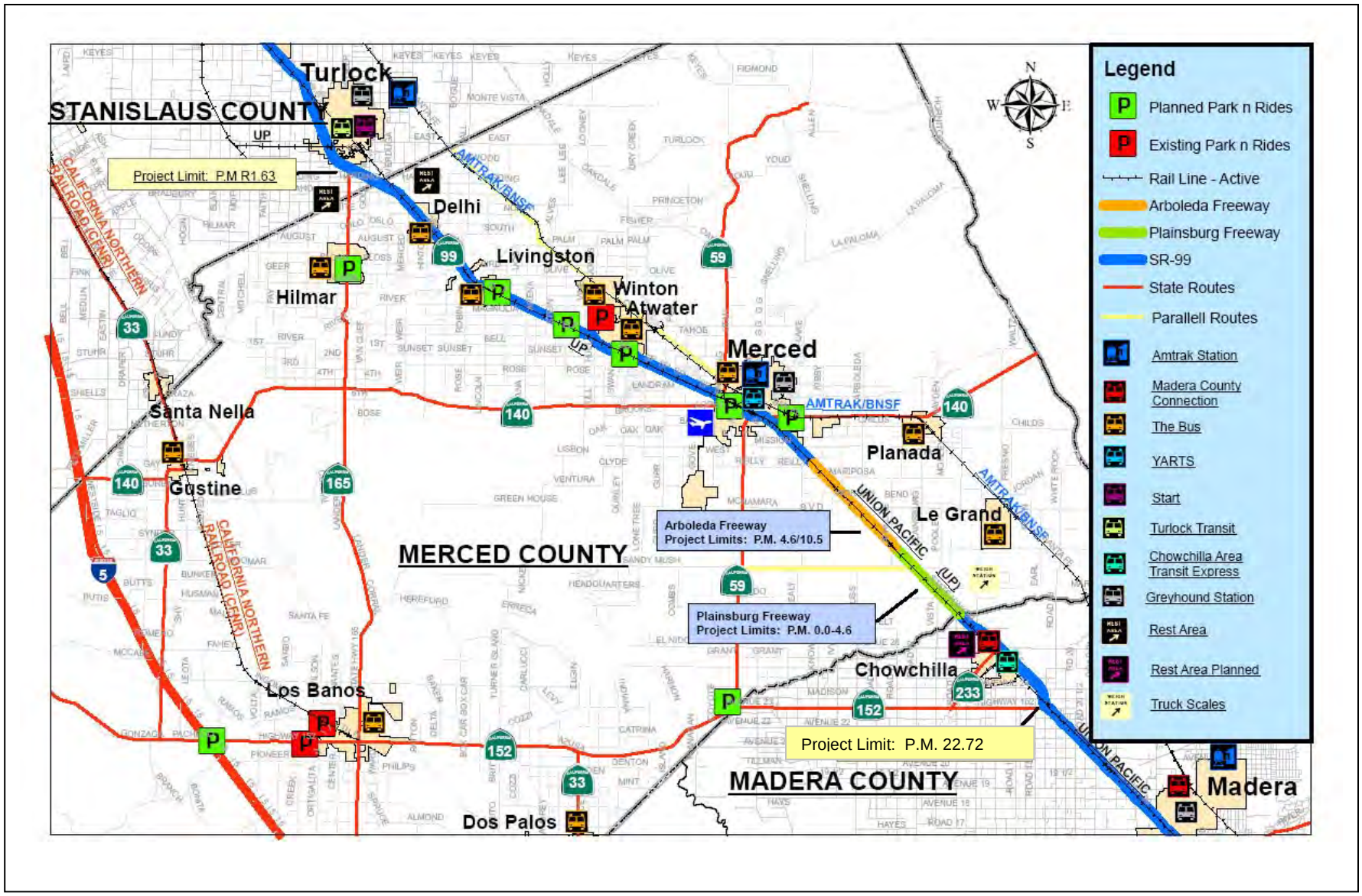
TABLE 2.4: SR-99 CSMP Transportation Network

SEG	LOCATION	STATE ROUTE 99						MAJOR PARALLEL ARTERIAL ROADS AND CONNECTING HIGHWAYS			TRANSIT		PARK AND RIDE LOTS	Bike Routes
											Heavy Rail	Transit		
	State Route	From (Description/PM)	To (Description/PM)	No. Lanes/ Facility Type	HOV Lanes	Aux. Lanes	Bike Access	Roadway	From	To	Operator/ Service	Operator/ Service	Post Mile	
1	99	SR-152; PM 22.72	MAD/MER Co. Line; PM 29.35	4	No	No	No	No reasonable alternative available			Union Pacific	Madera County Connection	None	Chowchilla Blvd (Proposed)
2	99	Mad/Mer Co. Line; PM 00.00	Buchanan Hollow Rd; PM 04.60	4	No	No	No	To become a frontage road	0.00	4.6	Union Pacific	Merced – The Bus	None	None
3	99	Buchanan Hollow Road.; PM 04.60	0.31-mi. N. of McHenry Road; PM 10.50	4	No	No	Yes	To become a frontage road	4.6	10.5	Union Pacific	Merced – The Bus	None	None
4	99	0.31-mi. N. of McHenry Road; PM 10.50	0.15-mi. S. of Childs Avenue; PM 12.80	4	No	No	No	No reasonable alternative available			Union Pacific	Merced – The Bus	None	None
5	99	0.15-mi. S. of Childs Avenue; PM 12.80	Jct. 140 (E); PM 13.90	4	No	No	No	No reasonable alternative available			Union Pacific	Merced – The Bus	None	Childs Ave. SR-140 (E). (Proposed)
6	99	JCT 140 (E) PM 13.90	OH Atwater Blvd.; PM 16.53	4	No	No	No	No reasonable alternative available			UP/Amtrak	Merced – The Bus/ YARTS	None	18th St. & 13th St.. SR-140 (W) (Proposed)

TABLE 2.4: SR-99 CSMP Transportation Network Cont'd.

SEG	LOCATION	STATE ROUTE 99						MAJOR PARALLEL ARTERIAL ROADS AND CONNECTING HIGHWAYS			TRANSIT		PARK AND RIDE LOTS	Bike Routes
											Heavy Rail	Transit		
	State Routes	From (Description/ PM)	To (Description/PM)	No. Lanes/ Facility Type	HOV Lanes	Aux. Lanes	Bike Access	Roadway	From	To	Operator/ Service	Operator/ Service	Post Mile	
7	99	OH Atwater Blvd.: PM 16.53	Buhach Rd; PM 20.52	4	No	No	No	No reasonable alternative available			UP	Merced – The Bus	None	Railroad. Ave (Proposed)
8	99	Buhach Rd; PM 20.52/23.80	0.43-mi. N. of Atwater OH; PM 23.80	4	No	No	No	No reasonable alternative available			UP	Merced – The Bus	PM 21.6 (PL)	Railroad. Ave (Proposed)
9	99	0.43-mi. N. of Atwater OH; PM 23.80	0.30-mi.S. of Arena Way; PM R26.50	4	No	No	No	No reasonable alternative available			UP	Merced – The Bus	PM 22.6(EX)/ PM 25.16 (PL)	Railroad. Ave partway (Proposed)
10	99	.30 mi. S. of Arena Way; PM R26.50	Hammatt Avenue; PM R28.80	4	No	No	No	No reasonable alternative available			UP	Merced – The Bus	PM 28.83 (PL)	No
11	99	Hammatt Avenue; PM R28.80	Stanislaus County Line; PM R37.30	4	No	No	No	No reasonable alternative available			UP	Merced – The Bus	None	None
12	99	Merced/Stanislaus County Line; PM 00.00	JCT 165; PM 1.63	6	No	No	No	No reasonable alternative available			UP	START/ Turlock Transit	None	Golden State Blvd (Proposed)

FIGURE 2.4: SR-99 CSMP Transportation Network Map



2.4.1 State Highways

State highways serve to facilitate faster travel between adjacent cities and for longer distance inter-regional travel. The following interstate/highways connect with SR-99 along the CSMP corridor:

- Interstate-5 (I-5) runs parallel to the CSMP corridor along the far western portion of Merced County and connects to SR-99 south of Bakersfield.
- State Route 152 (SR-152) provides a freeway-to-expressway connection between SR-99 and SR-152 in Chowchilla and provides connectivity to Los Banos, Dos Palos, SR-33 and I-5.
- State Route 140 (SR-140) provides a freeway-to-two-lane conventional highway connection between Merced and Gustine, and Santa Nella and I-5 to the west and freeway-to-multi-lane highway connection to the east for travel to Mariposa and Yosemite National Park.
- State Route 59 (SR-59) provides a freeway-to-two-lane conventional highway connection between SR-99 and SR-59 and provides connectivity between Merced, to Los Banos to the west, and Snelling to the north.
- State Route 165 (SR-165) with south and north junctions provides a freeway-to-two-lane conventional highway connection between SR-99 and SR-165 and travel between Turlock, Hilmar, Los Banos and SR-152 and I-5.

Based on 2006 traffic volumes, the traffic volumes are in the range of 39,300 to 64,000 on SR-99 through the CSMP corridor with the highest volumes through the northern most portion of the corridor. A preliminary performance assessment has been completed for the connecting highways to evaluate the volumes and LOS on to SR-99. Refer to TABLE 4.1.1 in Section 4, Preliminary Performance Assessment.

2.4.2 Major Parallel Roads

The CSMP includes identifying major connecting interstates, highways and major local parallel roadways, and examines the impact the demand has on the SR-99 CSMP corridor in the Merced area.

There are some parallel facilities to SR-99 in the Merced area, however they are fragmented and not adequate enough in order to handle the level of traffic including heavy duty truck traffic. Currently when one lane is closed on SR-99, the other can serve to meet a need temporarily. If there was a need due to a severe event that closes both lanes on SR-99 there are no adequate parallel routes that could serve for SR-99 except detouring traffic to I-5. Conceivably, Sandy Mush Road to SR-59, and returning to SR-99 could be used for most of the southern portion of Merced. For the northern portion of Merced, SR-59 north to Olive Avenue in Merced, and on to Santa Fe Avenue east of Merced beyond the northern corridor limits to Turlock could be used. This route could provide for inter-regional travel beyond the corridor limits to as far as Modesto at SR-132 in the unlikely event that both lanes were closed. Because of volumes of traffic on SR-99 and the heavy truck traffic, neither of the alternatives would be able to adequately accommodate the additional traffic.

With the funding of the Arboleda and Plainsburg Freeway widening projects, frontage roads will be developed only along those portions of SR-99 being upgraded to freeway, leaving much of SR-99 in the Merced area with significant gaps.

It is recommended that existing frontage roads be preserved, and the cities and counties consider developing new frontage road facilities where new development is being planned.

2.4.3 CSMP Transportation Network - Transit, Rest Areas, Park-and-Ride, Bicycle Routes, Light Rail and High Speed Rail

2.4.3.1 Transit

Communities in the Merced area are served by several transit companies including Greyhound Bus Lines, Merced County's Transit Service: THE BUS, and YARTS. Greyhound provides transit services to many areas outside the county. YARTS provides service between Merced and Yosemite National Park. This also includes YARTS connectivity between the Merced County Municipal Airport, AMTRAK, and Yosemite Valley serving tourists with the destination to Yosemite National Park all year and during the summer months to Mammoth Lakes. University of California (UC) Merced has also established their own transit system called, CatTracks, which has connectivity with Merced County's THE BUS and it includes fixed route dial-a-ride and medicab services. Medicab services are provided through the efforts of a non-profit organization called Medicab Mobilized Industries.

Merced County's THE BUS includes Route 1 through Route 16. Each bus stops at the Merced Transpo Center which is within a short distance from SR-99. Bus Route 7 travels to Turlock and Bus Route 8 stops in Winton and Atwater before returning to Merced. The following bus routes: Route 1, Route 2, Route 3, Route 4, Route 5, Route 5X, Route 7, Route 9, 10, Route 10A, Route 12, and Route 16 cross SR-99. In addition, THE BUS, has a system called the "Car-Less Commute" that provides transportation by picking up passengers at their home taking the passenger to their destination and returning passengers to their home to complete their trip.

The Madera County Connection (MCC) operates a fixed route system from Bass Lake/Oakhurst to the Valley Children's Hospital via SR-41, SR-145, SR-99 and Avenue 12. It also makes three round trips to Chowchilla daily. Chowchilla Area Transit Express (CATX) operates a fixed route and dial-a-ride system. CATX also provides one trip per month to the City of Madera if there is a request for service. Greyhound Bus Lines serve Madera County via SR-99 and SR-152 to Chowchilla, and areas north, south and west. Seven social service agencies provide transportation in Madera County, largely to their own clients at specific sites. Several private carriers provide inter-city services. The City of Madera's downtown intermodal center interconnects with Dial-A-Ride operations, the Madera fixed route system, and the Greyhound inter-city services. Planning is underway to improve access to Amtrak service.

StaRT is the Stanislaus Regional Transit System and serves the county including the Turlock area. StaRT includes various routes. The following routes provide service to the city of Turlock: Route 10 (express bus service) Route 15, Route 45 and Route 70. In addition there is a Turlock/Modesto shuttle. For long distance transportation StaRT has a Medivan to Livermore, Oakland and San Francisco and another Medivan to Madera and Fresno Counties. The City of Turlock also has its own transit system named, Bus Line Service of Turlock, or BLAST, which includes Routes A-D which all have pick up locations somewhat close to SR-99 in the City of Turlock.

In the past, neither Stanislaus County nor Merced County were successful in passing their sales tax proposal measures. Madera County, in contrast, passed their measure proposal: Measure T funds are now available there. Money from Measure T in Madera County will be able to be directed to public transportation, so expansion of services may be possible. Expansion of any transit service is always depends on funding and demand.

Refer to TABLES 2.4.3.1 a - d for information regarding travel times, ridership and frequency of service.

TABLES 2.4.3.1.a - 2.4.3.1.d

		ROUTES				
	TRANSIT AGENCY	FROM	TO	TRAVEL TIMES	RIDERSHIP (PER DAY)	FREQUENCY OF SERVICE
TABLE 2.4.3.1.a *MADERA AREA*	MCC	Madera	Chowchilla/ Fairmead	37 minutes	18	3 times per day/
TABLE 2.4.2.b *CHOWCHILLA AREA*	Chowchilla Area Transit Express (CATX)	Chowchilla Area	Chowchilla Area	Varies	90	On Demand
TABLE 2.4.3.1.c *MERCED AREA*	Merced-The Bus	Merced Transportation Center (near SR-99)	Fulkerth and Country Side Plaza	1 hour, 35 minutes	*RTE 7* 320	70-120 minutes
	Dial-a-Ride	Greater Merced	Greater Merced	Varies	*TSA-3* 31	On Demand
	Car-Less Commute	Residence to Business in Merced County	Business to Residence in Merced County	Varies	Unknown	On Demand
TABLE 2.4.3.1.d *TURLOCK AREA*	BLAST Route D	Linwood/West Avenue (near SR-99)	Linwood/Golf	7 minutes	116	35 minutes
	BLAST Route B	Golden State Blvd/Geer	Golden State/Makin (near Greyhound station)	5 minutes	85	35 minutes
	Dial-a-Ride	Greater Turlock area	Denair Amtrak Station	Varies	Unknown	On Demand

2.4.3.2 Park-and-Ride

There is one park-and-ride lot that is located in the SR-99 CSMP corridor in Atwater. There are two park-and-ride lots planned, one in the Atwater-Winton area and the other in the Merced area. Merced County Public Works has identified a need for a park-and-ride facility at the intersection of Campus Parkway and SR-140.

2.4.3.3 Rest Areas

There are currently two rest areas located south of Turlock called the Enoch Christoffersen Rest Areas. These rest areas located directly across from each other on SR-99 serve both north and south directions of travel. These locations have projects that provide WiFi capability to provide wireless internet for the public. There is also a rest area planned near the City of Chowchilla on SR-99 immediately to the south of the corridor at SR-99 and Avenue 24.

2.4.3.4 Bicycles and Pedestrians

The connectivity of all modes of transportation including bikeway facilities should be considered when planning improvements along SR-99. Bicycle and Pedestrians will not be permitted on SR-99 once the highway portions are improved to freeway standards, however there are alternate routes available. There are existing and planned facilities which cross or parallel SR-99 which provide alternate routes to reach desired destinations. Typically, if there are no alternative routes available for bicycles, bicycle access is permitted. Pedestrians are generally not permitted on the freeways where bicycles are allowed. TABLE 2.4.3.4.a below lists the existing bicycle facilities crossing SR-99 and on page 15 is TABLE 2.4.3.4.b that lists the proposed bicycle facilities crossing SR-99.

TABLE 2.4.3.4.a: Existing Bicycle Facilities

SR-99 CSMP Existing Bike Facilities Crossing SR-99 – Merced County – City of Merced	
Type	Location
Class III	Childs Ave. (west side)
Class II/III	16th Street under SR-99
Class II/III	G St.
Class II/III	M St.
Class II	R St.
Class II/III	V St.
SR-99 CSMP Existing Bike Facilities Crossing SR-99 – Merced County – City of Livingston	
Type	Location
Class I	Bloss Ave.

TABLE 2.4.3.4.b: Proposed Bicycle Facilities

SR-99 CSMP Planned/Potential Bike Facilities Crossing SR-99 – Madera County – City of Chowchilla	
Type	Location
Class I	Ash Slough
Class II	SR-233/SR-99 Interchange (I/C)
SR-99 CSMP Planned/Potential Bike Facilities Crossing SR-99 – Merced County – City of Livingston	
Type	Location
Class II	Winton Way
Class II	Hammatt Ave.
SR-99 CSMP Planned/Potential Bike Facilities Crossing SR-99 – Merced County – City of Atwater	
Type	Location
Class II	Applegate Rd.
Class I	Along SR-99 and Southern Pacific RR
SR-99 CSMP Planned/Potential Bike Facilities Crossing SR-99 – Merced County – City of Merced	
Type	Location
Class II	Childs Ave. E. of SR-99
Class I/II	Mission Ave.
SR-99 CSMP Planned/Potential Bike Facilities Crossing SR-99 – Merced County – Delhi	
Class II	Bradbury Rd. over SR-99
Class II	Shanks Rd. over SR-99
Class II	Stephens St./El Capitan
Class II	South Ave. over SR-99

The Madera County 2004 Regional Bicycle Plan includes the City of Chowchilla Bicycle Plan's information. Class 1 bicycle facilities are proposed parallel to SR-99 on Chowchilla Boulevard in the City of Chowchilla. The Merced County Regional Commuter Bike Plan includes facilities throughout Merced County. In the City of Merced, parallel to SR-99, existing bike lanes are located on 18th Street and 13th Street through town. Proposed bicycle lanes parallel to SR-99 are: (1) 16th Street through the city of Merced and (2) Santa Fe Avenue east of town up to the Merced/Stanislaus County line.

In Atwater there is an existing bike lane along a portion of Atwater Boulevard which can connect with a proposed bicycle path (class I) that would begin south of Atwater and would follow the railroad tracks parallel to SR-99 if funded.

In StanCOG's Regional Bicycle Action Plan, 2001, proposed by the City of Turlock there is a Class I bicycle path along the railroad tracks parallel to SR-99 partially along Golden State Boulevard from the Stanislaus County line north through Turlock and would continue into Modesto as a StanCOG project if funded. As a continuation of the Santa Fe Avenue bicycle lane from Merced County, there is a proposed bicycle lane that would, if funded continue up to the City of Modesto within Stanislaus County.

2.4.3.5 Passenger Rail

2.4.3.5.1 Amtrak

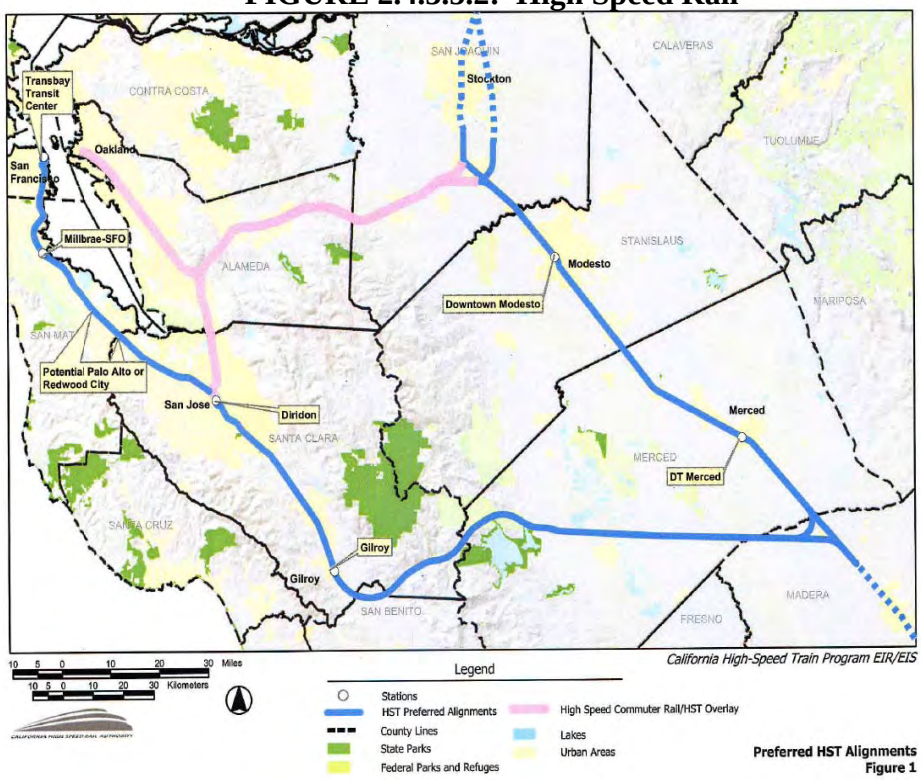
The Amtrak line known as the "San Joaquin" runs north-south, linking Bakersfield and the Bay Area with stops in Fresno, Madera, Merced, Turlock, Modesto, Stockton, Lodi and Sacramento. The San Joaquin's operate six times in each direction 365 days per year. At the present time, four round trips daily operate

between the San Francisco Bay Area and Bakersfield, and two round trips operate directly between Sacramento and Bakersfield. Some portions of the trip may be made by Amtrak Motorcoach. Adding additional trains to the existing San Joaquin line has been considered.

