

**StanCOG 2010
Regional Expressway Study Update**



Regional Expressway Study

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(StanCOG)

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EXECUTIVE SUMMARY

BACKGROUND

Setting

Stanislaus County is one of the fastest growing regions in California. The population has surged from 373,650 in 1990 to 530,584 in 2010 and is projected to grow to over 800,000 by 2040. This growth is fueled, in part, by the region's availability of land and affordable housing and its proximity to the job-rich San Francisco Bay Area. Local and regional traffic conditions are increasingly congested, and without substantial transportation improvements, they will continue to deteriorate with the County's projected growth. Even with improvements to the freeway network included in the 2011 Stanislaus Council of Governments (StanCOG) Regional Transportation Plan (RTP), travel forecasts indicate that the freeway system cannot fully accommodate the increased regional travel demand.

1990 Regional Expressway Study

Stanislaus County has pursued a strategy of planning for and implementing regional expressway facilities for the last 20 years, initiated by a comprehensive regional expressway study adopted in 1990. In 1990, StanCOG, then called the Stanislaus Area Association of Governments, in cooperation with the 10 jurisdictions in the county, prepared the region's first Regional Expressway Study. Based on growth projections and travel demand models, it was determined that "the planned improvements [to non-expressways] will not provide sufficient capacity to off-set expected traffic growth. About 26% of all travel will occur at congested levels considered unacceptable (Level of Service D, E or F) and about half of this (12%) will occur under extreme congestion (LOS F)."

While the region did not reach the population projections established in the 1990 Study, congestion is still an issue that needs to be addressed. The 1990 Regional Expressway Study assessed the need for regional expressways, established goals and objectives for a regional expressway system, and identified candidate expressway corridors. Through this process, the study identified 26 expressway corridors (see Table 1.1).

The Study further provided guidance for implementing the proposed regional expressway system. The Study prioritized the implementation of the regional expressway system, grouping expressway corridors into five groups based on priority—their relative importance to relieving traffic congestion and meeting other regional expressway goals. Finally, the 1990 Regional Expressway Study compiled cost estimates for constructing the regional expressway system.

TABLE 1-1
 1990 REGIONAL EXPRESSWAY SYSTEM STUDY

ID	Route	Segment		Priority Group
		From	To	
1	SR 132	SR 99	Dakota Corridor	1
2	SR 132	Dakota Corridor	San Joaquin Co. Line	2
3N	Dakota Corridor (North)	SR 99	SR 132	3
3S	Dakota Corridor (South)	SR 132	Paradise Road/Carpenter Road	5
4	Kiernan/Claribel Corridor	Dakota Corridor	Claus Road	2
5S	Faith Home Road	SR 99	Hatch Road	1
5C	Claus Road / Garner Road	Hatch Road	Briggsmore Avenue	1
5N	Claus Road	Briggsmore Avenue	Kiernan/Claribel Corridor	1
6	Service Road	Faith Home Road	Carpenter Road	3
7S	Carpenter Road (South)	Service Road	Hatch Road	2
7C	Carpenter Road (Central)	Hatch Road	SR 132	1
7N	Carpenter Road (North)	SR 132	SR 99	1
8	Briggsmore Avenue	SR 99	Claus Road	1
9W	Hatch Road (West)	Carpenter Road	Faith Home Road	1
9E	Hatch Road (East)	Faith Home Road	Geer/Albers Road	4
10	Briggsmore Extension West	SR 99	Dakota Corridor	3
11	Briggsmore Extension East	Claus Road	Albers Road	4
12	Oakdale/Riverbank Bypass	Claus Road/Claribel Road	SR 120/108 Bypass	3
13	McHenry Avenue	Kiernan Corridor	SR 120 Escalon Bypass	3
14	Geer/Albers Road	Turlock (Zeering Road)	Oakdale/Riverbank Bypass	4
15	Waring/Verduga Corridor	Zeering Road	SR 99	4
16	Harding Road	SR 99	Washington Road	3
17	Washington Road	Taylor Road	Harding Road	3
18	Taylor Road Interchange	Washington Road	Golden State Boulevard	1
19	Keyes Road	SR 99	Geer Road	5
20	Golden State Extension	Keyes Road	Faith Home Road	2
21	Golden State Boulevard	Keyes Road	SR 99 (South of Turlock)	1
22	Taylor or Zeering Road	Golden State Boulevard	Waring Corridor	3
23	Patterson Bypass	San Joaquin River	Sperry Road	3
24	Stuhr Corridor	SR 33/Yolo Street	I-5/Stuhr Road	5
25	Sperry Road	Patterson Bypass	I-5	3
26	West Main Street	Washington Road	San Joaquin River (Poplar Ave)	3