2.4.3.5.2 High Speed Rail

The California High Speed Rail Authority has developed a plan to build a high-speed rail line generally parallel to SR-99, connecting Los Angeles to San Francisco, and would eventually run from San Diego to as far north as Sacramento. The plan describes a 700-mile-long high-speed train system capable of speeds of 200 miles per hour.

FIGURE 2.4.3.5.2: High Speed Rail



The system as planned would serve the future major metropolitan centers of California to move travelers from the Transbay Terminal in downtown San Francisco to Union Station in Los Angeles in 2 ½ hours.

In December 2007, the California High Speed Rail Authority selected the Pacheco Pass and not the Altamont (I-205/I-580) alignment as part of the required environmental studies for the San Francisco Bay Area-Central Valley connection. It would sweep into the Bay Area over the pass between the Los Banos area (Merced County) and Gilroy, head north to San Jose, then up the Peninsula along the Caltrain ROW to San Francisco.

The Altamont proposal would have crossed the pass west of Tracy and traveled through the Tri-Valley to a new bay crossing near the Dumbarton Bridge, where it would have headed north to San Francisco. A separate set of tracks would have taken the train south down the East Bay shoreline to San Jose.

2.5 Goods Movement

SR-99 is the main inland route through the center of the State connecting major cities throughout the SJV region, which is one of the four major international trade regions in California, designated in the 2002 Global Gateways Development Program. The SJV Goods Movement Study, prepared for Caltrans and the eight counties of the SJV (Kern, Fresno, Tulare, Kings, Madera, Merced, Stanislaus and San Joaquin), determined that trucking is the dominant mode for moving freight. The increase in freight movement by trucks on State highways is growing faster than can be accommodated by the existing capacity.

Various transportation modes are used in California to move goods, including seaports, airports, railways, dedicated truck lanes, logistics centers, and border crossings. The California economy relies heavily on the efficient and safe delivery of goods to and from our ports and borders, as well as distribution within the

State. This includes the movement of raw materials to manufacturing and processing plants, as well as the movement of finished products to market. The AADT on SR-99 ranges from 39,300 to 64,800 with trucks constituting up to 27.3% of the AADT in some sections.

2.5.1 San Joaquin Valley Short Haul Rail/Inland Port Project

The CTC has awarded Trade Corridor Improvement Funds (TCIF) for the development of the SJV Short Haul Rail/Inland Port Project located in Crows Landing, within Stanislaus County at the Crows Landing Air Facility. It involves the development of an inland port logistics center, and the construction of a short haul rail service. The project railroad ROW acquisition and construction of 170-acre rail intermodal facility will provide for the loading and unloading of containers from rail cars. This project will provide a rail link between the SJV and Oakland. Local air quality and community impacts due to increase in vehicular traffic at the facility will require further analysis. A 4,800-acre business and industrial park is also being proposed at the site.

2.5.2 Freight

2.5.2.1 Burlington Northern and Santa Fe (BNSF) and Union Pacific (UP) Railroads

BNSF and UP Railroads traverse through Stanislaus, Merced and Madera counties. UP runs north-south along Atwater to Livingston on the west side of SR-99 through the entire corridor encompassed by this CSMP. BNSF runs parallel to UP further east.

2.5.2.2 Truck Freight

Within the last 10 years, SR-99 has experienced dramatic traffic growth and levels of congestion with truck traffic at volumes much higher than the statewide average for the highway system. SR-99 is vital to the goods movement network in the SJV. The corridor is heavily used by trucks for both interregional goods movement throughout the state and movement to eastern and northern states, and for local farm and commercial truck trips.

SR-99 is on the STAA national network for large trucks. The California economy relies heavily on the efficient and safe delivery and distribution of goods to and from our ports and borders. This includes the movement of raw materials to manufacturing and processing plants, as well as the movement of finished products to market.

2.5.2.3 STAA and Truck Parking Issues

The eight San Joaquin Valley Regional Transportation Planning Agencies have been working to prepare a San Joaquin Valley Goods Movement Action Plan. Agencies are going to continue to form contacts and relationships to start participation in STAA and truck parking issues as a part of the San Joaquin Valley Goods Movement Action Plan. In addition, on May 16, 2008, a workshop was held by UC Berkeley and the Caltrans, Headquarters Office of the Division of Research and Innovation with members of the San Joaquin Goods Movement Task Force to come up with an analysis of the issues regarding truck parking to be addressed by different levels of government for local, regional and statewide evaluation.

2.5.3 Airport

In addition to the Merced Municipal Airport which provides both commercial passenger and freight service, there are several small public airports in the area. The public airports within the corridor include locations in Chowchilla, Madera and Turlock. Near Atwater is Castle Airport, a certificated passenger airport with its 11,802 foot long heavy jet runway, new passenger terminal, operating control tower and ample ramp space. Castle is prepared to provide passenger and heavy air freight service to the region. Castle is now included in the SJV Goods Movement Action Plan for 2008.

2.5.4 Warehousing and Distribution

New warehousing and distribution centers for northern California and for the San Francisco Bay Area are locating in the Merced area. There is a Wal-Mart distribution center that is currently being considered for Merced. Minturn Huller, Minturn Nut, Buchanan Hollow Nut and other fruit and nut processing plants are located there. Foster Farms has a processing plant between Atwater and Livingston.

2.6 Transportation System Management

Intelligent Transportation Systems technology is used for crash prevention and safety and freeway management through technologies such as dynamic message and warning signs. Closed circuit television cameras (CCTV) monitor traffic and also monitor the changeable message signs (CMS) for verification of sign message and operation. The CMSs generally display road closure/road condition information. In addition to the cameras, traffic monitors are located in specific locations to feed traffic data to the Transportation Management Centers (TMC) in each Caltrans district.

Deployment of ITS technology will enhance traveler information services, as well as the operational and safety efficiency of the corridor by informing motorists of traffic congestion, inclement weather such as fog, dust, incident management, emergency response, and highway construction and/or closings.

Merced County has grown significantly in recent years and is projected to experience significant growth in the coming decades. While several freeway improvement projects are planned within Merced County, traffic forecasts indicate that the planned construction of new highway capacity projects will not keep pace with this growth, and additional capacity-increasing projects are subject to funding and environmental constraints. As a result, proper management of the region's freeways can provide practical and cost-effective alternatives (perhaps in combination with capacity improvements) for addressing freeway problems.

Freeway traffic management and operations is the implementation of policies, strategies and technologies to improve freeway performance. Ramp metering and High Occupancy Vehicle (HOV) lanes represent two potential strategies in a comprehensive or integrated approach to managing the region's freeways. Other potential elements include incident management, traveler information, traffic surveillance and detection, and advanced traffic signals. The overriding objectives of any freeway management program are to minimize congestion (and its side effects), improve safety, enhance overall mobility, and provide support to other agencies during emergencies. Often, a combination of strategies is needed to effectively and efficiently achieve these objectives.

Currently SJCOG and Caltrans, District 10 are developing an HOV and Ramp Metering Master Plan that will also include Merced and Stanislaus counties.

2.6.1 Intelligent Transportation Systems (ITS)

ITS includes electronic transportation systems that communicate information to the traveler that will improve efficiency. ITS includes traffic signals, closed-circuit televisions, changeable message signs, ramp meters, weigh-in-motion devices, freeway service patrols, weather stations, highway advisory radio (HAR) stations and TMCs. Also included is the centralization of control of many of these components from transportation or transit management centers.

Information technology systems are used for freeway management through technologies such as dynamic message and warning signs. CCTV cameras monitor traffic. CMS generally display road closure or road condition information. In addition to the cameras, traffic monitors are located in specific locations to feed traffic data to the TMC in each Caltrans district. Some traffic monitors are linked to the UC Berkeley Performance Monitoring System (PeMS) for use in distribution of data to many users.

Deployment of ITS technology will enhance traveler information services, as well as the operational efficiency of the corridor by informing motorists of traffic congestion, inclement weather such as fog, dust, incident management, emergency response, and highway construction and/or closings. This information assists motorists to make informed decisions regarding their travel.

Traveler information broadcast systems, traffic signal priority for emergency or transit vehicles, ITS data archive management and vehicle safety warning systems are all part of ITS. The "511" transportation information system is a new three-digit phone number program to access traveler information that is being implemented throughout the country. 511 is not available in Merced County at this time; however, the regional transportation planning agency within the CSMP area, MCAG, has recently made the decision to partner with Sacramento Area Council of Governments (SACOG) in joining the 511 system in the northern Sacramento region as Phase I of 511 deployment in most of the counties within the SJV. Neighboring transportation planning agencies in the San Joaquin Valley have also made the decision to partner with the SACOG 511 region. Memorandums of Understanding are signed by all but StanCOG and KernCOG.

The communication lines necessary to transmit all of the ITS data will be enhanced by the fiber optic network planned along the SR-99 corridor, along with the other corridors in the SJV area. The fiber optic network to Caltrans, District 10 TMC at the District Office in Stockton will relay this data. From this location, the TMC can monitor conditions and provide for rapid traffic and emergency response when conditions deteriorate. There is a methodology established which provides for cooperation and electronic sharing of information between the District 6 TMC in Fresno and the District 10 TMC in Stockton.

Currently, there is a regional architecture in existence called the "SJV ITS." This architecture covers the eight counties within the SJV (San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern). This plan is available online at: http://www.kimley-horn.com/Caarchitecture/task9/sjintor.htm.

Continued deployment of ITS technology will enhance traveler information services, as well as the operational efficiency of the highway by informing motorists of traffic congestion, inclement weather such as fog, dust, highway construction and/or highway lane closings.

Numerous applications of ITS exist or are proposed throughout the SR-99 corridor. Refer to TABLE 2.6.1.a on page 20 for the existing ITS elements on the corridor. The programmed ITS elements can be found in TABLE 2.6.1.b on pages 20-22.

TABLE 2.6.1.a: Existing ITS Elements within the SR-99 CSMP Corridor

No.	Co./Postmile	Location	Description
1	MAD/21.15	SB SR-99 S. of SR-152	CMS ID-064
2	MAD/22.72	SR-152	HAR ID 023
3	MAD/22.73	Califa JCT SR-152 (W)	TMS ID 692
4	MAD/23.1	Califa OH	CCTV ID-061
5	MAD/26.57	JCT SR-233 (W)	TMS ID-92
6	MAD/28.17	SR-99 at Le Grand Ave.	CMS ID-065
7	MER/10.60	SR-99 Mission Ave.	Road Weather Information System (RWIS)
8	MER/10.70	NB 99 Mission Ave.	CMS Station ID 27
9	MER/11.20	SR-99 S. of Healy Rd.	CCTV
10	MER/12.37	SR-99 Merced, Gerard Ave.	Traffic Monitoring Station ID 41 (NB/SB detection)
11	MER/12.40	SB SR-99 S. of Childs Ave.	CMS Station ID 29
12	MER/13.00	Merced Maintenance Yard	RWIS/TMS/HAR Station ID 6
13	MER/15.07	SB SR-99 Martin Luther King	CMS Station ID 22/CCTV
14	MER/15.80	Merced, JCT. SR-140 (W); JCT. SR-59 N.	Traffic Monitoring Station ID 263 (NB/SB detection)
15	MER/26.00	NB SR-99 S. of Sultana Dr.	CCTV
16	MER/27.29	Livingston	RWIS
17	MER/28.40	SB SR-99 S. of Hammatt Ave.	CMS Station ID 23
18	MER/32.31	Highlane Canal	Traffic Monitoring Station ID 49 (NB/SB detection)
19	MER/34.43	Shanks Rd.	Traffic Monitoring Station ID 320 (NB/SB detection)
20	MER/37.25	NB SR-99 at Merced County line (Turlock Rest Area)	CMS Station ID 21/CCTV

TABLE 2.6.1.b lists the ITS elements that are currently programmed to be installed on the SR-99 CSMP corridor.

TABLE 2.6.1.b: Programmed ITS Elements within the SR-99 CSMP Corridor

No.	EA / RTPMPO ID	Co./Postmile	Location	Description
1	41580	MER/0.063	NB SR-99 S. of Sandy Mush Rd.	CMS/CCTV/TMS
2	41570	MER/5.22	NB SR-99 N. of S. Athlone Rd.	CMS/TMS.
3	41570	MER/6.2	SR-99 S. of S. Arboleda Dr.	RWIS/CCTV
4	41570	MER/7.7	SR-99 N. of Le Grand Rd.	CMS/CCTV/TMS
5	41570	MER/8.85	SR-99 S. of Lingard Rd.	RWIS/CCTV
6	41570	MER/9.7	SB SR-99 S. of McHenry Rd.	CMS/TMS
7	0E720	MER/12.957	NB off-ramp to Childs Ave.	Traffic Monitoring Station
8	0E720	MER/12.969	SB on-ramp from Childs Ave.	Traffic Monitoring Station
9	0E720	MER/13.020	NB on-ramp from Childs Ave.	Traffic Monitoring Station
10	0E720	MER/13.306	SB off-ramp to Childs Ave.	Traffic Monitoring Station
11	0E720	MER/13.715	SB on-ramp fro SR-140 (E)	Traffic Monitoring Station
12	0E720	MER/13.766	NB off-ramp toSR-140 (E)	Traffic Monitoring Station
13	0E720	MER/13.924	NB off-ramp to SR-140 (E)	Traffic Monitoring Station
14	0E720	MER/14.026	SB off to SR-140 (E)	Traffic Monitoring Station

TABLE 2.6.1.b: Programmed ITS Elements within the SR-99 CSMP Corridor, Cont'd.

No.	EA / RTPMPO ID	Co./Postmile	Location	Description
15	0E720	MER/14.061	NB on-ramp from SR-140 (E)	Traffic Monitoring Station
16	0E720	MER/14.295	SB on-ramp from G St.	Traffic Monitoring Station
17	0E720	MER/14.311	NB off-ramp to G St.	Traffic Monitoring Station
18	0E720	MER/14.528	SB on-ramp from SR-59/J St.	Traffic Monitoring Station
19	0E720	MER/14.551	NB off-ramp to SR-59/J St.	Traffic Monitoring Station
20	0E720	MER/14.786	SB off-ramp to SR-59/J St.	Traffic Monitoring Station
21	0E720	MER/14.826	NB on-ramp from SR-59/J St.	Traffic Monitoring Station
22	0E720	MER/15.269	SB on-ramp from R St.	Traffic Monitoring Station
23	0E720	MER/15.293	NB off-ramp to R St.	Traffic Monitoring Station
24	0E720	MER/15.535	SB off-ramp to R St.	Traffic Monitoring Station
25	0E720	MER/15.553	NB on-ramp from R St.	Traffic Monitoring Station
26	0E720	MER/15.671	SB on-ramp from JCT SR-140/SR-59	Traffic Monitoring Station
27	0E720	MER/15.689	NB off-ramp to JCT SR-140/SR-59	Traffic Monitoring Station
28	0E720	MER/15.954	NB on-ramp from JCT SR-140/SR-59	Traffic Monitoring Station
29	0E720	MER/16.893	NB on-ramp from 16th St.	Traffic Monitoring Station
30	0E720	MER/16.983	SB on-ramp from 16th St.	Traffic Monitoring Station
31	3A340	MER/18.020	SB SR-99	RWIS/CCTV
32	0E720	MER/18.364	NB off-ramp to Franklin Rd.	Traffic Monitoring Station
33	0E720	MER/18.427	NB on-ramp from Franklin Rd.	Traffic Monitoring Station
34	3A340	MER/18.680	NB SR-99	CMS/TMS
35	3A340	MER/19.020	SB SR-99	RWIS/CCTV
36	0E720	MER/20.372	SB on-ramp from Buhach Rd.	Traffic Monitoring Station
37	0E720	MER/20.449	SB off-ramp to Buhach Rd.	Traffic Monitoring Station
38	0E720	MER/20.549	NB off-ramp to Buhach Rd.	Traffic Monitoring Station
39	0E720	MER/20.615	NB on-ramp from Buhach Rd.	Traffic Monitoring Station
40	0E720	MER/20.944	SB on-ramp from Atwater Blvd.	Traffic Monitoring Station
41	0E720	MER/21.421	NB off-ramp to Atwater Blvd.	Traffic Monitoring Station
42	0E720	MER/22.790	SB on-ramp from Applegate Rd.	Traffic Monitoring Station
43	0E720	MER/22.794	NB off-ramp to Applegate Rd.	Traffic Monitoring Station
44	0E720	MER/22.849	NB on-ramp from Applegate Rd.	Traffic Monitoring Station
45	0E720	MER/22.865	SB off-ramp to Applegate Rd.	Traffic Monitoring Station
46	0E720	MER/23.733	NB on-ramp from Atwater Blvd.	Traffic Monitoring Station
47	0E720	MER/24.149	SB off-ramp to Atwater Blvd.	Traffic Monitoring Station
48	0E720	MER/28.812	SB on-ramp from Hammatt Ave.	Traffic Monitoring Station
49	0E720	MER/28.828	NB off-ramp to Hammatt Ave.	Traffic Monitoring Station
50	0E720	MER/29.191	NB on-ramp from Hammatt Ave.	Traffic Monitoring Station
51	0E720	MER/29.206	SB off-ramp to Hammatt Ave.	Traffic Monitoring Station
52	0E720	MER/30.202	SB on-ramp from Winton Pkwy.	Traffic Monitoring Station
53	0E720	MER/30.209	NB off-ramp to Winton Pkwy.	Traffic Monitoring Station
54	0E720	MER/30.562	SB off-ramp to Winton Pkwy.	Traffic Monitoring Station
55	0E720	MER/30.609	NB on-ramp from Winton Pkwy.	Traffic Monitoring Station
56	0E720	MER/31.655	NB off-ramp to Collier Rd.	Traffic Monitoring Station
57	0E720	MER/31.743	SB on-ramp from Collier Rd.	Traffic Monitoring Station
58	0E720	MER/32.197	SB off-ramp to Collier Rd.	Traffic Monitoring Station
59	0E720	MER/32.208	NB on-ramp from Collier Rd.	Traffic Monitoring Station
60	0E720	MER/32.569	SB on-ramp from Weigh Station	Traffic Monitoring Station
61	0E720	MER/32.710	SB off-ramp to Weigh Station	Traffic Monitoring Station
62	0E720	MER/33.631	SB on-ramp from Stephens St.	Traffic Monitoring Station

TABLE 2.6.1.b: Programmed ITS Elements within the SR-99 CSMP Corridor, Cont'd.

No.	EA / RTPMPO ID	Co./Postmile	Location	Description
63	0E720	MER/34.227	NB off-ramp to Shanks Rd.	Traffic Monitoring Station
64	0E720	MER/34.287	SB on-ramp to Shanks Rd.	Traffic Monitoring Station
65	0E720	MER/34.625	NB on-ramp from Shanks Rd.	Traffic Monitoring Station
66	0E720	MER/34.663	SB off-ramp to Shanks Rd.	Traffic Monitoring Station
67	0E720	MER/36.069	SB on-ramp from Golden State	Traffic Monitoring Station
68	0E720	MER/36.146	NB off-ramp to Golden State	Traffic Monitoring Station
69	3A340	MER/36.780	SB SR-99	CMS/TMS/CCTV

TABLE 2.6.1.c lists the ITS elements that are currently planned to be installed on the SR-99 CSMP corridor.

TABLE 2.6.1.c: Planned Elements Within the SR-99 CSMP Corridor

NO.	EA /RTPMPO ID	Co./Postmile	Location	Description
1	Not Assigned	MAD/22.47	SB SR-99 N. of SR-152	CMS
2	Not Assigned	MAD/22.72	SR-99 at JCT SR-152	TMS/CCTV/RWIS
3	Not Assigned	MAD/24.45	SR-99 at Avenue 24 1/2	TMS
4	Not Assigned	MAD/26.46	SR-99 at JCT. SR-233	TMS
5	Not Assigned	MAD/28.14	SR-99 at JCT S. of Le Grand Ave. OC	TMS
6	Not Assigned	MAD/28.37	SR-99 at JCT N. of Le Grand Ave. OC.	TMS
7	Not Assigned	MER/13.7	SB SR-99	CMS/TMS
8	Not Assigned	MER/14.000	SB SR-99 N. of SR-140 (E)	CCTV/TMS
9	Not Assigned	MER/15.000	NB SR-99 N. of Martin Luther King Way	CMS/TMS
10	Not Assigned	MER/15.200	SR-99 N. of Martin Luther King Way	RWIS
11	Not Assigned	MER/16.000	NB SR-99 N. of McSwain Rd.	CCTV/TMS
12	Not Assigned	MER/16.500	SR-99 S. of W. 16th St.	RWIS/TMS
13	Not Assigned	MER/16.690	NB SR-99 N. of W. 16th St.	CMS/TMS
14	Not Assigned	MER/16.800	SR-99 N. of W. 16th Street	RWIS
15	Not Assigned	MER/16.930	NB SR-99 N. of W. 16th Street	CMS/TMS
16	Not Assigned	MER/17.500	NB SR-99	CMS/TMS
17	Not Assigned	MER/19.180	SR-99	RWIS
18	Not Assigned	MER/20.680	NB SR-99	CMS/TMS
19	Not Assigned	MER/20.680	NB SR-99	CMS/TMS
20	Not Assigned	MER/21.180	SR-99	RWIS
21	Not Assigned	MER/21.800	SB SR-99	CMS/TMS/CCTV
22	Not Assigned	MER/22.000	NB SR-99	CMS/TMS/CCTV

Planned ITS Elements within the Merced SR-99 CSMP Corridor Cont'd.

NO.	EA /RTPMPO ID	Co./Postmile	Location	Description
23	3A720	MER/22.680	NB SR-99	CMS/TMS/CCTV
24	Not Assigned	MER/23.180	SR-99	RWIS
25	Not Assigned	MER/23.680	SB SR-99	CMS/TMS
26	Not Assigned	MER/23.800	SR-99	RWIS
27	41481	MER/25.690	NB SR-99	CMS/TMS
28	Not Assigned	MER/33.470	NB SR-99	CMS/TMS
29	Not Assigned	MER/34.7	SB SR-99	CMS/TMS
30	Not Assigned	MER/35.47	NB SR-99	CMS/TMS
31	Not Assigned	MER/35.97	SR-99	RWIS
32	Not Assigned	MER/36.67	SB SR-99	CMS/TMS
33	Not Assigned	MER/R29.097	SR-99	RWIS
34	Not Assigned	MER/R29.47	NB SR-99	CMS/TMS
35	Not Assigned	MER/R31.47	SB SR-99	CMS/TMS

ITS improves efficiency for the traveling public through innovative use of traffic control, traveler information and improved incident management. Real time traveler information allows travelers to make more effective decisions regarding trip timing, route choices and mode selection. Traffic control reduces congestion through the use of technologies, such as system ramp metering, collision warning systems and advanced traffic management systems. Incidents are the primary cause of unexpected and variable delay. Improved incident management reduces congestion and traveler delay.

The various components of ITS, Traveler Information, Traffic Control, and Incident Management play a key part in optimizing the performance of the system.

2.6.2 Detection

Detection is one of the most important components of ITS. Detection refers to the real-time measurement of transportation movements and conditions. In the past, measurements have been conducted periodically (such as once per year) and those measurements were used to determine the need for infrastructure expansion. Optimized corridor management strategies will require more accurate, on-going data collection that will be provided by detection systems placed throughout the corridor. Without detection systems, transportation agencies cannot implement advanced traffic control strategies, cannot inform the public about traffic conditions, expected delays and options, and cannot detect and react to incidents quickly enough to minimize the impacts created by those incidents. SR-99, within the limits of this CSMP, does include a sufficient detection system, but there are some areas along the corridor that need system expansion to fully optimize these strategies. In addition, other types of improvement projects are typically planned to include detection units as part of the construction.

District 10 requests traffic monitoring stations on a project by project basis depending on funds availability and type of work involved in the project. Some traffic monitors are linked to the UC Berkeley PeMS for use in distribution of data to many users. There are currently 24 PeMS stations on SR-99, and the majority of the stations are spaced approximately one-quarter of-a-mile apart. There are four PeMS stations that are spaced more than one mile apart. TABLE 2.6.2.a on the following page identifies the location of areas for further PeMS implementation.

TABLE 2.6.2.a: PeMS Detection Gaps on SR-99 CSMP Corridor

Northbound MER SR-99 CSMP PeMS Station Gaps

MILES	FROM	TO
5.58	SR-152	Merced/Madera County line
10.773	Merced/Madera County Line	NB SR-99 S. of Mission Ave.
0.951	NB SR-99 S. of Mission Ave.	NB SR-99 N. of Gerard Ave
3.916	NB SR-99 Gerard Ave.	NB SR-99 JCT SR-140 (W), JCT SR-59 N.
10.418	NB SR-99 W. Merced OH	NB SR-99 S. of Sultana Dr/ Liberty Ave. OC
3.748	NB SR-99 north of Sultana Dr./Liberty Ave. OC	NB SR-99 Merced River
2.874	NB SR-99 Collier Road UC	NB SR-99 Shanks Rd.
1.75	Bradbury Road OC	Merced/Stanislaus County line

Southbound MER SR-99 CSMP PeMS Station Gaps

MILES	FROM	TO
5.58	SR-152	Merced/Madera County line
11.623	Merced/Madera County Line	SB SR-99 S. of Mission Ave.
3.916	SB SR-99 Gerard Ave.	SB SR-99 JCT SR-140 (W), JCT SR-59 N.
18.3	W. Merced OH	SB SR-99 Shanks Rd.
1.75	Bradbury Road OC	Merced/Stanislaus County line

TABLE 2.6.2.b identifies the location of the stations currently existing in Merced and Stanislaus County

TABLE 2.6.2.b: PeMS Detection on SR-99 CSMP Corridor

Ref. #	CO	Direction	Postmile	Description
1	MER	NB	10.773	NB 99 S. of Mission Ave.
2	MER	NB	11.057	NB 99 S. of Mission Ave.
3	MER	NB	11.306	NB 99 S. of Mission Ave.
4	MER	NB	11.533	NB 99 S. of Mission Ave.
5	MER	SB	11.623	SB 99 S. of Mission Ave.
6	MER	SB	11.867	SB 99 N. of Mission Ave.
7	MER	SB	12.109	SB 99 S. of Gerard Ave.
8	MER	SB	12.35	SB 99 S. of Gerard Ave.
9	MER	NB	12.484	NB 99 N. of Gerard Ave.
10	MER	SB	12.484	SB 99 N. of Gerard Ave.
11	MER	NB	16.4	NB 99 JCT 140 (W), JCT 59 N.
12	MER	SB	16.4	SB 99 JCT 140 (W), JCT 59 N.
13	MER	NB	26.918	NB 99 S. of Sultana Dr./Liberty Ave. OC
14	MER	NB	27.053	NB 99 S. of Sultana Dr./Liberty Ave. OC
15	MER	NB	27.293	NB 99 N. of Sultana Dr./Liberty Ave. On-Ramp
16	MER	NB	27.548	NB 99 N. of Sultana Dr./Liberty Ave. OC
17	MER	NB	31.296	NB 99 Merced River
18	MER	SB	31.296	SB 99 Merced River
19	MER	NB	R34.8	NB 99 Shanks Rd.
20	MER	SB	R34.8	SB 99 Shanks Rd.

TABLE 2.6.2.b: PeMS Detection on SR-99 CSMP Corridor Cont'd

Ref. #	CO	Direction	Postmile	Description
21	MER	NB	R37.22	N. of Griffith Rd. OC
22	STA	NB	R0.16	Turlock Rest Stop
23	STA	NB	R0.41	Turlock Rest Stop
24	STA	NB	R0.66	N. of Golf Rd. OC

2.6.3 Traffic Control

Another element of ITS is traffic control. Traffic control includes signal strategies for managing traffic flows on arterials as well as metering on the freeway system. These strategies offer great promise to improve the productivity of the transportation system. There are, however, challenges for the State in utilizing some of these options. Local agencies are often concerned that traffic control devices will cause additional traffic to use local streets as an alternative. This is an area where the Department can work with its local partners to reach a solution that will be agreeable to all parties. Caltrans, District 10 is currently working with SJCOG, StanCOG and MCAG on the ramp metering and HOV Master Plan, which will include SR-99.

2.6.4 Incident Management

Incident Management is a significant component of ITS. Most studies in the United States suggest that incidents such as accidents, special events, and severe weather conditions are responsible for about half of the delay on our freeway system. Motorists are accustomed to normal delays. However, traffic incidents disrupt the motorist's normal routine, creating unplanned delays. This can create a negative impact to the traveling public. Unanticipated delays may also create frustration and aggressive driving. Such aggressive behavior poses a danger not only to other motorists but also to emergency response personnel. The goal of effective Traffic Incident Management (TIM) is to reduce the time it takes to clear traffic incidents from the roadway. The less time it takes to clear an incident, the less congestion and delay the motorist experiences. Safety for both the emergency response personnel and the traveling public could be improved. Even small improvements in this process can yield significant benefits.

Effective TIM relies on advanced technologies to allow for expedited incident detection, verification, coordination among necessary emergency response agencies, and the subsequent clearance of the incident as rapidly as possible.

2.6.5 Advanced Traveler Information Systems (ATIS)

One of the more progressive components of ITS is ATIS. Most commuters get information about traffic conditions from the media, such as radio and television stations. ATIS will provide modal-specific, time-of-day demand data that will allow travelers to get the most out of the transportation system. The system would allow travelers to manage their trips in the most efficient manner. Implementing advanced traveler information systems requires a partnership between transportation agencies and the public. However, it is clear that the framework is not yet fully developed and that, at this time, current detection systems are not adequate for real-time, tailored information.

2.6.6 Transportation Management Centers

FIGURE 2.6.6: District 10 TMC

Effective ITS implementation requires coordination of all components. The TMC plays an important role in day to day system management, providing coordinated incident responses, as well as integration of various systems. An example of integration would be the coordination of ramp metering and arterial signal management. Traveler information also requires sharing data with our public and private partners. Caltrans District 10, the CHP and the media play different in managing incident management. The Caltrans TMC integrates these roles and systems in one location to optimize performance. TMCs are used in emergencies, Amber Alerts, and provide an Emergency Operations Center function during natural disasters, such as earthquakes.

TMCs also serve a security preparedness function; staff can monitor the urban freeway system, quickly activate response strategies (such as CMSs), or notify the proper authorities when security risks are identified.

Logical phasing for implementing the components of an effective Transportation Management System would be:

a) Installing simple, adaptive-scheme ramp metering

b) Optimizing the meter rates

c) Implementing a corridor adaptive ramp-metering scheme

d) Advanced arterial signal actuation strategies and improved incident management; and

e) Establishing a comprehensive traveler information system.

Monitoring and evaluation are the foundations for sound management of the corridor. Monitoring and evaluation will help to identify the optimum strategies to improve the transportation corridor. Strategies range from system maintenance and preservation to expansion, but focus on optimization of the existing system by fully incorporating operational strategies into the ITS management plan. Implementation of ITS strategies will complement other improvements, including those improvements that may be implemented by our partner agencies such as transit, light rail, and improvements on the local road system. Our goal is that the transportation system, as a whole, including highways, local roads, and alternative modes of transportation, operate as one seamless network.

2.7 Transportation Demand Management (TDM)

TDM is designed to reduce vehicle trips during peak hours. TDM is specifically targeted at the work force, commuters that generate the majority of peak hour traffic. Strategies include:

a) Rideshare programs
b) Transit usage
c) Flex hours
d) Vanpools
e) Bicycling and walking
f) Telecommuting
g) Mixed land uses (job/housing balance)

Incorporating these strategies would be part of land use decisions which are the prerogative of local government and businesses. TDM programs could be required by local jurisdictions for any large commercial or office project and could be tied to incentives of some sort to encourage the development of such programs. Some businesses provide TDM on a volunteer basis, such as providing flex hours and telecommuting for their employees.

2.7.1 Rideshare Programs

Merced, Stanislaus and San Joaquin Counties Rideshare Programs are implemented by the Commute Connection. The website is located at: http://www.commuteconnection.com/. This rideshare program includes carpool matching, vanpool matching and assistance, media promotion of ridesharing, distribution of brochures at employment sites and other locations as necessary. Program monitoring and recording, public education and community outreach are also part of this rideshare program.

In addition, there is the Merced County bus system which is called, THE BUS. THE BUS has a system that provides a car-less commute by improving transportation by picking up passengers at their home, taking the passenger to their destination, and returning passengers to their home to complete their trip.

2.8 Land Use

Merced County and the SJV have historically grown at a faster rate than the rest of California and will likely continue to do so. Growth and land use patterns have a vast and far-reaching effect on the transportation system. Long-term planning, coordination amongst local governments, and innovative solutions will be needed to keep transportation viable. The area encompassed by this CSMP is becoming more urbanized and is gradually replacing rural agricultural lands. However, Merced is still one of the richest agricultural regions in the United States. The combination of rich flood plains, climate and irrigation systems create an ideal environment for agri-business.

There is significant urban development along the entire section of SR-99; particularly that portion that passes through the cities of Merced and Atwater. Large-scale urban developments have been proposed for the expansion of the cities of Merced, Turlock and Atwater. Although some of these developments are primarily centered around the newly established, UC Merced. Land use, impacts are also attributable to the attraction of the lower cost of housing in the SJV in conjunction with higher salaries within the Bay Area.

In 2000, Merced County had a population of 241,500. As of January 2007 the city of Merced population was at 79,715. The population of Merced County is expected to reach 417,200 by the year 2030. The city

of Merced is expected to reach a population of 116,800 by the year 2030; the UC Merced and UC Community are expected to reach 29,300 by year 2030.

The trend toward increases in population is anticipated to continue throughout the foreseeable future. This is due in large part to the availability of land, the proximity of the urban centers within this CSMP area, such as Modesto, Fresno and the San Francisco Bay Area, combined with the relatively low cost of land. Congestion on roads in Merced County will increase dramatically in years to come because demand will soon outstrip supply. By 2030, about one-fourth of all travel will be experiencing traffic congestion. Part of the increase in demand is "through" traffic (traffic traveling on SR-99 through the entire county) and part is from the dramatic increase in commuting. Currently 25% of workers who live in Merced County commute to jobs outside of the county. Merced County is rapidly becoming home to an increasing number of people who work more than 50 miles from their residence. Addressing the jobs/housing imbalance and the impacts of commuters on highways and roads are in the best interests of the whole region.

The SR-99 corridor through Merced County is experiencing increasing congestion due to continuous development within several incorporated cities along the route as well as within the outlying unincorporated areas of Merced County. In addition, the recent development of the UC Merced campus located in northeastern Merced County will add to the existing level of travel demand along the SR-99 Corridor.

Commercial development outside of urbanized areas is heavily influenced by tourism and recreation, especially as related to eastbound travelers heading to Yosemite National Park located in Mariposa and Tuolumne counties. These counties border Merced County to the east.

In addition to numerous minor development projects, several major development proposals are projected to impact the SR-99 Corridor. These are:

- Applegate Road/SR-99 I/C: Several large commercial businesses are currently being constructed, including: Target, Home Depot and fast food establishments. MCAG has programmed monies to prepare a Project Study Report (PSR) to recommend interchange improvement needs.

- Five Bridges Development: Located adjacent to SR-99 in the northwest section of the city of Merced, the project proposals identify a significant degree of mixed use development consisting of new residential and commercial projects. Initial plans call for new interchanges and bridge connections to SR-99. The project proponent is seeking funding to program a PSR through MCAG to study infrastructure recommendations.

- Summer Stone Subdivision in Livingston : Consists of 129 lots built on 45 acres south of SR-99, this development is projected to directly impact the existing interchange ramps within the City of Livingston, as well as mainline segments of SR-99.

- Summerfield Estates: A development proposal to subdivide 55.24 acres into 250 single-family (R-1-5) residential lots within the City of Merced is projected to significantly impact existing interchange ramps and mainline segments of SR-99 within the City of Merced.

Future plans call for SR-99 within Merced County to operate ultimately as a six-lane including auxiliary lanes facility within rural areas and eight lanes within urban regions. While the pattern and intensity of development highlights the need for an ultimate ten-lane facility along this route, due to existing development encroachments onto available ROW, this ultimate facility concept may be financially cost-prohibitive and therefore practically unrealistic.

Rather than widening the facility to the ultimate required width, an alternative that should be considered would be to pursue alternative demand management strategies, including: ramp metering, HOV lane options, smart growth development, ridesharing and employer-based trip reduction strategies.

Long term planning and coordination amongst local governments and innovative solutions will be needed to keep transportation viable. Caltrans has provided a planning grant to MCAG on behalf of the eight SJV regional planning agencies to develop a Regional Blueprint Planning Program intended to better inform regional and local decision-making through pro-active engagement of all segments of the population as well as critical stakeholders in the community, business interests, academia, builders, environmental advocates, and to foster consensus on a vision and preferred land use pattern. It is anticipated that the regional blueprint planning grants will build capacity for regional collaboration and integrated planning that will in turn enable regions to plan to accommodate all their future growth, thereby reducing need for sprawl.

2.9 Environmental Scan

A scan of potential environmental impacts has been completed along the CSMP corridor. It can be found in TABLE 2.9.b on the following page. There is a 100-year flood plain from SR-152 to Buhach Avenue. There are low to high degrees of impacts to wetlands and special status species, and there are moderate to high degrees of impacts to cultural resources and possible hazardous waste from lead. Leaking underground tanks, some from gas stations pose a low-to-moderate risk, with moderate-to-high risk near Merced and Atwater, and near the Stanislaus County line. The Merced Area is within the SJV Air Pollution Control District, and is non-attainment for the 1 hour/8 hour ozone standard, , maintenance for particulate matter of 10 microns or less (PM_{10}) and carbon monoxide, and non-attainment for particulate matter of 2.5 microns or less ($PM_{2.5}$.

One air quality concern along the SR-99 corridor is that heavy duty diesel powered trucks contribute PM_{10} and $PM_{2.5}$ into the atmosphere. In the following table, smog violations in 2006 are ranked between the various portions of the State. The SJV faces challenges of severe health, social and economic impacts that are associated with the worst ozone; and particulate air pollution in the State, as well as the nation. This is primarily attributable to heavy-duty diesel trucks and the miles that are spent within the SJV vs. the rest of the State, see TABLE 2.9.a below for more information.

TABLE 2.9.a Highest Utilized Trucking Corridors

Region	Heavy Duty Diesel Truck Miles Per Day	Smog Violations in 2006
San Joaquin Valley	11.6 million	86
South Coast	9.6 million	85
San Francisco	2.9 million	12
San Diego	1.5 million	14

TABLE 2.9.b: Environmental Scan – Degree of Impact

	County/PM/Description	*Flood Plains*	*Wetlands*	*Special Status Species*	*Cultural Resources*	*Leaking Underground Tanks*	*Possible Hazardous Waste*	*Air Quality*		
								Ozone	*Particulate Matter*	*Carbon Monoxide*
1	MAD/PM 22.72-PM 29.35 SR-152 IC to MAD/MER County Line	100 yr.	mod/high	mod/high	moderate	low	high-lead	1hr/8hr nonatt.ainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
2	MER/PM 0.00-PM 4.60 MAD/MER County Line to Buchanan Hollow Rd.	100 yr.	low/mod	mod/high	high	low	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
3	MER/PM 4.60-PM 10.50 Buchanan Hollow Rd. to 0.31 mi. N. of McHenry Rd.	100 yr.	low/mod	mod/high	high	low	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
4	MER/PM 10.50-12.80 0.31 mi. N. of McHenry Rd. to 0.15 mi. S. of Childs Ave.	100 yr.	low/mod	mod/high	mod	low	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
5	MER/PM 12.80-PM 13.90 0.15 Miles S. of Childs Ave. to JCT. 140 (E).	100 yr.	low	mod/high	mod	mod	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
6	MER/PM 13.90-PM 16.53 JCT. 140 (E). to Atwater Blvd. OH	100 yr.	low	mod/high	mod	mod/high	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
7	MER/PM 16.53-PM 20.52 Atwater Blvd. OH to Buhach Rd.	100 yr.	low	mod/high	mod	mod/high	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
8	MER/PM 20.52-PM 23.80 Buhach Rd. to 0.43 mi. N. of Atwater OH	N/A	low/mod	mod/high	mod	mod	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
9	MER/PM 23.80-PM ‘R26.50 0.43 mi. N. of Atwater OH to 0.30 mi. S. of Arena Way	N/A	mod	mod/high	mod	mod	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
10	MER/PM R26.50-PM R28.80 0.30 mi. S. of Arena Way to Hammatt Ave.	N/A	mod	mod/high	mod	mod	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
11	MER/PM R28.80-PM R37.30 Hammatt Avenue to MER/STA County Line	N/A	low/mod	mod/high	high	mod/high	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance
12	STA/PM 0.00-PM 1.63 MER/STA County Line to JCT. 165	N/A	low	low/mod	low	low	high-lead	1hr/8hr nonattainment	PM-10 maintenance/ PM-2.5 nonattainment	maintenance

Section 3 Preliminary Corridor Performance, Management and Maintenance Assessment

3.0 Performance Measures

The performance measures will establish whether or not the objectives for the CSMP have been met. These measures include the expectations, needs and issues related to the section of the corridor included in the study, and will provide a sound technical basis for describing traffic performance in the corridor. Performance measures will include the following:

3.0.1 Mobility

Mobility deals with how well the corridor is able to move people and freight. Mobility is an easily measurable and straightforward documentation of current conditions. It is also a measure that can be forecasted, making it useful for future comparisons. Two primary measures are typically used: travel time and delay. The drawback with basing the measure of mobility on travel time and delay is that it is necessary that the corridor be adequately covered by reliable automatic detection. Adjustments can be made for some corridors with spatial gaps in the coverage by adjusting the travel times to account for travel over the sections with missing coverage. Vehicle and person-miles or hours traveled and person-hours of delay are relatively straightforward calculations once travel times and delays are established.