STUDY PURPOSE

The 2010 Regional Expressway Study is intended to serve as an update to the 1990 Study, providing a review of the 1990 Study's implementation to date and providing modifications based on current population projections, travel demand forecasts, local and regional land use and transportation plans, and input from local agencies. Three tasks were undertaken as part of the update process:

- Conducting an inventory of existing expressway facilities and currently proposed expressways throughout the County (**Regional Expressway Inventory**)
- Identifying an updated regional expressway system based on the inventory of existing and proposed expressway facilities (**Planned Expressway System**)
- Initiating a discussion that incorporates expressways in a multi-modal approach to relieve congestion, increase transportation efficiency, and enhance environmental quality (**Transportation Planning for the Future**)

STUDY PROCESS

Regional Expressway Inventory

The 2010 Regional Expressway Study update began with a review of the 1990 Regional Expressway Study and the current local and regional land use and transportation plans. Based on this review, the inventory identifies general expressway characteristics, existing expressways, and planned future expressways.

The Stanislaus Council of Governments (StanCOG) also sought input on the agencies' land use and transportation plans to develop the expressway inventory and ultimately a draft regional expressway map.

Planned Regional Expressway System

Based on the planned expressway system from the 1990 Study, the regional expressway inventory, and input from stakeholder meetings, the 2010 Study update identifies a refined regional expressway system—a “refreshing” of the projects based on the latest demographic information and the planning policies from the local agencies.

In addition to the planned expressway corridors, this study also highlights major regional roadway facilities, including freeways, state highways, and county highways (J-routes), to show the integration of the planned expressway system into an interconnected regional roadway network.

Expressways and Regional Planning for the Future

The Regional Expressway Study is one of several regional transportation planning documents for the Stanislaus County region. To remain consistent with current regional planning documents and address a diverse range of transportation planning needs and values, this study also considered StanCOG's Congestion Management Process (CMP) and the Regional Transportation Plan (RTP), and identified transportation trends that may influence the future utilization of a regional expressway network.

NEXT STEPS

This report is intended to be considered by the local agencies for incorporation of regional expressway elements into their future general plans and other planning documents.

REGIONAL EXPRESSWAY INVENTORY

This chapter describes the initial step in the Regional Expressway Study update process: the inventory of expressways in the Stanislaus County region. The task of inventorying the existing and proposed expressway segments identified in the 1990 Regional Expressway Study was completed through field observations and a review of local general plans, street master plans, and ongoing regional roadway projects.

The 1990 Regional Expressway Study identified characteristics of an expressway; this provides good background information for this chapter and the Regional Expressway Study update.