3.0.2 Travel Time

The amount of time for a vehicle to traverse between two points on a corridor is the travel time. Travel time may be defined as the time to travel the entire length of the corridor within the CSMP. However, with congestion currently existing at some known points, a more valuable measure would be to use intermediate starting and ending points to evaluate the specific conditions at known problem points. The degree to which the strategies within the CSMP improved travel time at these known problem points would be a significant measure of success.

3.0.3 Delay

The total observed travel time less the travel time under non-congested conditions represents vehicle-hours of delay. Existing delay will be calculated from actual data sources. Future delay should not be derived solely from travel demand model data since these models compute very high level estimates over the entire peak period. The already-mentioned freeway deficiency may provide a means of forecasting future delay. There are two types of delay that need to be considered: Recurrent delay and non-recurrent delay. Caltrans defines recurrent delay as travel demand exceeding freeway design capacity and vehicular speeds are 35 miles per hour (mph) or less during peak commute periods on a typical incident-free weekday. This condition must last for 15 minutes or longer. Non-recurrent delay is defined by Caltrans as delay created by irregular events such as collisions, events, maintenance, or short-term construction.

3.0.4 Safety

The number of collisions and collision rates from the Traffic Accident Surveillance Analysis System (TASAS) is a potential measure of safety along the corridor. TASAS contains specific data for accidents on state highways. To attempt to measure safety performance, three years of collision data will be analyzed for the number of collisions and collision rates within the corridor.

3.0.5 Productivity

Freeway productivity is defined as the total number of vehicles (and the people inside vehicles) served per hour at a given location. Freeway productivity actually diminishes when demand is highest. Productivity within a corridor is the percent utilization of the facility (or mode) under peak conditions and is calculated as actual volume divided by the capacity of the highway. Travel demand models do not generally project capacity loss for highways. Detailed micro-simulation tools will be needed to forecast productivity and determine if a given alternative will provide the results anticipated.

Recent analysis suggests that almost half of California's urban freeway system provides 25 to 35 percent less productivity than the planned capacity during peak congested periods. There are solutions to restore part, if not all, of this lost productivity. An in-depth understanding of current and projected system performance is needed, as well as the ability to leverage new technologies and tools to improve productivity. Improvements to productivity can be achieved by implementing the concepts of the TMS. The Department has focused on three core TMS processes. These include traffic control and management systems, incident management systems, and advanced traveler information systems. These three components are discussed in more detail in the section on ITS. All three require that a detection system be in place along the corridor.

3.0.6 Reliability

Reliability is the relative predictability of the public's travel time. Reliability focuses on how much mobility varies from day to day. It is recommended that a "buffer index" be used to estimate reliability, meaning the amount of extra time that travelers must add to their average travel time when planning trips to ensure on-time arrival. This is presented as a percentage and is easily understandable to the motoring public. Analysis techniques can also be used to forecast travel time reliability, including the use of micro-simulation models. Micro-simulation modeling is not employed for this first CSMP, but may be warranted on the corridor in the next generation of CSMP.

3.0.7 Preservation

Identification of the ROW needed to accommodate the ultimate corridor will allow this land to be preserved, reducing time delays and costs on projects. The Department intends to work with local agencies to work together to establish plan lines and interchange "footprints" so that local agencies can use their land-use authority to preserve the necessary ROW for the corridor.

Section 4 Preliminary Performance Assessment

SR-99 2006 AADT ranges from 39,300 to 64,000 vehicles with trucks constituting 27.3% of the AADT in the city of Merced between the Childs Avenue interchange and SR-140 East interchange. Truck volumes are also significantly higher between the Madera/Merced County line and Childs Avenue. It is projected that by 2030 AADT will be up to 150,700 at the northernmost end of the corridor in Stanislaus County.

4.0 Traffic Volumes

The 2006 AADT on SR-99 ranges from 39,300 at SR-152 in Madera County, to 64,000 at SR-99 at SR-165 just beyond the Stanislaus County line. The 2006 peak hour volumes range from 3,840 to 6,780. Refer to TABLE 4.0 on the following page for information on traffic volumes on the SR-99 corridor.

TABLE 4.0 SR-99 CSMP Corridor Volumes

Segment	County	Postmile	Description	2006 AADT	2015 AADT	2030 AADT	2006 Peak Hour Volume	2015 Peak Hour Volume	2030 Peak Hour Volume	Truck Volume (2005)	5+ Axle Truck Volume (2005)	Truck Volume Peak Hour %	Truck Volume % of Total ADT
1	MAD	22.72/29.35	JCT 152 to MAD/MER County. Line	39,300	51,600	80,600	3,840	5,060	8,000	9,850	7,000	19.5	26
2	MER	0.00/4.60	MAD/MER County. Line to Buchanan Hollow Rd.	41,000	51,500	75,600	4,260	5,360	7,860	10,500	7,500	19.7	26.3
3	MER	4.60/10.50	Buchanan Hollow Rd. to 0.31 mi. N. of McHenry Rd.	42,000	53,000	79,600	4,330	5,460	8,060	10,800	8,100	20.1	26.8
4	MER	10.50/12.80	0.31 mi. N. of McHenry Rd. to 0.15 mi. S. of Childs Ave.	42,500	53,600	79,100	4,290	5,400	8,000	11,300	8,400	20.3	27.0
5	MER	12.80/13.90	0.15 mi. S. of Childs Ave. to JCT 140 (E)	42,800	54,000	79,600	4,370	5,508	8,100	11,700	8,850	20.5	27.3
6	MER	13.90/16.53	JCT 140 (E). to Atwater Blvd. OH	53,500	66,600	97,300	5,620	7,000	10,200	10,600	7,700	15.3	20.3
7	MER	16.53/20.52	Atwater Blvd. OH to Buhach Rd.	57,800	72,100	106,600	5,780	7,200	10,700	11,000	7,200	16.5	22.0
8	MER	20.52/23.80	Buhach Rd. to 0.43 mi. N. of Atwater OH	47,300	58,800	86,400	4,870	6,070	8,950	11,300	7,600	18.4	24.5
9	MER	23.80/R26.50	0.43 mi. N. of Atwater OH to 0.30 mi. S. of Arena Way	46,700	57,700	84,300	4,670	5,770	8,430	12,000	8,000	18.0	24.0
10	MER	R26.50/R28.80	0.30 mi. S. of Arena Way to Hammatt Ave.	47,300	58,900	86,900	4,870	6,070	8.950	12,500	8,400	16.9	22.5
11	MER	R28.80/R37.30	Hammatt Ave. to MER/STA County Line	62,000	81,600	132,400	6,260	8,240	13,400	13,000	8,700	15.4	20.5
12	STA	0.00/1.63	MER/STA County Line to JCT 165	64,000	87,200	150,700	6,780	9,240	16,000	13,500	8,900	15.0	20.0

4.0.1 Truck Volumes

Based on 2006 volumes, SR-99 through Merced County area experienced the highest truck volumes of 13,500 from the Stanislaus/Merced County line to SR-165 south, which includes 8,900 five-plus axle trucks. The 2006 truck volume peak hour percentage through the segment was 15%, and truck volume of total AADT represented 20%. Refer to TABLE 4.0. on page 33 for further information regarding truck volumes on the SR-99 corridor.

4.1 Level of Service

The concept LOS for the SR-99 CSMP corridor is 'C' in rural areas and 'D' in urban and developing areas. Based on 2006 data, and the six-lane project to widen SR-99 between the Madera/Merced County line to 0.15 miles south of Childs Avenue and the segment between 0.43 miles north of Atwater OH and the Merced/Stanislaus County line, the entire CSMP corridor will be operating at acceptable LOS.

In 2015 it is projected that 16.53 corridor miles will be operating at a deficient LOS with 6.62 miles between SR-140 East to Buhach segment will be operating at LOS 'F'. The segment from the Stanislaus County line to the junction with SR-165 will be operating at LOS 'E'. And the rural portion in Madera County from SR-152 to the Merced/Madera County line will be operating at LOS 'D'. In 2030 it is projected that 27.76 miles will be operating at deficient LOS 'F'.

Based on the projected performance of the corridor over the next 20 years, the corridor will need six to 12 lanes to operate at Concept LOS 'C' in rural areas and 'D' in urban areas. Projections show the need for 12 lanes on SR-99 between Hammatt Avenue and SR-165. Projections also show the need for eight lanes on SR-99 between SR-152 and the Madera/Merced County line and also between 0.15 miles south of Childs Avenue and 0.43 miles north of Atwater OH. TABLE 4.1 on the next page illustrates mainline level of service within the SR-99 CSMP corridor.

TABLE 4.1: SR-99 CSMP Corridor Level of Service

	County	Postmile	Description	Current LOS (2006)	Existing Facility	LOS w/ Existing Facility (2015)	LOS w/ Existing Facility (2030)	Concept LOS	Concept Facility	LOS Concept Facility w/ Improve-ment
1	MAD*	22.72/ 29.35	JCT 152 to MAD/MER County line	C	4F	D	F	C	6	D
2	MER	0.00/ 4.60	MAD/MER County line to Buchanan Hollow Rd.	B	4E (6F With New Alignment)	B	D	C	8	C
3	MER	4.60/ 10.50	Buchanan Hollow Rd. to 0.31 mi. N. of McHenry Rd.	B	4E (6F With New Alignment)	C	D	C	8	C
4	MER	10.50/ 12.80	0.31 mi. N. of McHenry Rd. to 0.15 mi. S. of Childs Ave.	B	4F (6F With New Alignment)	C	D	D	8	C
5	MER	12.80/ 13.90	0.15 Miles S. of Childs Ave. to JCT 140 (E).	C	4F	D	F	D	8	C
6	MER	13.90/ 16.53	JCT 140 (E) to Atwater Blvd. OH	D	4F	F	F	D	8	D
7	MER	16.53/ 20.52	Atwater Blvd. OH to Buhach Rd.	D	4F	F	F	D	8	D
8	MER	20.52/ 23.80	Buhach Rd. to 0.43 mi. N. of Atwater OH	C	4F	D	F	D	8	C
9	MER	23.80/ R26.50	0.43 mi. N. of Atwater OH to 0.30 mi. S.of Arena Way	B	4E (6F With New Alignment)	C	D	D	8	C
10	MER	R26.80/ R28.80	0.30 mi. S. of Arena Way to Hammatt Ave.	B	4E (6F With New Alignment)	C	D	C	8	C
11	MER	R28.80/ R37.30	Hammatt Ave. MER/STA County line	C	4E (6F With New Alignment)	D	F	D	8	E
12	STA**	0.00/ 1.63	MER/STA County line to JCT 165	C	6F	E	F	D	8	F

*Part of segment is rural, part is urban: P.M. 22.72-23.77 (rural) P.M. 23.77-26.80 (urban) P.M. 26.80-0.00 (rural)
** By 2030 this segment will be outside the Turlock City Limits but in an urbanized area. Currently it is outside the city limits, but in a rural area

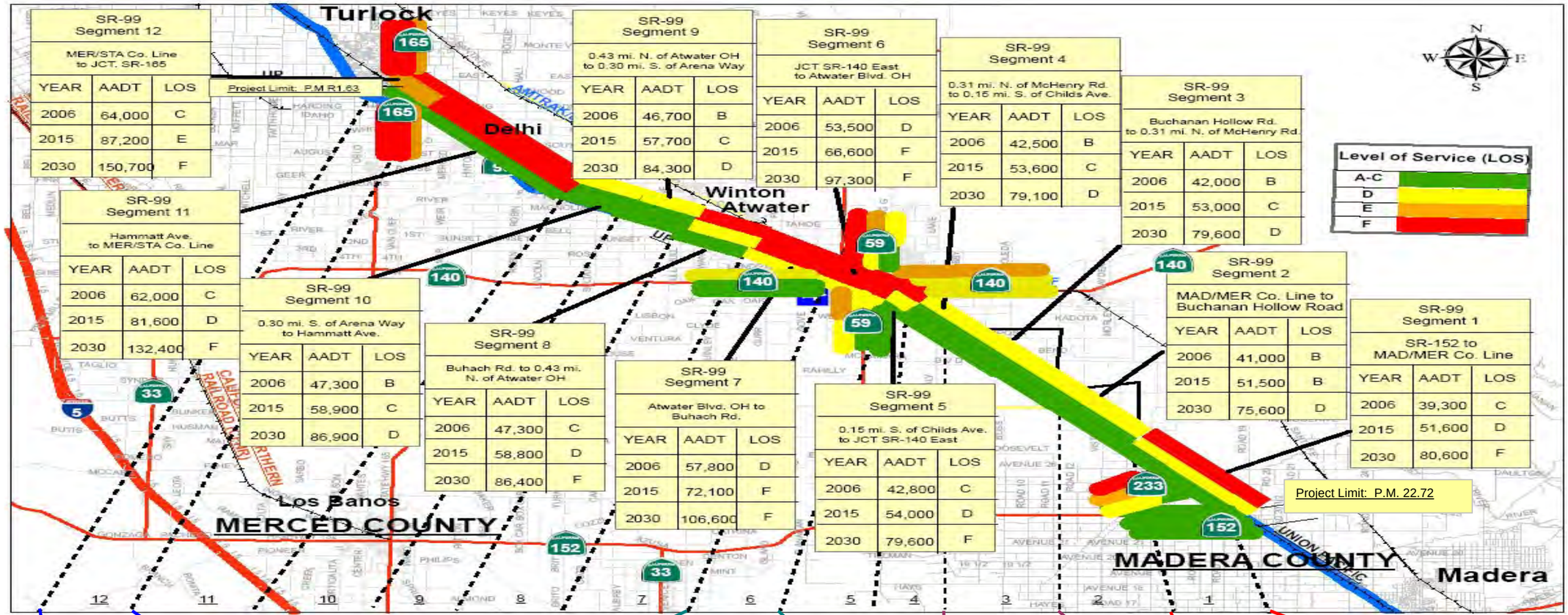
4.1.1 SR-99 CSMP Corridor LOS, Connecting Highways

A preliminary performance assessment has been completed for highway connections along SR-99 to evaluate existing and projected connecting highway LOS. Based on 2006 data, SR-165 up to one mile north and one mile south of SR-99 are operating at an unacceptable LOS at LOS 'E'. Connecting highways SR-165 north and SR-165 south are projected to be operating at a further deficient LOS 'F' by 2015 and will degrade further at LOS 'F' for 2030 with no improvements. Based on 2006 data, SR-233 from 0.69 miles up to one mile west of SR-99, will be operating at LOS 'D' in 2006, LOS 'E' in 2015 and LOS 'F' in 2030. Based on 2006 data, SR-59 north is also operating at an unacceptable LOS at LOS 'D' from 0.53 to one mile north of SR-99 and is expected to degrade to LOS 'E' in 2015 and to LOS 'F' in 2030. Based on 2006 data SR-140 east is operating at LOS 'D' in 2006 and 2015, in 2030 it degrades to LOS 'E'. TABLE 4.1.1 on the next page provides the LOS along its connecting highways. FIGURE 4.1.1 on page 36 illustrates the LOS on the mainline and on the connecting highways.

TABLE 4.1.1: Connecting Highways

State Route 99 Corridor		Connecting Highway		Connecting Corridor ADT 2006	Existing Facility LOS 2006	Connecting Corridor ADT 2015	Existing Facility LOS 2015	Connecting Corridor ADT 2030	Existing Facility LOS 2030
Segment /Co./PM	Description	RTE/PM	Description						
Seg. 1 MAD/ 22.72	SR-99 and JCT 152	SR-152 (W) 14.63/15.63	SR-152 (W) up to 1-mi. W. of SR-99	16,300	A	22,000	B	36,700	C
Seg. 1 MAD/ 3.88	SR-99 and JCT 233	SR-233 (W) 2.887/3.57	SR-233 (W) up to 0.69-mi W. of SR-99	13,200	A	15,700	B	21,300	C
Seg. 1 MAD/ 3.88	SR-99 and JCT 233	SR-233 3.58/3.88	SR-233 from 0.69 mi. to 1-mi. W. of SR-99	11,000	D	14,300	E	22,500	F
Seg 5/6 MER/ 13.9	SR-99 and JCT 140 (E)	SR-140 (E) 35.78/36.51	SR-140 up to 1-mi. E. of SR-99	13,200	D	16,300	D	23,400	E
Seg 6 MER/15.8	SR-99 and JCT 59 (N)	SR-59 (N) 14.8/15.33	SR-59 up to 0.53-mi. N. of SR-99	22,600	C	29,800	D	48,600	F
Seg. 6 MER/ 15.8	SR-99 and JCT 59 (N)	SR-59 (N) 15.33/15.8	SR-59 from 0.53 mi. up to 1-mi. N. of SR-99	16,200	D	20,900	E	32,000	F
Seg. 6 MER/ 14.7	SR-99 and JCT 59 (S)	SR-59 (S) 14.12/14.75	SR-59 from 0.37 mi. up to SR-99	13,500	D	16,100	D	21,600	E
Seg. 6 MER/ 14.7	SR-99 and JCT 59 (S)	SR-59 (S) 13.75/14.12	SR-59 from 0.37 up to 1-mi. S. of SR-99	11,000	B	14,000	C	20,700	D
Seg 6 MER/ 15.8	SR-99 and JCT 140 (W)	SR-140 (W) 34.75/35.75	SR-140 up to 1-mi. W. of SR-99	8,300	B	10,800	C	16,500	D
Seg 12 STA/ R1.626	SR-99 and JCT 165 (N)	SR-165 (N) 1.45/1.54	SR-165 up to 1-mi. N. of SR-99	22,300	E	29,700	F	42,000	F
Seg 12 STA/ R1.626	SR-99 and JCT 165 (S)	SR-165 (S) 0.4/1.4	SR-165 up to 1-mi. S. of SR-99	21,300	E	29,000	F	41,900	F

FIGURE 4.1.1: SR-99 CSMP LOS and Connecting Highways Highway LOS



	Segment 12 SR-165 N		Segment 12 SR-165 S		Segment 6 SR-59 N from 0.53 mi N to 1 mi N		Segment 6 SR-59 N to 0.53 mi N		Segment 6 SR-59 S from 0.37 mi S to 1 mi S		Segment 6 SR-59 S up to 0.37 mi S		Segment 3 SR-140 W up to 1 mi		Segment 3 SR-140 E Up to 1 mi		Segment 1 SR-233 From 0.69 to 1 mi W		Segment 1 SR-233 to 0.69 mi W		Segment 1 SR-152 up to 1 mi	
YEAR	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**	**AADT**	**LOS**
2006	22,300	E	21,300	E	16,200	D	22,600	C	13,500	B	11,000	D	8,300	B	13,200	D	11,000	D	13,200	A	16,300	A
2015	29,700	F	29,000	F	20,900	E	29,800	D	16,100	C	14,000	D	10,800	C	16,300	D	15,700	E	15,700	B	22,000	B
2030	42,000	F	41,900	F	32,000	F	48,600	F	21,600	D	20,700	E	16,500	D	23,400	E	22,500	F	21,300	C	36,700	C

4.2 Corridor Concept Facility

The concept LOS for SR-99 for the 20-year planning horizon is concept LOS 'C' from the SR-99/SR-152 junction to 0.31 miles north of McHenry Road. The concept LOS is 'D' for the rest of the corridor to the SR-99/SR-165 junction. Based on the project performance of the corridor over the next 20 years, the corridor will need six to twelve lanes. Projections show the need for eight lanes from the junction of SR-152 and SR-99 to 0.31 miles north of McHenry Road. Between 0.31 miles north of McHenry Road to SR-140, the facility will need six lanes. From SR-140 with SR-99 to Buhach Road, it is projected to need eight lanes. From Buhach Road to Hammatt Avenue it will need six lanes. There will be ten lanes needed between Hammatt Avenue and the Merced/Stanislaus County line. For the northern most section from between the Merced/Stanislaus County line to SR-99 with the junction of SR-165, the facility will need twelve lanes.