EXPRESSWAY CHARACTERISTICS

The purpose of a regional expressway system is to improve connections between communities in the County, relieve congestion on freeways and arterials, and improve connectivity to adjacent counties in a cost-effective manner while supporting local land use plans. Expressways can exhibit a range of roadway design standards with varying levels of access control, design speeds, and traffic control. In general, most expressways have the following characteristics:

- Divided multi-lane facility, with cross-traffic and conflicting turning movements limited to specified locations
- Limited or prohibited access to and from abutting properties
- At-grade intersections generally limited to no less than half-mile intervals
- Right-in/right-out movements may be more frequently allowed; may also include acceleration and deceleration lanes
- Preference for traffic signal progression in urban areas
- Minimum design speed of 40 MPH

Expressway Classifications

1990 Regional Expressway Study

In the 1990 Stanislaus County Regional Expressway Study, the variation in expressway design was captured using three general expressway classifications. Each classification has differing levels of access control, traffic signal “green time” preference, and intersection/interchange spacing. These three expressway classes, as defined in the 1990 Regional Expressway Study, are described below.

- *Class “A” Expressway* – Class “A” expressways are fully access-controlled with grade-separated interchanges at crossings of other expressways, arterials, or collector roads. As a fully access-controlled facility, direct access to adjacent properties is prohibited. Class “A” expressways are most similar to freeways, but interchanges and design speeds are reduced from Caltrans and FHWA freeway standards.
- *Class “B” Expressway* – Class “B” expressways are partially access-controlled with traffic-controlled intersections at arterial roads and other expressways. Collector and local roads are permitted right-in, right-out access only at specified intervals ranging from a quarter to half mile. Class “B” expressways typically prohibit access to and from driveways and minor side streets.
- *Class “C” Expressway* – Class “C” expressways have minor access restrictions with traffic-controlled intersections at arterial roads and other expressways. Class “C” expressways are most similar to major arterial streets, but with more stringent access controls. Access standards vary between the jurisdictions, but generally allow intersections with collector and local roads at

specified intervals ranging from a quarter to half mile. Access to and from driveways and minor side streets are often limited to right-in/right-out access only.

2010 Regional Expressway Update

As part of the 2010 Regional Expressway Study update, it was determined that expressway classifications and design standards should be described and implemented by the local agencies' planning documents. Therefore, expressway characteristics have not been specifically designated for each facility. Instead, design standards for each expressway segment will be determined by the appropriate local jurisdiction and applicable local policy documents.

In most cases, Stanislaus County and the cities within the County have local design standards and expressway development guidelines that govern how expressways are implemented within their jurisdictions. Where expressways cross multiple jurisdictions, municipalities should coordinate with Stanislaus County, the Stanislaus Council of Governments (StanCOG), and adjacent jurisdictions to provide consistent design standards and reasonable transitions between jurisdictions.

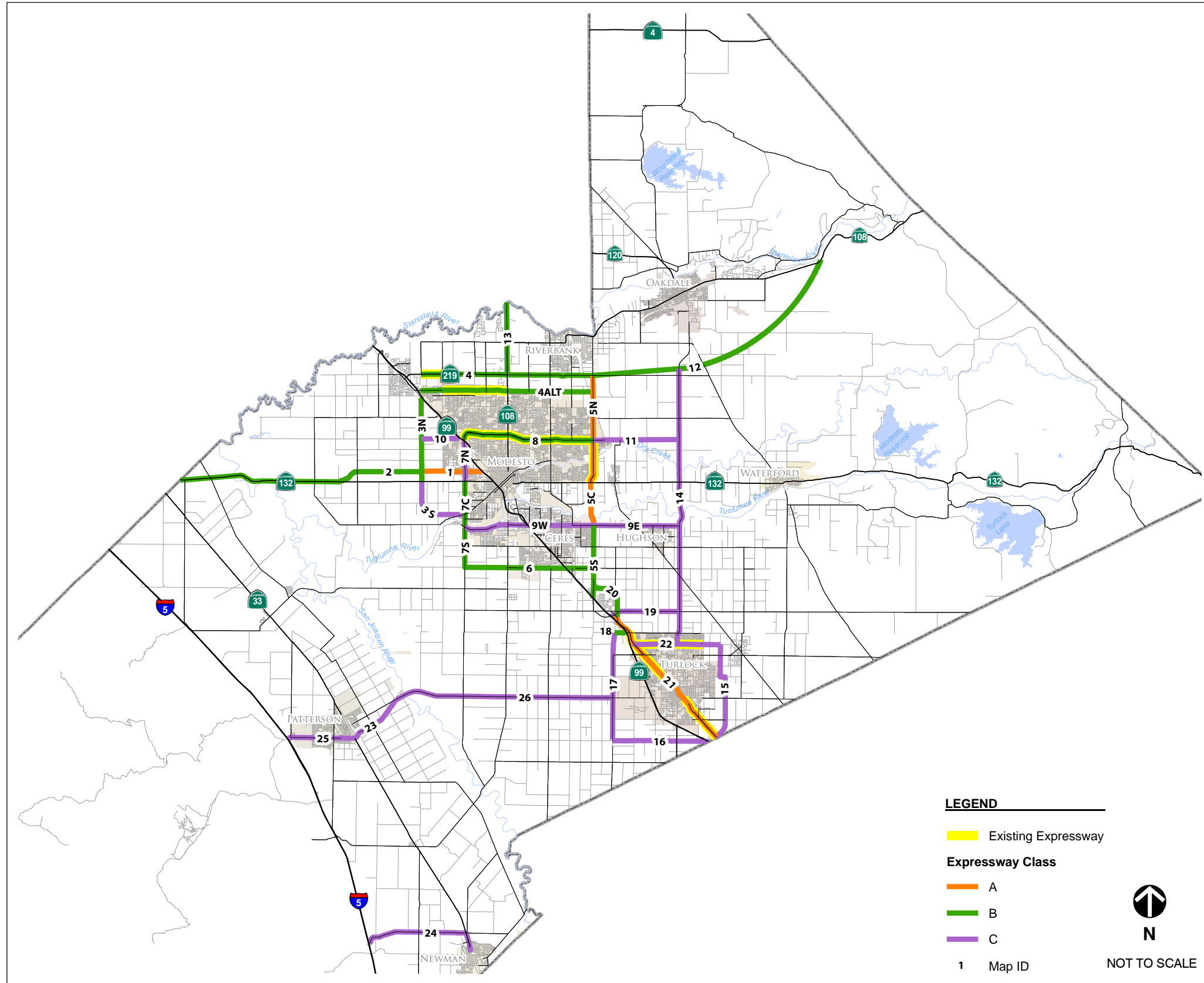
CURRENT EXPRESSWAY SYSTEM

The 1990 Stanislaus County Regional Expressway Study identified 26 expressway segments throughout the County (see Table 1-1). Figure 2.1 shows a map of these expressway segments along with a table describing the status of each segment.

As of 2010, six of the 26 expressway segments have been constructed or upgraded to expressway standards in whole or in part, with all of the existing expressways located in the urban areas of Modesto and Turlock. Table 2-1 summarizes and highlights these existing expressway segments and the extent of their construction.

TABLE 2-1 EXISTING EXPRESSWAYS IN STANISLAUS COUNTY						
Route	Segment		1990 Study		Status	
	From	To	ID#	Classification	Lanes	Classification
Kiernan Ave. (SR 219)	SR 99	Dale Rd.	4	Class B	4	Class B
Pelandale Ave.	Dale Rd.	McHenry Ave. (SR 108)	4	Class B	6	Class B
Claus Rd.	Briggsmore Ave.	Scenic Dr.	5C	Class A	4-6	Class C
	Scenic Dr.	Yosemite Blvd. (SR 132)	5C	Class A	4-6	Class B
Briggsmore Ave.	SR 99	Oakdale Rd.	8	Class B	4-6	Class C
	Oakdale Rd.	Claus Rd.	8	Class B	4	Class B
Golden State Blvd.	Taylor Rd.	Hawkeye Ave./ Fulkerth Rd.	21	Class A	4	Class C
	East Ave.	Berkeley Ave./ Golf Rd.	21	Class A	4	Class C
	Berkeley Ave./ Golf Rd.	Merced Co. Line	21	Class A	4	Class B
Christoffersen Pkwy.	Golden State Blvd.	Turlock City Limits	22	Class C	4	Class C