Due to ROW, environmental, and financial constraints along the corridor the concept facility will be eight-lanes from Madera/Merced County line up to SR-165 in Stanislaus County. The concept facility includes consideration of ramp metering and HOV lanes during the final build out of the facility throughout urban areas to manage freeway performance. MCAG is currently working with Caltrans District 10, SJCOG, and StanCOG to expand the 2008 San Joaquin Regional Ramp Metering and HOV Master Plan to include Merced and Stanislaus counties.

Other strategies will include expansion of incident management, traveler information, traffic surveillance and detection, advanced traffic signals, and operational improvements. It is recommended that the local jurisdictions consider the connectivity of existing and construction of new frontage roads in future commercial and residential development along SR-99.

4.2.1 Ultimate Transportation Corridor (UTC)

Identification of the UTC ensures that adequate ROW will be preserved to accommodate facility improvement projects beyond 2030. Just as the concept facility, due to ROW, environmental, and financial constraints the UTC is eight lanes for the entire corridor. The concept facility is six lanes between SR-152 and the Merced/Madera County line. The concept facility for the rest of the corridor is eight lanes.

Caltrans, District 6, located in Fresno has identified the concept facility for SR-99 south of SR-152 in Madera County to be a six-lane freeway. The UTC of eight lanes is consistent across jurisdictional boundaries. The concept facility and UTC will be re-evaluated at the next update of the SR-99 CSMP and TCR.

4.3 SR-99 CSMP Corridor Programmed and Planned Projects

The SR-99 CSMP includes improvements directly or indirectly impacting the proposed CSMP transportation network that are under development or in construction. These improvement projects are either fully or partially programmed (funded) or planned (usually without specific funding sources identified).

4.3.1 Programmed Capacity and Interchange Projects

There are currently two programmed projects receiving Proposition 1B 99 Bond funds to widen SR-99 to six lanes:

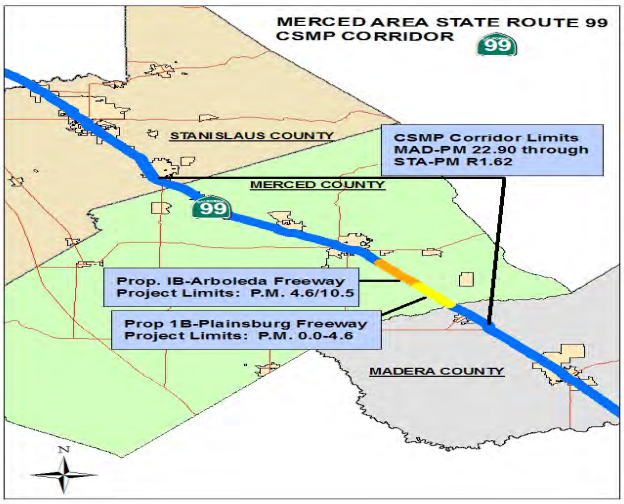


FIGURE 4.3.1: Arboleda and Plainsburg Freeway Projects

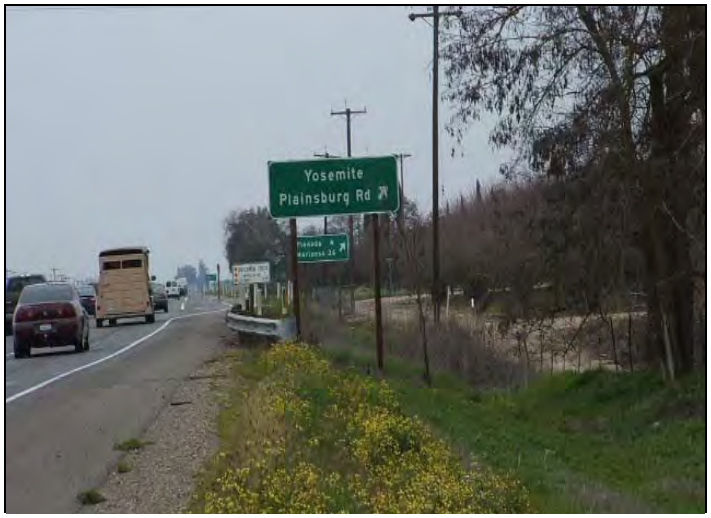
The Arboleda Freeway Widening Project

The first project is located in Merced County is the Arboleda Project which will convert a four-lane expressway to an eight-lane freeway, including a ROW alignment. It is located on SR-99 from Buchanan Hollow Road to 0.3-mile north of McHenry Road. Traffic operations would be improved by the addition of a travel lane in each direction and elimination of existing at-grade intersections and median opening within the project limits.

This project will ease congestion, improve mobility, decrease commute times for all drivers, and enhance safety for interregional and regional trips within and through the county. Currently, commercial and passenger traffic is confronted with cross traffic and/or slow vehicles entering or exiting the highway via the at-grade intersections. These intersections would be removed with the proposed project. SR-99 is an interregional Focus Route and a corridor essential to the economic development of the SJV and the State of California. The project would reduce congestion affecting the interregional traffic on SR-99. The construction target date is set for 2010.

Plainsburg Freeway Widening Project

The Plainsburg Road freeway will convert a four-lane expressway to a six-lane freeway on a ROW alignment. It is located between the Madera/Merced County line to Buchanan Hollow Road and constructs an I/C at approximately midway between the project limits. This project should ease congestion, improve mobility, decrease commute times for all drivers, and enhance safety for interregional and regional trips within and through the county. The construction target date is set for 2011.



In addition to the Arboleda and Plainsburg four to six lane widening projects, the following capacity increasing projects are currently programmed on SR-99 (Table 4.3.1.1):

- Atwater-Merced Expressway. Funded, Tier 1. Construct a new alignment in Merced County from the intersection of Bellevue Avenue and existing SR-59 to the intersection of Gurr Road and existing SR-140 West.

- Livingston Freeway, Stage 2 - Construct freeway south of the city of Livingston – Funded, Tier I. Near Livingston from 0.1- mile south of Arena Way to 0.1- mile south of Hammatt Avenue.

- Atwater Freeway – Convert four-lane expressway to six-lane freeway – Tier I. In and near Atwater from 0.1-mile north of Atwater OH to 0.1-mile south of Arena Way.

- Merced Median Widening – Widen from four lanes to six lanes. Add a deceleration lane. Tier I. From the Stanislaus/Merced County line to 0.25-mile south of Hammatt Avenue OC.

Table 4.3.1.1 lists the programmed capacity and interchange projects along the SR-99 CSMP corridor.

TABLE 4.3.1.1: SR-99 CSMP Programmed Capacity and Interchange Project List

Primary Funding Source	RTP Y/N Tier 1	EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Begin Const.
Local 2002 PA&ED	Tier 1 K	10-0G440_0	MER	14.8	19.0	In the city of Merced from the intersection of Bellevue Ave. and existing SR-59 to the intersection of Gurr Rd. and existing SR-140.	Atwater-Merced Expressway	$239,426	2012
STIP 1998 Construction	Tier 1-B Funded	10-3169E_ 1	MER	26.5	R28.8	Near Livingston from 0.25 mi. S. of Arena Way to 0.25 mi. S. of Hammett Ave. OC.	Livingston Freeway Stage 2 - Construct freeway to S. of Livingston. (Note: this is currently built to 4 lanes, but will be restriped to 6 lanes when the Atwater Freeway project is constructed.)	$35,584	2008
STIP 1998 PS&E/RW	Tier 1-C Funded	10-41481_ 1	MER	23.8	R26.5	In and Near Atwater from 0.25 mi. N. of Atwater OH to 0.25 mi. S. of Arena Way.	Atwater Freeway- Convert 4 Lane Expressway to 6 lane Freeway	$48,002	2008
STIP 2010 PS&E/RW	Tier 1-D Funded	10-41570_ 1	MER	4.6	10.5	On SR 99 from Buchanan Hollow Rd. to 0.3 mi. N. of McHenry Rd. in Merced County.	Arboleda Dr. Freeway - Convert 4-lane expressway to 6-lane freeway including a R/W alignment.	$151,900	2010
STIP 1998 PS&E/R/W	Tier 1-E Funded	10-41580	MER	0	4.6	From MAD/Merced County line to Buchanan Hollow Rd.	Plainsburg Rd. Freeway - Convert 4-lane expressway to 6-lane freeway on R/W alignment	$101,177	2011
STIP	N/A	10-36311	MER	10.2	12.8	In Merced from McHenry Rd. to S. of Childs Ave.	Mission Ave I/C-Freeway Conversion – Construct Freeways and Bridges	Completed	Completed
STIP 2008 PA&ED	Tier 1-F	10-OQ120_0	MER	26.8	R37.3	Livingston-Delhi - from Stanislaus/Merced Co. line to 0.25 mi. S. of Hammatt Ave OC.	Merced Median Widening – Widen from 4 lanes to 6 lanes; SB off-ramp to Winton Pkwy. - add deceleration lane.	$80,500	2013

4.3.1.2 Planned Capacity and Interchange Projects

Planned improvements are those projects without guaranteed funding. There are two projects that are planned for the corridor. One project is in Madera County at the SR-233 interchange at SR-99. The project will be to provide improvements to the interchange and a widening project for the Ash Slough bridge. The other project is in Merced County on SR-99 from north of the City of Atwater to Mission Avenue, south of Merced. The project is to convert a four-lane expressway to a six-lane freeway. See TABLE 4.3.1.2 on page 40.

TABLE 4.3.1.2: SR-99 CSMP Planned Capacity and Interchange Project List

Primary Funding Source	RTP Y/N Tier 1	EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Begin Const.
Developer Fees/Measure T/Partnership	Y	06-0C910_K	MAD	26.3	26.8	SR-99/SR-233	SR-99/SR-233 I/C improvements and Ash Slough Bridge Widening	$55,000	TBD
STIP 2008 Local	Y	OQ060_K	MER	11.6	24.2	In Merced County on SR-99 from N. of the city of Atwater to Mission Ave in the city of Merced.	Applegate SR-99 I/C - Convert four-lane expressway to six-lane freeway; SB off-ramp to Applegate Rd. add deceleration lane; SB on-ramp to Buhach/Castle extend acceleration lane; NB off-ramp to Atwater Blvd. add deceleration lane; NB off-ramp to Mariposa/Yosemite add deceleration lane; NB off ramp to Childs Ave. add deceleration lane.	TBD	TBD

4.4 Corridor Collision and Incidents

The collision data at these segments revealed that the collisions occurring on the highway were predominantly sideswipe collisions and rear-end collisions which might indicate collisions that some collisions are occurring due to congestion on the state highway. Below, TABLE 4.4 Corridor Collisions and Incidents, provides information of the collision history for the corridor between January 1, 2004, and December 31, 2006.

TABLE 4.4 Corridor Collisions and Incidents

Segment	County/Post Mile /Description	Traffic Collision Rate (per million vehicle miles traveled) TASAS Table B January 1, 2004-December 31, 2006		
		Actual Total No. of Collisions	Collision Rate	Statewide Average Rate
1	MAD/PM 22.72-PM 29.35 SR-152 IC to MAD/MER County line	135	0.58	0.59
2	MER/PM 0.00-PM 4.60 MAD/MER County line to Buchanan Hollow Rd./	84	0.42	0.77
3	MER/PM 4.60-PM 10.50 Buchanan Hollow Rd. to 0.31 mi. N. of McHenry Rd.	144	0.55	0.79
4	MER/PM 10.50-PM12.80 0.31 mi. N. of McHenry Rd. to 0.15 mi. S. of Childs Ave.	82	0.78	1.08
5	MER/PM 12.80-PM 13.90 0.15 mi. S. of Childs Ave to SR-140 E.	54	1.06	0.83
6	MER/PM 13.90-PM 16.53 SR-140 E. to Atwater Blvd OH	161	1.07	0.92
7	MER/PM 16.53-PM 20.52 Atwater Blvd OH to Buhach Rd.	223	0.90	0.66
8	MER/PM 20.52-PM 23.80 Buhach Rd. to 0.43 mi. N. of Atwater OH	175	1.11	0.77
9	MER/PM 23.80-PM R26.50 0.43 mi. N. of Atwater OH to 0.30 mi. S. of Arena Way	98	0.73	0.88
10	MER/PM R26.50-PM R28.80 0.30 Miles S. of Arena Way to Hammatt Ave.	104	0.90	0.87
11	MER/PM R28.80-PM R37.30 Hammatt Ave. to MER/STA County line	296	0.53	0.77
12	STA/PM 0.00-PM 1.63 MER/STA County line to SR-165	55	0.49	0.56

4.5 Corridor Transportation Management Strategies

4.5.1 Incident Management

The standard operating procedure and protocol for incident management of collisions and closures for natural causes on SR-99 is coordinated between the CHP and the Caltrans District 10 Transportation Management Center. Communication with the media is coordinated through the California Highway Patrol. Semi-annual team meetings are held with CHP, Caltrans, and Merced, Stanislaus County agencies to discuss incident, construction, maintenance, and special event traffic management, including permit related issues. Madera County works with a parallel team from Caltrans District 6 (D-6) for incident management.

Key ITS elements are strategically placed at major decision points and areas with high incident rates where extensive data is gathered through TMS, RWIS, and CCTV. Caltrans D-10 communicates road and weather
information via the Caltrans Highway Information Network (CHIN), CMS, and HAR. ATIS is available through the telephone and internet via the PeMS, RWIS, and other statewide databases.

4.5.2 Intelligent Transportation Systems

The major challenge to ITS deployment is funding. ITS elements are proposed through the SHOPP which has minimal funding for ITS deployment. Caltrans D-10 requests the installation of ITS elements on STIP projects, but more frequently than not, when project costs need to be reduced, ITS elements are the first to go. There needs to be more support from all project partners to promote and fund ITS elements on STIP projects.

Technology advances are also a challenge for ITS deployment. Technology is always changing which makes it very difficult to integrate with existing technologies; and the lack of power and communication in remote areas impedes implementation in rural areas. ITS operating, utility, and maintenance expenses are costly along with high bandwidth communications for video. It is also a challenge to sustain the level of expertise that is needed to operate and maintain the complex ITS equipment.

4.5.3 Transportation Management Plan

The transportation management plan for projects through the CSMP corridor area includes educating the traveling public through CMS's, HAR's, roadside signs and the media prior to and during construction. During construction, traffic will be managed through the use of k-rail barriers, temporary road alignments, and temporary signing/pavement delineation to provide protective measures for both construction crews and the traveling public. Construction is often performed during the night to avoid peak demand periods. Freeway Service Patrol may be available during the day to relieve incident-related congestion on certain corridors or during certain construction projects. The use of park-and-ride lots, carpools and transit will be encouraged. Public transit may be subsidized with a portion of the construction resources to promote the use of transit by providing discount prices during construction.

4.5.4 Freeway Service Patrol

The Freeway Service Patrol (FSP) is a program run jointly by Caltrans, the CHP and local transportation agencies such as MCAG. The program offers free service to motorists provided by privately owned tow trucks that patrol designated routes on congested urban California freeways. This

reduces delay for other motorists, maintains the capacity of our highway system and enhances safety for motorists by clearing hazards that may cause secondary incidents. FSP services are utilized during highway construction. FSP is not currently being used in the Merced area due to a lower level of congestion. It is something that can be considered in the future when congestion issues increase.

4.5.5 Ramp Metering and HOV Strategies

Projected growth in the SJV will necessitate the consideration of some form of congestion relief. Ramp metering and HOV facilities should be considered. HOV lanes are facilities that have been designated for a specific use by the traveling public. Criteria for using these facilities include the number of passengers per vehicle (two or more), transit vehicles, trucks and motorcycles. These facilities emphasize "efficient person movement" rather than vehicle movement, with an emphasis on increasing the number of persons per vehicle via transit, vanpool, and all forms of ridesharing. This provides for a more efficient utilization of the existing freeway capacity. HOV facilities may result in not only relieving congestion, but may also play a role in improving the overall air quality in the SJV. In December 2004, Caltrans Districts 6 and District 10 completed a study entitled "High Occupancy Vehicle Lane Viability for the San Joaquin Valley." The purpose of the study was to identify potential HOV corridors within the study area. HOV Guidelines call for consideration of HOV lanes on corridors that meet certain criteria (freeways with six lanes or more), recurrent congestion, and those facilities falling below LOS 'D.'

The success of an HOV facility does not rely solely on the identification of a road segment that meets specific criteria, but is also contingent on public involvement and education, supporting policy and programs, and interagency coordination. Caltrans will continue to evaluate, in collaboration with our local partner agencies, the possibility of HOV facilities within the SJV. The Department's Policy and Procedures Memorandum (P89-01) states that the department will consider an HOV lane alternative for projects which add capacity to metropolitan freeways or proposed new metropolitan freeways." Such a facility, or facilities, may prove viable in the future.

Merced, Stanislaus and Madera Counties are also part of the eight-county San Joaquin Valley Air Basin, which is in non-attainment for two of the six criteria pollutants specified by the Clean Air Act: ozone and $PM_{2.5.}$ There is urgent need to ensure that future travel is accommodated in the most efficient manner possible with the least impact on air quality. Ramp metering and HOV lanes have proven to be effective methods for increasing the efficiency of a freeway system when implemented under the right conditions and in the right locations. A SJCOG Ramp Metering and HOV Master Plan is being developed for San Joaquin County to evaluate the potential applicability of ramp metering and HOV lanes in San Joaquin County over the next twenty to twenty-five years. The scope of the SJCOG Ramp Metering Plan has now been expanded to now include the counties of Stanislaus and Merced.

4.6 Corridor Maintenance Conditions and Preservation

4.6.1 Corridor Rehabilitation and Maintenance Strategy

The current rehabilitation strategy is to maintain and rehabilitate the existing facility with plans to improve various interchanges and widen the roadway where feasible. Projects from the SHOPP are prioritized by the needs of the State highway. These projects maintain or improve the condition, safety, and operation of the highway, and protect the investment that has been made on the facility. The SHOPP includes six types of projects that would affect SR-99:

a) Collision Reduction

b) Roadway Preservation

c) Bridge Preservation

d) Roadside Preservation

e) Mobility Improvement

f) Mandates (storm water requirements and emergency-type projects)

Nominated projects within each category compete for available dollars with other projects on a statewide basis. Proposed collision reduction projects that meet certain thresholds of cost-benefit criteria are funded first from the SHOPP before other needs are addressed.

Maintenance costs, including roadsides, pavement, bridges, guardrail, median barriers, signs, and delineation are making it more and more difficult to maintain adequate appearance and condition ratings. The 10-year SHOPP includes investments in projects in both the rehabilitation and preventive maintenance categories. This investment is expected to provide highway appearance and condition ratings similar to current conditions, which are less than Caltrans performance targets and the desires of the communities served by SR-99.

4.6.1.1 Programmed Operational Improvement Projects

Currently there are two programmed projects in Madera County: (1) Asphalt/Concrete Overlay for SR-99 in Madera County to upgrade 6.7 miles from the Union Pacific Bridge to the Merced County line. (2) Ash Slough median shoulder widening for the inside shoulder between Avenue 24 ½ to Ash Slough Bridge. In Merced County, there are 16 programmed operational projects. The projects included are: (1) the Arboleda Drive Freeway - Convert 4-lane expressway to 6-lane freeway including R/W alignment. Operational improvements include: add northbound off-ramp and left-turn acceleration and deceleration lanes to Le Grand Avenue For the southbound off-ramp to Le Grand Avenue - add right-turn acceleration and deceleration lanes and add left-turn acceleration and deceleration lanes. Add right-turn acceleration and deceleration lanes to Worden Avenue and Pioneer Avenue. For the southbound off-ramp to Arboleda Road, add right-turn acceleration and deceleration lanes and add left-turn acceleration and deceleration lanes. (2) Merced Median Widening - widen from 4 lanes to 6 lanes. Operational improvements include: southbound off-ramp to Winton Parkway, add a deceleration lane. Other projects include a bridge replacement project on SR-99 from less than 0.1 mi. north of V Street to Black Rascal Bridge and widen 15th Street UC and replace East Merced OH. In addition, there are five highway planting and landscaping projects in the CSMP corridor. See TABLE 4.6.1.1 on page 44 for more information.

TABLE 4.6.1.1: SR-99 Programmed Operational Improvement Project List

Primary Funding Source	RTP Y/N Tier I Tier II	EA/RTP MPO ID	County	PM Begins	PM Ends	Location	Description	Total Cost (1, 000)	Begin Const.
SHOPP PID	N	06-OE220_K	MAD	22.7	29.4	From Union Pacific Bridge to Merced County line.	Asphalt/Concrete Overlay.	$9,838	2011
SHOPP	N	06-OE820_1	MAD	24.4	26.8	From Ave. 24 1/2 to Ash Slough Bridge (affects only small portion of project limits).	Ash Slough Median Shoulder Widening - widen inside shoulder.	$1,598	2008
TCRP/IIP/ 99 Bond	Y	10-415701	MER	7.01	TBD	SB off-ramp to Arboleda Rd.	Add right-turn acceleration and deceleration lanes; Add left-turn acceleration and deceleration lanes.	Incl. in 415701	Incl. in 415701
TCRP/IIP/ 99 Bond	Y	10-415701	MER	7.3	TBD	NB off-ramp to Le Grand Rd.	Add left-turn acceleration and deceleration lane.	Incl. in 415701	Incl. in 415701
TCRP/IIP /99 Bond	Y	10-415701	MER	7.3	TBD	SB off-ramp to Le Grand Rd.	Add right-turn acceleration and deceleration lanes; add left-turn acceleration and deceleration lanes.	Incl. in 415701	Incl. in 415701
TCRP/IIP/ 99 Bond	Y	10-415701	MER	8.1	TBD	NB off-ramp to Worden Ave.	Add right-turn acceleration and deceleration lane.	Incl. in 415701	Incl. in 415701
TCRP/IIP/ 99 Bond	Y	10-415701	MER	8.4	TBD	NB off-ramp to Pioneer Ave.	Add right-turn acceleration and deceleration lane.	Incl. in 415701	Incl. in 415701
STIP PS&E/RW	Y	10-48100	MER	13.9	14.4	In Merced from 0.15 mi. S. of E. Merced OH to 0.15 mi. N. of 15th St. UC.	Widen 15th St. UC and replace E. Merced OH.	$39,774	2011
SHOPP	Y	10-48231	MER	15.2	16.2	In Merced, R St. to V St..	Merced Highway Planting	$1,425	2006
STIP PS&E/ RW	N	10-OK020_ 1	MER	15.8	17.3	On SR-99 from 0.1 mi. N. of V St. to Black Rascal Bridge.	West Merced/Bear Creek Structures Replacement - replace bridges.	$44,670	2009
SHOPP	Y	10-0Q060	MER	20.3	TBD	SB off-ramp to Buhach/Castle.	Extend acceleration lane.	Incl. in 0Q060	Incl. in 0Q060
SHOPP	Y	10-0Q060_	MER	21.4	TBD	NB off-ramp to Atwater Blvd.	Add deceleration lane.	Incl. in 0Q060	Incl. in 0Q060
SHOPP	Y	10_0Q060_	MER	22.8	TBD	SB off-ramp to Applegate.	Add deceleration lane.	Incl. in 0Q060	Incl. in 0Q060
STIP 2011 PS&E/ RW	Y	10-41482_1	MER	23.8	R26.5	In Merced County in and near Atwater from 0.25 mi. N. of Atwater OH to 0.4 mi. S. of Arena Way.	Atwater highway planting and irrigation.	$4,973	2011
STIP PS&E/ RW	Y	10_3169C_1	MER	26.8	R27.6	On SR-99 in Merced County, near the city of Livingston from Arena Way to 0.3 mi. S. of Hunter Rd.	Delhi corridor tree planting.	$900	2008
STIP	Y	10_0Q120K	MER	R30.562	TBD	SB off-ramp to Winton Pkwy.	Add deceleration lane.	Incl. in 0Q120	Incl. in 0Q120
STIP	Y	10_0L580	MER	R32.6	37.2	On SR-99 in the community of Delhi.	Highway planting	$900	2008
STIP	Y	10_36312	MER	10.2	12.8	In Merced from McHenry Rd. to S. of Childs Ave.	Highway planting and irrigation	$3,607	2009

4.6.1.2 Planned Operational Improvement Projects

Currently there is one planned rehabilitation project in the corridor. The project is a SHOPP candidate and is located on SR-99 from 0.45 miles south of Franklin Slough to Grove Avenue. The project will be to rehabilitate the highway with an asphalt/concrete overlay, and to widen the shoulders. The planned operational projects are part of the Applegate SR-99 Interchange - convert four-lane expressway to six-lane freeway project. Operational improvements include for the southbound off-ramp to Applegate Road, add a deceleration lane. At the southbound on-ramp to Buhach/Castle exit, extend the acceleration lane. At the northbound off-ramp to Atwater Boulevard, add a deceleration lane. From the northbound off-ramp

to the Mariposa/Yosemite exit, add a deceleration lane. From the northbound off-ramp to Childs Avenue add a deceleration lane. See TABLE 4.6.1.2 below for more information.

TABLE 4.6.1.2: SR-99 Planned Operational Improvement Project List

Primary Funding Source	RTP Y/N Tier I Tier II	EA / RTP MPO ID	County	PM Begins	PM Ends	Location	Description	Total Cost (1, 000)*	Begin Const.
SHOPP 2008 Candidate	N	10-3A720_K	MER	17.6	24.5	On SR-99 in and near Atwater from 0.45 mi. S. of Franklin Slough to Grove Ave.	Franklin Slough Rehab. - AC overlay and widen shoulders	$11,406	2010
STIP 2008 Local	Y	OQ060_K	MER	11.6	24.2	In Merced County on SR-99 from N. of the City of Atwater to Mission Ave. in the city of Merced.	SB off ramp to Applegate.- add deceleration lane; SB on to Buhach/Castle -extend acceleration lane; NB off-ramp to Atwater Blvd. - add deceleration lane; NB off-ramp to Mariposa/Yosemite - add deceleration lane; NB off-ramp to Childs Ave. - add deceleration lane.	TBD	TBD

4.6.2 Pavement Conditions

The Division of Maintenance conducts a Pavement Condition Survey (PCS) annually to identify pavement distress. Based on the most recent survey, the SR-99 corridor exhibits major structural distress needing pavement rehabilitation. The PCS is used to identify needs in the roadway preservation programs (Roadway Rehabilitation and Pavement Preservation).

Based on 2005 maintenance pavement condition data, SR-99 has 79.8 corridor miles of the 90 corridor lane miles identified for rehabilitation strategies. TABLE 4.6.2 lists the segments identified for rehabilitation strategies along the SR-99 CSMP corridor.

TABLE 4.6.2: SR-99 CSMP Corridor Pavement Distress

County/ Postmile	Description	# of Distressed Lane Miles
MAD/23.77-29.35	SR-152 IC to MAD/MER County line	13.8
MER/00.00-04.60	MAD/MER County line to Buchanan Hollow Rd.	10.0
MER/04.60-10.50	Buchanan Hollow Rd. to 0.31 mi. N. of McHenry Rd.	16.0
MER/16.53-20.52	Atwater Blvd OH to Buhach Rd.	11.0
MER/20.52-23.80	Buhach Rd. to 0.43 mi. N. of Atwater OH	13.0
MER/23.80-R26.50	0.43 mi. N. of Atwater OH to 0.30 mi. S. of Arena Way	9.0
STA/00.00-01.63	MER/STA County line to SR-165	7.0
	Total	79.8

4.6.3 Bridge Conditions

Office of Structures Maintenance and Investigations of the Engineering Service Center (OSM&I-ESC) conducts periodic inspections of all State structures. The Structures Replacement and Improvement Needs (STRAIN) report is used to identify needs for the Bridge Preservation Programs (Bridge

Replacement/Rehabilitation, Scour Mitigation, Rail Replacement/Upgrade, Seismic Restoration and Widening). Based on the most recent reports, there are currently nine bridges identified on the STRAIN report.

Refer to TABLE 4.6.3 for additional information on bridges identified for replacement and or improvement needs on the SR-99 CSMP corridor.

TABLE 4.6.3: SR-99 CSMP Corridor Bridge Needs

County/Postmile	Description	SR-99 Maintenance Bridge Data	
		Bridge Name -	Bridge
MER 10.50-12.80	0.31 mi. N. of McHenry Rd. to 0.15 mi. S. of Childs Ave.	Yosemite Pkwy. on-ramp (PM 13.9)	39 0141S
MER 12.8-13.9	0.15 mi. S. of Childs Ave. to JCT 140 E.	E. Merced OH (PM 14.08)	39 0130L&R
MER 13.9-16.53	JCT 140 E. to Atwater Blvd. OH	15th Street UC (PM 14.22)	39 0139L&R
		Bear Creek (PM 16.38)	39 0132L&R
		W. Merced OH (PM 16.54)	39 0131L&R
MER 16.53-20.52	OH Atwater Blvd. to Buhach Rd.	Franklin Slough (PM 18.06)	39 0016R
		Ashe Drain (PM 18.59)	39 0116L&R
		Webber Canal (PM 19.49)	39 0018L&R
		Canal Creek (PM 20.07)	39 0013L&R

4.6.4 Corridor Preservation Management Practices

4.6.4.1 Right-of-Way, Preservation of Ultimate Transportation Corridor

Identification of the UTC and subsequent preservation of the ROW will ensure adequate ROW will be preserved to accommodate facility improvement projects beyond 2030. The ultimate corridor concept for SR-99 in Merced County is consistent with the 20 year concept facility of eight lanes.

There are many existing ramps and bridges along the CSMP corridor that do not meet current standards. Extensive development has occurred that will impact expansion of the freeway due to the heightened cost of ROW acquisition. The Department intends to work with local agencies should work together to establish plan lines and interchange "footprints." This will enable local agencies to use their land-use authority and preserve the necessary ROW for the corridor. Caltrans also intends to work with local agencies to have plan lines adopted into those jurisdiction's general plan circulation elements. This will also accelerate the necessary environmental clearances. District 6 is currently in the process working on a test model in Madera to verify the existing ROW information and the amount needed to accommodate the UTC. The expectation is that the model will eventually expand throughout the entire SR-99 corridor.

4.6.5 Access Control

The California Freeway and Expressway System has a large financial investment in access control to insure operational integrity of the highways. The freeway agreement documents the understanding between Caltrans and the local agency relating to the planned traffic circulation features of the proposed facility. In the event that the freeway is fully constructed, it shows which streets may be closed or connected to the freeway, which streets and roads may be separated from the freeway; the location of frontage roads; and how streets may be relocated, extended or otherwise modified to maintain traffic circulation in relation to the freeway. 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 the local agency's support of local road closures and changes to the local circulation system, to protect property rights, and to assure adequate service to the community. Access control is necessary on the freeway or expressway so that current and future traffic operations are not compromised.

4.7 Smart Land Use Management Practices

4.7.1 Local Tax Measures - Regional Congestion Management System

Neither Stanislaus County nor Merced County have passed their tax proposal measures to date. Madera County, in contrast, has passed their half-cent transportation sales tax measure which leverages $48.4 million for the Avenue 12/ SR-99 I/C south of the City of Madera. Measure T began to accumulate on April 1, 2007. Madera County will be able to direct funds to SR-99 projects and to public transportation.

4.7.2 City/County Transportation Impact Fees (TIF)

City and county transportation impact fees are collected when development projects are planned in most of the cities within Merced, Stanislaus and Madera counties. The fees are charged to new development projects or development expansion projects to offset the cost of needed roadway capacity improvements due to the auto trips generated from the development.

4.7.3 Regional Planning Efforts

4.7.3.1 SR-99 Corridor Master Plan

Collectively, Caltrans, local agencies, business interests, community groups and organizations including the Great Valley Center (GVC) have prepared a number of planning documents intended to improve the capacity and efficiency as well as the aesthetics of the SR-99 corridor. The Department, in cooperation with the GVC 99 Task Force, completed a “Route 99 Corridor Enhancement Master Plan” which placed emphasis on creating a “sense of place” as a means of distinguishing one community along SR-99 from another. This plan went above and beyond the more standard types of planned projects. The Business, Transportation and Housing Agency then requested that Caltrans prepare a business plan for the orderly improvement of State Route 99 throughout the SJV. These two products were completed in 2005 and became known as the Route 99 Corridor Master Plan. The “SR-99 Business Plan” is currently being updated to reflect existing conditions and to complete several plan goals. It is the intent of this CSMP to be consistent with the goals of the SR-99 Business Plan.

4.7.3.2 Valley Wide Transit Study

Caltrans also awarded a partnership planning grant to fund the SJV Express Transit Study, with MCAG as lead and working with the counties of Kern, Kings, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin. The study will address current and future needs for coordinated bus services throughout the region, which will create a more integrated transit network within the SJV and improve the existing transit system. The study will also examine the potential for connectivity with other modes of transportation such as Bay Area Rapid Transit, Altamont Commuter Express, and Amtrak.

4.7.3.3 Interregional Transportation Partnership Planning

Caltrans also recently awarded a Partnership Planning grant to fund the Interregional Transportation Partnership Planning program. SJCOG has taken the lead in bringing together stakeholders from the central valley and the San Francisco Bay Area to explore ways to address interregional growth issues. These complex issues include interregional transportation, goods movement, and air quality. The program

will develop a five-year strategic plan of regional transportation improvement strategies and a memorandum of understanding documenting support from the Central Valley and San Francisco/San Jose Bay Area regions for implementation.

4.7.3.4 Valley Wide Regional Blueprint Strategies

Building on successful planning studies conducted by several California metropolitan transportation planning agencies over the past four years, Caltrans provided a planning grant to MCAG on behalf of the eight SJV regional planning agencies to prepare a "visioning" plan for the SJV. The goal of the SJV Blueprint Planning Process is to facilitate the development and implementation of the San Joaquin Valley Regional Vision (SJVRV). The SJVRV addresses the growth of San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings and Kern Counties, and emphasizes the links between: land use, agriculture, environment, transportation, and air quality. The StanCOG, MCAG, MCTC and Caltrans District 6 and 10 have been actively participating in the Valley-wide Regional Blueprint process.

Section 5 Comprehensive Performance Assessment and Corridor System Management Strategies

The comprehensive performance assessment evaluates congestion, delay, and performance of the corridor by analyzing the existing (2006 base year) LOS, and projections for years 2015 and 2030 and collision rates. In addition, the CSMP provides expected benefits and performance of the Proposition 1B 99 Bond Act (Arboleda Freeway Widening and Plainsburg Freeway Widening) projects.

Also included are the system management strategies that are needed to manage the performance of the SR-99 corridor, and a Ten Year Implementation Plan that identifies transportation improvements currently provided in the STIP, SHOPP, RTP, and other transportation programming and planning documents. The project list includes ITS, detection, operational, rehabilitation, interchange/intersection, capacity increasing, transit, park-and-ride, rest area, and bicycle facility improvements. It is expected that these improvements will be considered during the next available update of transportation planning and programming processes.

5.0 Delays or Bottlenecks

Reduced speeds and bottlenecks (areas of congestion) indicate that the current capacity of SR-99 in the near future will no longer be adequate. In spite of the widening projects, congestion will persist due to increases in AADT and peak hour traffic, increases in traffic merging on and off the freeway, and the large percentage of truck traffic, primarily five plus axle trucks. Most of the corridor through Merced County is at expressway standards. The portions of the highway that are at expressway standards have at grade intersections that allow cross traffic and make it difficult for vehicles to cross the highway. The corridor is currently programmed to convert the entire facility to freeway standards by replacing the at-grade interchanges with interchanges designed to meet freeway and STAA standards for trucks. Adequate truck maneuvering ability is critical to provide access for truck drivers as well as for the motorists on the highway. Providing the needed turning radiuses for STAA trucks is critical in the Merced area.

Other factors associated with not meeting freeway standards include insufficient distances for vehicles to smoothly merge on and off the highway. As vehicles approach the off-ramp, traffic is slowed and affects the mainline. Where substandard spacing exists, interchange spacing should be increased, auxiliary lanes added, or other operational solutions constructed to decrease the merging conflicts and improve operations. Impacts to capacity include the number and width of lanes; the location, spacing, and type of interchanges, the presence and width of shoulders, and the condition of the pavement. Increasing capacity

could be achieved by widening the route; however, the ability to widen the route is hampered by available ROW and adjacent present and planned development.

Fog is a frequent cause of collisions and delay during the winter months, occasionally requiring the use of CHP pace cars. Interregional traffic as well as local traffic is delayed, impeding the efficient movement of people and goods. Caltrans District 10 uses a sophisticated multi-sensor automated warning system composed of roadside weather stations, visibility meters, and traffic monitoring stations to notify of incidents and delays due to adverse conditions.

The primary function of the Caltrans Automated Warning System (CAWS) is to detect the presence of adverse weather conditions and/or congested traffic and then warn the driver of such conditions automatically using changeable message signs. The CAWS is composed of 24 separate stations each consisting of remote roadside weather stations and/or Inductive Loop Speed Detectors and one Model 500 Changeable Message Sign. The CAWS is controlled by a network in the District 10 TMC. The CAWS currently serves the corridors of SR-99, I-5, I-205 and SR-120.

Congestion on SR-99

The AADT on SR-99 in the CSMP corridor limits currently ranges from 39,300 to 64,000 with trucks constituting up to 27.3% of the AADT in some sections.

Currently, there are 17.63 out of the 45.5 lane miles that are not currently programmed for widening to six lanes. There are 27.87 lane miles programmed to be widened on SR-99 to six lanes before 2015. Based on 2006 volumes and calculating in the programmed projects that will allow widening to six lanes prior to 2015, 45.5 miles of the 45.5-mile corridor should be operating at acceptable LOS 'D.'

In 2015, there will be 6.62 lane miles operating at deficient LOS 'F' from SR-140 East to Buhach Road and there will be 1.63 miles operating at deficient LOS 'E' from the Merced/Stanislaus County line to SR-165. Altogether there will be 14.88 miles operating at a deficient level of service in 2015. In 2030 there will be 27.76 lane miles in the CSMP corridor operating at LOS 'F'. There will be 6.63 lane miles operating at deficient LOS 'F' from SR-152 East to the Merced/Madera County line. Between 0.15 miles south of Childs Avenue to 0.43 miles north of Atwater Overhead; there will be 11 lane miles operating at deficient LOS 'F'. From the Merced/Stanislaus County line to SR-165 there will be 1.63 miles operating at deficient LOS 'F' . Without additional capacity improvements, 27.76 lane miles of the 45.5 miles will be

operating at deficient level of service by 2030, the remaining 17.74 lane miles is expected to be operating at LOS 'D.'

5.1 SR-99 CSMP Transportation System Management Strategies

Analysis indicates that eight to twelve lanes are needed to meet the 2030 concept LOS 'C' and 'D.' Due to ROW, environmental, and financial considerations, the concept facility and UTC for the corridor is eight lanes. In order to manage the performance of the freeway, the concept facility includes consideration of ramp metering and HOV lanes throughout urban areas. Other strategies will include expansion of incident management, traveler information, traffic surveillance and detection, advanced synchronization of traffic signals, and additional operational improvements. It is also recommended that the local jurisdictions consider the connectivity of existing and construction of new frontage roads in future commercial and residential development along SR-99.

In order to manage the performance of the freeway, reduce congestion, and preserve the mobility gains of the SR-99 Proposition 1B investment, Caltrans District 10 and MCAG are committed to the following system management strategies:

- Expansion of ITS elements to enhance incident management, traveler information, traffic surveillance and detection. There are 20 existing ITS elements and 24 PeMS stations along the CSMP corridor, and 69 ITS elements are currently programmed for implementation. There are 13 segments along the corridor that have been identified for further PeMS implementation, and an additional 35 ITS elements that are planned and proposed for the corridor.

  The existing and planned ITS infrastructure represents a wide collection of instrumentation, some of which combines several technologies in a single integrated system. The elements are placed in strategic locations to provide optimal benefit to the public or provide Caltrans TMC with data used to manage the corridor. The TMC uses the collected data to post advisories during incident management through CMS, HAR, or other media to alert approaching traffic to avoid possible secondary accidents, encourage diversion away from an incident, or dispatch Traffic Management Teams in the field.

  ITS project improvements are categorized as short-term (0-4 years), mid-term (5-7 years) and long-term (8 to 10 years). Short-term project goals for SR-99 include placing ITS elements at major decision points within STIP and SR-99 Bond funded projects. Mid-term project goals for SR-99 include TMS for congestion monitoring of lane volumes and possible travel time calculations, as well as CCTV for incident verification and management. Long-term project goals for SR-99 include full instrumentation of ITS elements along freeway corridors. MCAG is currently working with Caltrans District 10, SJCOG, and StanCOG to expand the 2008 San Joaquin Regional Ramp Metering and HOV Master Plan to include Merced and Stanislaus counties. This study will examine future ramp metering and HOV lanes through Merced County. Programmed, planned, and proposed ITS projects are listed in the Ten Year Implementation Plan and Project List on pages 54 to 60.

- Expansion of operational, rehabilitation improvements to include auxiliary lanes, increase acceleration lanes, reconstruct and modify interchanges and bridges, asphalt/concrete overlays, median barriers, and landscaping. In addition to the operational improvements that are included in the Proposition 1B Arboleda Widening and Plainsburg Widening projects, there are 13 Programmed operational, maintenance and rehabilitation projects. There are two planned and proposed operational improvements, seven programmed interchange projects, and two interchange projects are planned for the corridor.

The programmed and planned project improvements will provide safety operational benefits at the location of the improvements and contribute to the overall improved performance of the corridor. Improvements are categorized as short-term (0-4 years), mid-term (5-7 years) and long-term (8 to 10 years). Short and mid-term project goals for SR-99 include the operational improvements within the SR-99 Bond projects, and those currently programmed in the STIP and SHOPP. Long-term project goals include operational improvements not currently identified for funding. The programmed, planned, and proposed operational, rehabilitation and maintenance improvements are listed in the Ten Year Implementation Plan and Project List on pages 54 to 60.

- The management of traffic incidents and closures for natural causes will continue to be coordinated between the CHP and the Caltrans District 10 TMC, and communication with the media will continue to be coordinated with the CHP. Meetings will also continue to be held twice a year with CHP, Caltrans, and local agencies, and the Office of Emergency Services to discuss incident, construction, maintenance, and special event traffic management, including permit related issues.

- Expansion of transportation demand management practices including construction of new park-and-ride facilities with transit coordination, development of telecommute work centers, and continued work force vanpool and rideshare services.

- Connectivity of bicycle and pedestrian facilities crossing and parallel to SR-99. Programmed and planned bicycle and pedestrian facilities are listed in the Ten Year Implementation Plan and Project List on pages 54 to 60.

- To address the lack of local STAA routes, access and truck parking issues along SR-99 and throughout the SJV, the San Joaquin Valley Goods Movement Action Plan efforts will serve to evaluate and coordinate discussion of these local and regional issues.

- Construction of new frontage roads in future transportation projects should be considered and included in any planned commercial and residential development along SR-99. Developing frontage roads allows for the establishment of an alternative route for local traffic to reduce traffic congestion on the mainline.

5.1.1 Ten Year Implementation Plan

The SR-99 CSMP includes a Ten Year Implementation Plan or project listing of transportation improvements and system management strategies currently identified in the STIP, SHOPP, RTP, and other transportation programming and planning documents. The project list includes programmed and planned ITS, detection, operational, rehabilitation, interchange/intersection, capacity increasing, park-and-ride, rest area, transit, and bicycle and pedestrian facility improvements along the corridor.

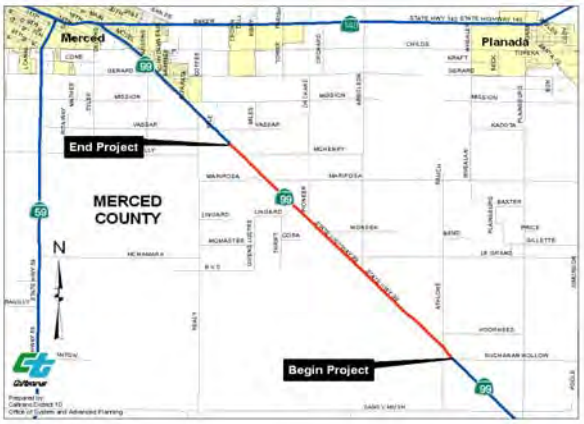
In addition, the project list includes proposed improvements and system management strategies that have been recommended as a result of the CSMP development process. Funding for the proposed improvements has not yet been identified, and are considered planned projects for CSMP purposes. It is expected that these improvements will be considered during the next available update of transportation planning and programming processes. The 10 year planning horizon extends ten years from the beginning construction date of the Proposition 1B Bond Act Arboleda Widening and Plainsburg Widening projects or 2022. Refer to Ten Year Implementation Plan and Project list on pages 54 to 60.

5.2 Proposition 1B 99 Bond Act Project Benefits

5.2.1 Arboleda Freeway Widening Project

The Arboleda Widening project will widen the SR-99 from four to six lanes from Buchanan Hollow Road to 0.3 miles north of McHenry Road in Merced County. The project is expected to begin construction in June 2010.

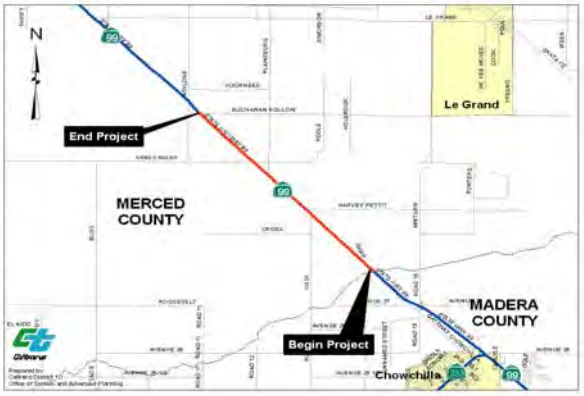
The project will ease congestion, improve mobility and decrease commute times for all drivers for interregional and regional trips within and through the county. The Daily Vehicle Hours of Delay saved will be 87 hours. The Daily Peak Duration Person-Minutes Saved will be 0.3 minutes per individual and 6,951 minutes cumulative.



Project Benefits	
Daily Travel Time Savings (hours)	**87**
Peak Period Time Savings (minutes)	**0.3**

5.2.2 Plainsburg Freeway Widening Project

This project will widen SR-99 from a 4-lane to a 6-lane freeway from the Madera/Merced County line to Buchanan Hollow Road. The project is expected to begin construction in February 2011.



Project Benefits	
Daily Travel Time Savings (hours)	**66**
Peak Period Time Savings (minutes)	**0.2**

This project will ease congestion, improve mobility and increase commute times for all drivers for interregional and regional trips through the county. The Daily Vehicle Hours of Delay saved will be 66 hours. The Daily Peak Duration Person-Minutes Saved will be 0.2 minutes per individual and 5,285 minutes cumulative. The project benefits are published on the California Strategic Growth Plan: Bond Accountability Website: http://svdtsucp.dot.ca.gov:8084/bondacc/.

5.3 Other Considerations

While project specific considerations are not included in the CSMP, they need to be considered in successful implementation of the improvements identified in the SR-99 Merced Area 10-year implementation plan.

Environmental

The National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA) and other related federal and state environmental laws and regulations require environmental studies and public participation for all projects for which a public agency has a discretionary action. Resources and issues requiring environmental study may include historical structures, protected animals and plants, social and economic impacts, wildlife refuges and public parks, archaeological sites, hazardous waste, paleontological sites, air and water quality, and noise.

Appropriate environmental studies would need to be conducted whenever any of the SR-99 CSMP improvements proposed are implemented if state or federal funding is involved. Project level analysis may be required and depending on the funding source may involve compliance with NEPA and/or CEQA.

Projects that may potentially cause an increase in traffic may require air quality and noise impact studies to determine if effects of increased traffic would cause a significant reduction of air quality and/or substantial increase in noise level. Hazardous waste studies may be indicated if the project area would include gas stations or other businesses that use or generate potential hazardous waste.

Context Sensitive Solutions

Caltrans uses “Context Sensitive Solutions” (CSS) as an approach to plan, design, construct, maintain and operate its transportation system. These solutions use innovative and include approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. CSS are reached through a collaborative, interdisciplinary approach involving all stakeholders, and meets transportation goals in harmony with community goals and natural environments.

CSS require careful, imaginative, and early planning, as well as continuous community involvement. The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options.

Relevant laws, rules, and regulations must be investigated when considering CSS issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, and safety.

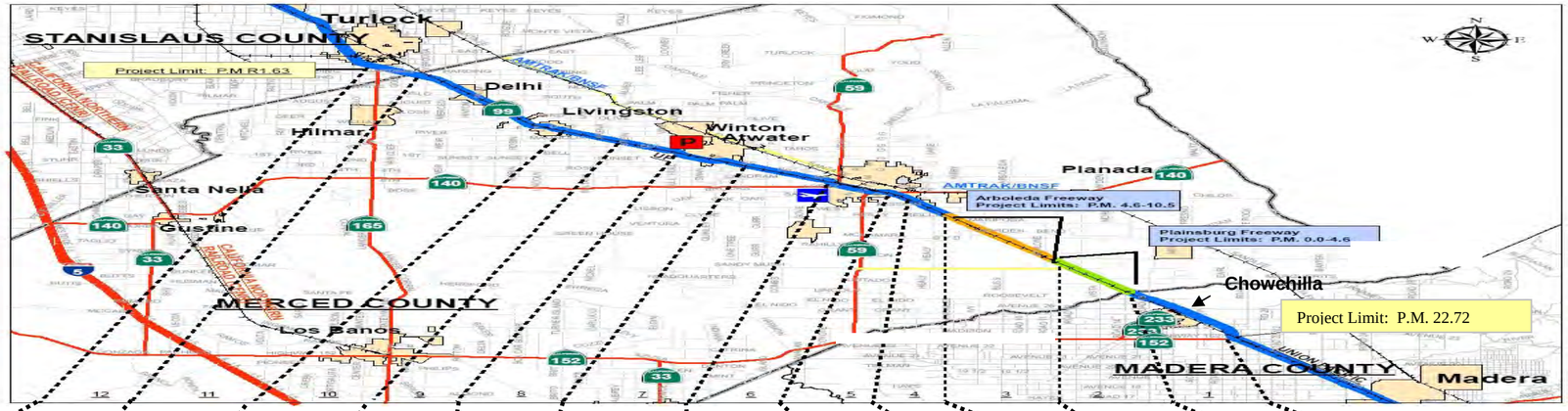
Safety Conscious Planning

Safety conscious planning is incorporated into all planning processes and complements context sensitive solutions. As in most projects, a need is established before a project can be built.

Factors such as congestion, poor LOS, narrow roads, non-standard alignments and operational problems, require improvements. The SR-99 CSMP can be used as a tool to proactively identify these improvements rather than react to existing problems. Suggested solutions for these problems should conform to the surrounding environment and meet the needs of the people within. These community sensitive solutions should be agreed upon by users of these facilities however safety is always a primary factor in all proposed solutions and cannot be overlooked.

FIGURE 5.1.1

SR-99 10 Year Implementation Plan (2021) LOS with Project List Summary: 10 Years from Begin Construction Date of SR-99 Bond Projects (Arboleda 2010)(Plainsburg 2011)



Location	12 MER/ STA County line to SR-165	11 Hammatt Ave. to MER/ STA County line.	10 0.30 mi. S. of Arena Way to Hammatt Ave.	9 0.43 mi. N. of Atwater OH to 0.30 mi. S. of Arena Way	8 Buhach Rd. to 0.43 mi. N. of Atwater OH	7 Atwater Blvd. OH to Buhach Rd.	6 SR-140 E. to Atwater Blvd OH	5 0.15 mi. S. of Childs Ave. to SR-140 E.	4 0.31 mi. N. of McHenry Rd. to 0.15 mi. S. of Childs Ave.	3 Buchanan Hollow Rd. to 0.31 mi. N. of McHenry Rd.	2 MAD/ MER County line to Buchanan Hollow Rd.	1 SR-152 to MAD/ MER County line
Existing Level of Service (LOS)	'B' with a new alignment	'C' with a new alignment	D	'B' with a new alignment	C	D	D	C	'B' with a new alignment	'B' with a new alignment	'B' with a new alignment	C
ITS - Funded		99 , 100, 102, 103, 105, 106, 107, 108, 110, 111, 112, 114, 115, 118, 120, 121, 122, 123, 124, 128, 129, 130		93, 94	74, 75, 77, 79, 83, 84, 85 86, 89	44, 61, 63, 66, 67, 68, 69, 71, 72, 73,	32, 34, 36, 37, 38, 39, 40, 41, 42,42, 44, 47, 48, 49, 50, 51, 52, 53, 56, 150	26, 27, 28, 29, 31		14, 15, 16, 17, 18	13	
ITS- Unfunded		101, 104, 109, 119, 125, 127, 130		92	76, 78, 80, 81 82, 87, 88	59, 60, 62, 64, 70	35, 45, 46, 55	30				1, 5, 7 ,8, 9
PeMS Detection Funded												
PeMS Detection Unfunded		58, 113, 116, 126, 97	57, 58, 97	57, 58	57, 58	57, 58	23, 24	23, 24	22	10, 11	10, 11	3, 4
Operational Funded												
Operational Unfunded												
Rehabilitation Funded		117	98	91		54	33, 54		20			6
Rehabilitation Unfunded					65	65	25	25				2
Interchange Funded									132			
Interchange Unfunded					21	21	21	21	21			137
Capacity Funded		96	96	90, 95, 96						19	12	
Capacity Unfunded												
Other Modes/TDM Funded												135
Other Modes/TDM Unfunded	139	139, 143, 144, 146, 147, 148, 149	139	139	141, 142 134		133	140, 145, 146, 147, 148, 149				136, 138

TABLE 5.1.1: SR-99 CSMP Ten Year Implementation Plan Project List

Corridor Segment	Project ID	Begin Const.	EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Primary Funding Source	RTP* SHOPP**
Seg. 1	1	2018-2020	TBD	MAD	22.47	22.47	SB SR-99 N. of SR-152	CMS	TBD	SHOPP	Long term
	2	2011	06-OE220_K	MAD	22.7	29.4	From UP Bridge to Merced County line	Asphalt/Concrete Overlay	$9,838	SHOPP 2008 PID	Short term
	3	2018-2020	Not assigned	MAD	23.77	29.35	SR-152 to Merced/Madera County line (NB)	5.58 mi. distance PeMS Gap	TBD	SHOPP	Long term
	4	2018-2020	Not assigned	MAD	23.77	29.35	SR-152 to Merced/Madera County line (SB)	5.58 mi. distance PeMS Gap	TBD	SHOPP	Long term
	5	2015-2017	Not assigned	MAD	24.45	24.45	SR-99 at Ave. 24 1/2	TMS	TBD	SHOPP	Mid-term
	6	2008	06-OE820_1	MAD	24.4	26.8	From Ave. 24 1/2 to Ash Slough Bridge (affects only small portion of project limits)	Ash Slough Median Shoulder Widening; Widen Inside Shoulder	$1,598	SHOPP 2006	Tier 1
	136	TBD	Not assigned	MAD	26.8	26.8	Ash Slough	Class I/II Bicycle Path or Lane	300	Not assigned	No
	137	TBD	06-OC910_K	MAD	26.3	26.8	SR-99 at JCT. SR-233	RTE-99/SR-233 I/C improvements and Ash Slough Bridge Widening.	55,000	Measure T/Developer Fees +TBD	Long term
	138	TBD	06-OC910_K	MAD	26.3	26.8	SR-99 at JCT. SR-233	Class II Bicycle Lane	TBD	Measure T/Developer Fees +TBD	No
	7	2015-2017	Not assigned	MAD	26.46	26.46	SR-99 at JCT. SR-233	TMS	TBD	SHOPP	Mid-term
	135	TBD	Not assigned	MAD	26.6	26.6	Chowchilla	Rest Area -	TBD	SHOPP	No
	8	2015-2017	Not assigned	MAD	28.14	28.14	SR-99 at JCT S. of Le Grand Ave. OC	TMS	TBD	SHOPP	Mid-term
	9	2015-2017	Not assigned	MAD	28.37	28.37	SR-99 at JCT N. of Le Grand Ave. OC	TMS	TBD	SHOPP	Mid-term
Seg. 2	10	2018-2020	Not assigned	MER	0.0	11.65	Merced/Madera County Line NB to S of Mission Ave.	10.77 mi. distance PeMS Gap	TBD	SHOPP	Long term
	11	2018-2020	Not assigned	MER	0.0	11.65	Merced/Madera County Line SB to S. of Mission Ave.	10.77 mi. distance PeMS Gap	TBD	SHOPP	Long term
	12	2011	10-41580	MER	0.0	4.6	From Madera/Merced County Line to Buchanan Hollow Rd.	Plainsburg Rd. Freeway - Convert 4-Lane Expressway to 6-Lane Freeway on ROW Alignment	$101,177	TCRP/IIP/99 Bond	Tier 1-E Funded
	13	2011	41580	MER	0.063	0.063	NB SR-99 S. of Sandy Mush Rd.	CMS/CCTV/TMS	See EA 41580	TCRP/IIP/99 Bond	Short term
Seg. 3	14	2010	41570	MER	5.2	5.2	NB SR-99 N. of S. Athlone Rd.	CMS/CCTV/TMS.	See EA 41570	TCRP/IIP/99 Bond	Tier 1
	15	2010	41570	MER	6.2	6.2	SR-99 S. of S. Arboleda Dr.	RWIS	See EA 41570	TCRP/IIP/99 Bond	Tier 1
	16	2010	41570	MER	7.7	7.7	SB SR-99 N. of Le Grand Rd.	CMS/CCTV/TMS	See EA 41570	TCRP/IIP/99 Bond	Tier 1
	17	2010	41570	MER	8.7	8.7	SR-99 S. of Lingard Rd.	RWIS	See EA 41570	TCRP/IIP/99 Bond	Tier 1
	18	2010	41570	MER	9.7	9.7	SB SR-99 S. of McHenry Rd.	CMS/CCTV/TMS	See EA 41570	TCRP/IIP/99 Bond	Tier 1
	19	2010	10-41570_ 1	MER	4.6	10.5	On SR-99 from Buchanan Hollow Rd. to 0.3 mi. N. of McHenry Rd. in Merced County.	Arboleda Dr. Freeway - Convert 4-lane Expressway to 6-lane Freeway including a ROW alignment. Add NB off-ramp, left-turn acceleration and deceleration lanes to Le Grand Ave. SB off-ramp to Le Grand Ave - Add right-turn acceleration and deceleration lanes. Add left-turn acceleration and deceleration lanes. Add right-turn acceleration and deceleration lanes to Worden Ave and Pioneer Ave. SB off-ramp to Arboleda - Add right-turn acceleration and deceleration lanes. Add left-turn acceleration and deceleration lanes.	$151,900		Tier 1-D Funded

Green: Programmed/Funded
Pink: Construction Completed
Blue: Planned
Yellow: Proposed
* RTP - Tier 1 Tier 2 (Yes/No)
**SHOPP - Short term(0-4 yrs) Mid-term (5-7 yrs) Long term(8-10 yrs)

TABLE 5.1.1: SR-99 CSMP Ten Year Implementation Plan Project List

Corridor Segment	Project ID	Begin Const.	EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Primary Funding Source	RTP* SHOPP**
Seg. 4	20	2009	10_36312	MER	10.2	12.8	In Merced from McHenry Rd. to S. of Childs Ave.	Highway Planting and Irrigation	$3,607	STIP	Tier 1
	132	N/A	10_36311	MER	10.2	12.8	In Merced from McHenry Rd. to S. of Childs Ave.	Mission Ave I/C-FWY Conversion - Construct Freeway and Bridges	N/A	STIP	N/A
	21	TBD	OQ060_K	MER	11.6	24.2	In Merced County on SR-99 from Mission Ave. in the city of Merced to N. of the city of Atwater to.	Applegate SR-99 I/C Convert four-lane expressway to six-lane freeway	TBD	STIP 2008 Local	Tier 2
	22	2018-2020	Not assigned	MER	11.65	12.45	NB SR-99 S. of Mission Ave. to NB N. of Gerard Ave.	0.95 mi. distance PeMS Gap	TBD	SHOPP	Long term
Seg. 5	23	2018-2020	Not assigned	MER	12.37	15.79	NB SR-99 at Gerard Ave. to JCT SR-140 (W) and SR-59 (N)	3.92 mi. distance PeMS Gap	TBD	SHOPP	Long term
	145	TBD	Not assigned	MER	12.0	12.0	Mission Ave.	Class I/II Bicycle Lane	TBD	Not assigned	No
	24	2018-2020	Not assigned	MER	12.37	15.79	SB SR-99 at Gerard Ave. to JCT SR-140 (W) and SR-59 (N)	3.92 mi. distance PeMS Gap	TBD	SHOPP	Long term
	25	2009	10-0L010_K	MER	12.8	16.6	On SR-99 from 0.2 mi. S. of the Childs Ave. OC to W. of Merced OH.	Child Ave. Landscape Restoration - Highway Planting Restoration.	$2,647	SHOPP 2008 PID	Short term
	26	2008	0E720	MER	12.957	12.957	NB off-ramp to Childs Ave.	Traffic Monitoring Station	$2,922	SHOPP	Short term
	27	2008	0E720	MER	12.969	12.969	SB on-ramp from Childs Ave	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	28	2008	0E720	MER	13.020	13.020	NB on-ramp from Childs Ave	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	140	TBD	Not assigned	MER	13.07	13.07	Childs Ave. E. of SR-99.	Class II Bicycle Lane	TBD	Not assigned	No
	29	2008	0E720	MER	13.306	13.306	SB off-ramp to Childs Ave	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	30	2015-2017	Not assigned	MER	13.7	13.7	SB SR-99	CMS/TMS	TBD	Planned	Mid-term
	31	2008	0E720	MER	13.715	13.715	SB on-ramp from SR-140 (E)	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
Seg. 6	32	2008	0E720	MER	13.766	13.766	NB off-ramp to SR-140 (E)	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	33	2011	10-48100_1	MER	13.9	14.4	In Merced from 0.15 mi. S. of E. Merced OH to 0.15 mi. N. of 15th St.. UC Bridge.	Widen 15th St. UC and replace E. Merced OH.	$39,774	SHOPP 2006 PS&E/RW	No
	34	2008	0E720	MER	13.924	13.924	NB off-ramp to SR-140 (E)	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	35	2015-2017	Not assigned	MER	14.000	14.000	SB SR-99 N. of SR-140 (E)	CCTV/TMS	TBD	SHOPP	Mid-term
	36	2008	0E720	MER	14.026	14.026	SB off to SR-140 (E)	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	37	2008	0E720	MER	14.061	14.061	NB on-ramp from SR-140 (E)	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	37	2008	0E720	MER	14.295	14.295	SB on-ramp from G St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	39	2008	0E720	MER	14.311	14.311	NB off-ramp to G St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	40	2008	0E720	MER	14.528	14.528	SB on-ramp from SR-59/J St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	41	2008	0E720	MER	14.551	14.551	NB off-ramp to SR-59/J St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	42	2008	0E720	MER	14.786	14.786	SB off-ramp to SR-59/J St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	43	2008	0E720	MER	14.826	14.826	NB on-ramp from SR-59/J St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	44	2012	10-0G440_0	MER	14.8	19.0	In the City of Merced from the intersection of Bellevue Ave. and existing SR-59 to the intersection of Gurr Rd. and existing SR-140.	Atwater-Merced Expressway	$239,426	Local 2002 PA&ED	Tier 1 K
	45	2015-2020	Not assigned	MER	15.000	15.000	NB SR-99 N. of Martin Luther King Way	CMS/TMS	TBD	SHOPP	Mid-term

Green: Programmed/Funded
Pink: Construction Completed
Blue: Planned
Yellow: Proposed
* RTP - Tier 1 Tier 2 (Yes/No)
**SHOPP - Short term(0-4 yrs) Mid-term (5-7 yrs) Long term(8-10 yrs)

TABLE 5.1.1 SR-99 CSMP Ten Year Implementation Plan Project List

Corridor Segment	Project ID	Begin Const.	EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Primary Funding Source	RTP* SHOPP**
Seg. 6	46	2018-2020	Not assigned	MER	15.200	15.200	SR-99 N. of Martin Luther King Way	RWIS	TBD	SHOPP	Long term
	150	2006	48231	MER	15.2	16.2	Merced – R St. to V St.	Merced Highway Planting Restoration	$1,425	SHOPP	
	47	2009	0E720	MER	15.269	15.269	SB on-ramp from R St.	Traffic Monitoring Station	TBD	SHOPP	Short term
	48	2008	0E720	MER	15.293	15.293	NB off-ramp to R St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	49	2008	0E720	MER	15.535	15.535	SB off-ramp to R St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	50	2008	0E720	MER	15.553	15.553	NB on-ramp from R St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	51	2008	0E720	MER	15.671	15.671	SB on-ramp from JCT SR-140/SR-59	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	52	2008	0E720	MER	15.689	15.689	NB off-ramp to JCT SR-140/SR-59	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	53	2008	0E720	MER	15.954	15.954	NB on-ramp from JCT SR-140/SR-59	Traffic Monitoring Station	Included in EA 0E720D	SHOPP	Short term
	54	2009	10-OK020_1	MER	15.8	17.3	On SR-99 from 0.1 mi. N. of V St. to Black Rascal Bridge.	W. Merced/Bear Creek Structures Replacement - Replace Bridges	$44,670	SHOPP 2004 PS&E/RW	Short term
	55	2015-2017	Not assigned	MER	16.000	16.000	NB SR-99 N. of McSwain Rd.	CCTV/TMS	TBD	SHOPP	Mid-term
	133	TBD	Not assigned	MER	TBD	TBD	Merced Area	Park and Ride	TBD	TBD	No
	56	2015-2017	Not assigned	MER	16.500	16.500	SR-99 S. of (W) 16th St.	RWIS/TMS	TBD	SHOPP	Mid-term
Seg. 7	57	2018-2020	Not assigned	MER	16.538	27.37	NB SR-99 from (W) Merced OH to S. of Sultana Dr./Liberty Ave. OC	10.42 mi. distance PeMS Gap	TBD	SHOPP	Long term
	58	2018-2020	Not assigned	MER	16.538	34.429	SB SR-99 from W. Merced OH to SB SR-99 at Shanks Rd.	18.3 mi. distance PeMS Gap	TBD	SHOPP	Long term
	59	2015-2017	Not assigned	MER	16.690	16.690	NB SR-99 N. of W. 16th St.	CMS/TMS	TBD	SHOPP	Mid-term
	60	2018-2020	Not assigned	MER	16.800	16.800	SR-99 N. of W. 16th St.	RWIS	TBD	SHOPP	Long term
	61	2008	0E720	MER	16.893	16.893	NB on-ramp from 16th St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	62	2015-2017	Not assigned	MER	16.930	16.930	NB SR-99 N. of W. 16th St.	CMS/TMS	TBD	SHOPP	Mid-term
	63	2008	0E720	MER	16.983	16.983	SB on-ramp from 16th St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	64	2015-2017	Not assigned	MER	17.500	17.500	NB SR-99	CMS/TMS	TBD	SHOPP	Mid-term
	65	2010	10-3A720_K	MER	17.6	24.5	On SR-99 in & near Atwater from 0.45 mi. S. of Franklin Slough to Grove Ave.	Franklin Slough Rehab - AC Overlay and Widen Shoulders	$11,406	SHOPP 2008 Candidate	Short term
	66	2010	3A340	MER	18.020	18.020	SB SR-99	RWIS/CCTV	$4,924	SHOPP	Short term
	67	2008	0E720	MER	18.364	18.364	NB off-ramp to Franklin Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	68	2008	0E720	MER	18.427	18.427	NB on-ramp from Franklin Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	69	2010	3A340	MER	18.680	18.680	NB SR-99	CMS/TMS	Included in EA 3A340	SHOPP	Short term
	70	2018-2020	Not assigned	MER	19.180	19.180	SR-99	RWIS	TBD	SHOPP	Long term

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Yellow: Proposed
* RTP - Tier 1 Tier 2 (Yes/No)
**SHOPP - Short term(0-4 yrs) Mid-term (5-7 yrs) Long term(8-10 yrs)

TABLE 5.1.0: SR-99 CSMP Ten Year Implementation Plan Project List

Corridor Segment	Project ID		EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Primary Funding Source	RTP* SHOPP**
Seg. 7	71	2010	3A340	MER	19.020	19.020	SB SR-99	RWIS/CCTV	Included in EA 3A340	SHOPP	Short term
	72	2008	0E720	MER	20.372	20.372	SB on-ramp from Buhach Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	73	2008	0E720	MER	20.449	20.449	SB off-ramp to Buhach Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
Seg. 8	74	2008	0E720	MER	20.549	20.549	NB off-ramp to Buhach Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	75	2008	0E720	MER	20.615	20.615	NB on-ramp from Buhach Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	76	2018-2020	Not assigned	MER	20.680	20.680	NB SR-99	CMS/TMS	TBD	SHOPP	Mid-term
	77	2008	0E720	MER	20.944	20.944	SB on-ramp from Atwater Blvd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	78	2018-2020	Not assigned	MER	21.180	21.180	SR-99	RWIS	TBD	SHOPP	Long term
	79	2008	0E720	MER	21.421	21.421	NB off-ramp to Atwater Blvd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	141	TBD	Not assigned	MER	21.65	21.65	Along Southern Pacific Rail Road	Class I Bicycle Path	TBD	SHOPP	No
	80	2015-2017	Not assigned	MER	21.800	21.800	SB SR-99	CMS/TMS/CCTV	TBD	SHOPP	Mid-term
	81	2015-2017	Not assigned	MER	22.000	22.000	NB SR-99	CMS/TMS/CCTV	TBD	SHOPP	Mid-term
	82	2015-2017	3A720	MER	22.680	22.680	NB SR-99	CMS/TMS/CCTV	$10,760	SHOPP	Mid-term
	142	TBD	Not assigned	MER	22.76	22.76	Applegate Rd.	Class II Bicycle Lane	TBD	SHOPP	No
	83	2008	0E720	MER	22.790	22.790	SB on-ramp from Applegate Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	84	2008	0E720	MER	22.794	22.794	NB off-ramp to Applegate Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	85	2008	0E720	MER	22.849	22.849	NB on-ramp from Applegate Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	86	2008	0E720	MER	22.865	22.865	SB off-ramp to Applegate Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	87	2018-2020	Not assigned	MER	23.180	23.180	SR-99	RWIS	TBD	SHOPP	Long term
	134	TBD	Not assigned	MER	TBD	TBD	Atwater-Winton area	Park and Ride	TBD	SHOPP	No
	88	2015-2017	Not assigned	MER	23.680	23.680	SB SR-99	CMS/TMS	TBD	SHOPP	Mid-term
	89	2008	0E720	MER	23.733	23.733	NB on-ramp from Atwater Blvd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
Seg. 9	90	2008	10-41481_ 1	MER	23.8	R26.5	In and Near Atwater from 0.25 mi. N. of Atwater OH to 0.25 mi. S. of Arena Way.	Atwater Freeway- Convert 4-lane expressway to 6-lane freeway	$48,002	STIP 1998 PS&E/RW	Tier 1-C Funded
	91	2011	10-41482_1	MER	23.8	R26.5	In Merced County in and near Atwater from 0.25 mi. N. of Atwater OH to 0.25 mi. S. of Arena Way.	Atwater Highway Planting and Irrigation.	$4,973	STIP 2011 PS&E/RW	Tier 1
	92	2018-2020	Not assigned	MER	23.800	23.800	SR-99	RWIS	TBD	SHOPP	Long Term
	93	2008	0E720	MER	24.149	24.149	SB off-ramp to Atwater Blvd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	94	2012	41481	MER	25.690	25.690	NB SR-99	CMS/TMS		SHOPP	Short term

Green: Programmed/Funded
Pink: Construction Completed
Blue: Planned
Yellow: Proposed
* RTP - Tier 1 Tier 2 (Yes/No)
**SHOPP - Short term(0-4 yrs) Mid-term (5-7 yrs) Long term(8-10 yrs)

TABLE 5.1.1: SR-99 CSMP Ten Year Implementation Plan Project List

Corridor Segment	Project ID	Begin Const.	EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Primary Funding Source	RTP* SHOPP**
Seg. 10	95	2005	10-3169E_1	MER	26.5	R28.8	Near Livingston from 0.25 mi. S. of Arena Way to 0.25 mi. S. of Hammett Ave. OC	Livingston Freeway Stage 2 - Construct Freeway to S. of Livingston	$35,584	STIP 1998 Construction	Tier 1 B Funded
	139	TBD	Not assigned	MER	26.5	1.63	Cities of Hilmar, Delhi, Livingston and Ballico	Dial-a-Ride Expansion	TBD	Not assigned	No
	96	2013	10-OQ120_0	MER	26.8	R37.3	Livingston-Delhi - from Stanislaus/Merced Co. line to 0.25 mi. S. of Hammatt Ave OC	Merced Median Widening - Widen From 4 lanes to 6 lanes; SB off-ramp to Winton Pkwy - Add deceleration lane.	$80,500	STIP 2008 PA&ED	Tier 1-F
	97	2018-2020	Not assigned	MER	27.45	31.524	NB SR-99 N. of Sultanan Dr./Liberty Ave. OC to NB SR-99 at Merced River	3.748 mi. distance PeMS Gap	TBD	SHOPP	Long term
	98	2008	10_3169C_1	MER	26.8	R27.6	On SR-99 in Merced County, near the City of Livingston from Arena Way to 0.3 mi. S. of Hunter Rd.	Delhi Corridor Tree Planting	$900	STIP 1998 PS&E/RW	Tier 1
Seg. 11	99	2008	0E720	MER	28.812	28.812	SB on-ramp from Hammatt Ave.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	100	2008	0E720	MER	28.828	28.828	NB off-ramp to Hammatt Ave.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	143	TBD	Not assigned	MER	29.00	29.00	Hammatt Ave.	Class II Bicycle Lane	TBD	Not assigned	No
	101	2018-2020	Not assigned	MER	R29.097	R29.097	SR-99	RWIS	TBD	SHOPP	Long term
	102	2008	0E720	MER	29.191	29.191	NB on-ramp from Hammatt Ave.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	103	2008	0E720	MER	29.206	29.206	SB off-ramp to Hammatt Ave.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	104	2015-2017	Not assigned	MER	R29.47	R29.47	NB SR-99	CMS/TMS	TBD	Not assigned	Mid-term
	105	2008	0E720	MER	30.202	30.202	SB on-ramp from Winton Pkwy	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	106	2008	0E720	MER	30.209	30.209	NB off-ramp to Winton Pkwy.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	144	TBD	Not assigned	MER	30.50	30.50	Winton Way	Class II Bicycle Lane	TBD	Not assigned	No
	107	2008	0E720	MER	30.562	30.562	SB off-ramp to Winton Pkwy.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	108	2008	0E720	MER	30.609	30.609	NB on-ramp from Winton Pkwy.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	109	2015-2017	Not assigned	MER	R31.4	R31.47	SB SR-99	CMS/TMS	TBD	SHOPP	Mid-term
	110	2008	0E720	MER	31.655	31.655	NB off-ramp to Collier Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	111	2008	0E720	MER	31.743	31.743	SB on-ramp from Collier Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	112	2008	0E720	MER	32.197	32.197	SB off-ramp to Collier Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	113	2018-2020	Not assigned	MER	31.926	34.625	NB SR-99 Collier Rd. UC to NB SR-99 and Shanks Rd.	2.874 mi. distance PeMS Gap	TBD	SHOPP	Long term
	114	2008	0E720	MER	32.208	32.208	NB on-ramp from Collier Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	115	2008	0E720	MER	32.569	32.569	SB on-ramp from Weigh Station	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term

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**SHOPP - Short term(0-4 yrs) Mid-term (5-7 yrs) Long term(8-10 yrs)

TABLE 5.1.1: SR-99 CSMP Ten Year Implementation Plan Project List

Corridor Segment	Project ID	Begin Const.	EA/RTP MPO ID	County	PM Beg.	PM End	Location	Description	Total Cost (1,000)	Primary Funding Source	RTP* SHOPP**
Seg. 11	116	TBD	Not assigned	MER	35.43	0.00	SB SR-99 from Bradbury OC to Merced/Stanislaus County line	1.75 mi. distance PeMS Gap	TBD	SHOPP	Long Term
	117	2008	10_0L580	MER	R32.6	37.2	On SR-99 in the community of Delhi	Highway Planting	$0	STIP	Tier 1
	118	2008	0E720	MER	32.710	32.710	SB off-ramp to Weigh Station	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	119	TBD	Not assigned	MER	33.470	33.470	NB SR-99	CMS/TMS	TBD	SHOPP	Mid-term
	146	TBD	Not assigned	MER	33.55	33.55	South Ave. over SR-99	Class II Bicycle Lane	TBD	Not assigned	No
	147	TBD	Not assigned	MER	33.63	33.63	Stephens St./El Capitan	Class II Bicycle Lane	TBD	Not assigned	No
	120	2008	0E720	MER	33.631	33.631	SB on-ramp from Stephens St.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	121	2008	0E720	MER	34.227	34.227	NB off-ramp to Shanks Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	122	2008	0E720	MER	34.287	34.287	SB on-ramp to Shanks Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	148	TBD	Not assigned	MER	34.43	34.43	Shanks Rd. over SR-99	Class II Bicycle Lane	TBD	Not assigned	No
	123	2008	0E720	MER	34.625	34.625	NB on-ramp from Shanks Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	124	2008	0E720	MER	34.663	34.663	SB off-ramp to Shanks Rd.	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	125	2015-2017	Not assigned	MER	35.47	35.47	NB SR- 99	CMS/TMS	TBD	SHOPP	Mid-term
	149	TBD	Not assigned	MER	35.52	35.52	Bradbury Rd. over SR-99	Class II Bicycle Lane	TBD	Not assigned	No
	126	TBD	Not assigned	MER	35.43	0.00	Bradbury Rd. OC to Merced/Stanislaus County Line	1.75 mi. distance PeMS Gap	TBD	SHOPP	Long term
	127	2018-2020	Not assigned	MER	35.97	35.97	SR-99	RWIS	TBD	SHOPP	Long term
	128	2008	0E720	MER	36.069	36.069	SB on-ramp from Golden State	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	129	2008	0E720	MER	36.146	36.146	NB off-ramp to Golden State	Traffic Monitoring Station	Included in EA 0E720	SHOPP	Short term
	130	TBD	Not assigned	MER	36.67	36.67	SB SR-99	CMS/TMS	TBD	SHOPP	Mid-term
	131	2010	3A340	MER	36.780	36.780	SB SR-99	CMS/TMS/CCTV	Included in EA 3A340	SHOPP	Short term

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APPENDIX

FIGURES AND TABLES

REFERENCE MATERIAL

FIGURE 1: SR-99 CSMP Letter of Intent

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
P.O. BOX 2048 (1976 E. CHARTER WAY)
STOCKTON, CA 95201 (95205)
TTY: California Relay Service (800) 735-2929
PHONE (209) 948-7943
FAX (209) 948-3670

Flex your power!
Be energy efficient!

March 20, 2008

Marjorie Kirn
Executive Deputy Director
Merced County Association of Governments
369 West 18th Street
Merced, CA 95340

Dear Ms. Kirn:

This letter is to communicate our intent to work, in partnership, with the Merced County Association of Governments (MCAG) to jointly develop the State Route 99 (SR-99) Corridor System Management Plan (CSMP). The CSMP is a guide for managing the corridor among all partners, and the process is intended to develop and implement a CSMP across all jurisdiction and modes for the highest mobility benefits to travelers in the corridor.

The Department of Transportation, District 10 is committed to a coordinated and cooperative effort with MCAG and our other regional agency partners in the Central Valley to improve mobility and performance along the SR-99 Corridor. This is a statewide effort to bring SR-99 up to freeway standards. This includes working with local partners throughout the San Joaquin Valley.

District 10 is coordinating the preparation of two CSMPs for the SR-99 corridor segments in Merced and San Joaquin Counties respectively. CSMPs are required pursuant to the SR-99 Infrastructure Bond Program and undertaken in conjunction with two programmed projects to convert SR-99 from a four-lane expressway to a six lane freeway (The SR-99 Arboleda Project – construction to begin 2010 and the SR-99 Plainsburg Project – construction to begin 2011). The confirmed corridor limits for the SR-99 CSMP in the Merced segment area is: SR-99 north of SR-152 in Madera County to SR-165 in Stanislaus County (City of Turlock).

On August 23, 2007, our internal SR-99 CSMP development team met with you for the purpose of reviewing requirements, purpose, and scope of the SR-99 CSMP in the Merced area. The CSMP document will be framed similar to a Transportation Concept Report (TCR), but will be modified to emphasize operational aspects, the identification of specific areas of traffic congestion, identify causes, and then identify strategies, actions, and projects to remove congestion.

MCAG and District 10 are committed to undertake this work with a delivery date of October 2008. Initially, this commitment is between District 10 and MCAG, but will be conveyed to other local agencies and the public, for their input, as the process is broadened with additional outreach and education on the value of system and corridor management. This letter will be included in the CSMP document to demonstrate our commitment to actively participate in this collaborative effort. Please sign and return at your earliest convenience.

I look forward to our continued cooperation during development and implementation of the SR-99 CSMP dedicated to the highest mobility benefits to travelers in the San Joaquin Valley. If you have any questions please do not hesitate to contact Annette Clark of my staff at (209) 948-3975, or me at (209) 948-7906.

Sincerely,

3/20/08
Date

Ken Baxter
Deputy Director
Division of Planning and Local Assistance
Caltrans District 10

3/24/08
Date

Marjorie Kirn
Executive Deputy Director
Merced County Association of Governments

GLOSSARY OF TERMS

AADT	Average Annual Daily Traffic
BNSF	Burlington Northern Santa Fe
CCTV	Closed Circuit Television
CHP	California Highway Patrol
CMS	Changeable Message Sign
FHWA	Federal Highway Administration
HAR	Highway Advisory Radio
HICOMP	State Highway Congestion Monitoring Program
I/C	Interchange
ICES	Inter-modal Corridor of Economic Significance
IRRS	Interregional Road System
IT	Information Technology
LOS	Level of Service
MAD	Madera County
MCTC	Madera County Transportation Commission
MER	Merced County
MCAG	Merced County Association of Governments
NTN	National Truck Network
OH	Overhead
OC	Over-crossing
PeMS	Performance Measurement System
PSR	Project Study Report
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWIS	Roadside Weather Information System
SHOPP	State Highway Operations Protection Program
SP	Southern Pacific Rail Road
SR	State Route
STA	Stanislaus County
STANCOG	Stanislaus Council of Governments
STIP	State Transportation Improvement Program
STRAHNET	Strategic Highway Network
TMC	Transportation Management Center
TMS	Traffic Monitoring Station or Transportation Management System
UC	Under-crossing
UP	Union Pacific Rail Road

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