Source: City of Modesto General Plan, 2008; City of Turlock General Plan, 2002



Expressway Location				Current Status	
ID#	Route	From	To	Classification	# of Lanes
1	SR 132	SR 99	Dakota Ave or Nebraska Ave	Future Roadway - Not Yet Constructed	
2	SR 132	Dakota Ave or Nebraska Ave	San Joaquin Co. Line	Conventional Highway	2
3N	Dakota Corridor	SR 99	SR 132 Expressway (Kansas Ave)	Rural Road	2
3S	Dakota Corridor	SR 132 Expressway (Kansas Ave)	Paradise Rd/ Carpenter Rd	Future Roadway - Not Yet Constructed	
4	Kiernan Corridor	Dakota Corridor	Claus Rd	Conventional Highway	2
4ALT	Pelandale Corridor	Dakota Corridor	Claus Rd	Arterial/ Expressway	2/6
5N	Claus Rd	Clanbel Rd or Pelandale Ave	Briggsmore Ave	Arterial/ Expressway	2*
5C	Claus Rd/ Garner Rd	Briggsmore Ave	Hatch Rd	Expressway/ Industrial Collector	4/6
5S	Faith Home Rd	Hatch Rd	SR 99	Semi-Rural Arterial/Expwy	2
6	Service Rd	Carpenter Rd	Faith Home Rd	Rural Road/ Expwy	2
7N	Carpenter Rd	SR 99	SR 132	Major Arterial	4
7C	Carpenter Rd	SR 132	Hatch Rd	Major Arterial	2*
7S	Carpenter Rd	Hatch Rd	Service Rd	Rural Road	2
8	Briggsmore Ave	SR 99	Claus Rd	Expressway	4/6
9W	Hatch Rd	Carpenter Rd	Faith Home Rd	Urban Arterial/ Expressway	2/4
9E	Hatch Rd	Faith Home Rd	Geer Rd	Rural Road	2
10	Briggsmore Ave	SR 99	Dakota Corridor	Rural Road	2
11	Briggsmore Ave	Claus Rd	Albers Rd	Rural Road	2/4
12	Oakdale/Riverbank Bypass	Claus Rd/ Clanbel Rd	SR 120/108 Bypass	Future Roadway - Not Yet Constructed	
13	McHenry Ave	Kiernan Corridor	Escalon Bypass	Rural Highway	2
14	Geer Rd/ Albers Rd	Oakdale/ Riverbank Bypass	Zearing Rd (Christoffersen Pkwy)	Rural Highway	2
15	Waring Rd/ Verduga Rd	Zearing Rd (Christoffersen Pkwy)	SR 99	Rural Road	2
16	Harding Rd	Washington Rd	SR 99	Rural Road	2
17	Washington Rd	Taylor Rd	Harding Rd	Rural Road	2
18	Taylor Rd	Washington Rd	Golden State Blvd	Rural Road	2
19	Keyes Rd	SR 99	Geer Rd	Rural Highway	2
20	Golden State Extension	Keyes Rd	Faith Home Rd	Future Roadway - Not Yet Constructed	
21	Golden State Blvd	Keyes Rd	Through Turlock	Expressway/Arterial	2 & 4
22	(Christoffersen Pkwy) or Taylor Rd	Golden State Blvd	Waring Rd	Expressway	4
23	Patterson Bypass	Sperry Ave	San Joaquin River (Poplar Ave)	Future Roadway - Not Yet Constructed	
24	SR 33/Stuhr	SR 33/Orestimba Rd (Yolo St)	I-5/Stuhr Rd	Conventional Highway/Rural Road	2
25	Sperry Ave	Patterson Bypass	I-5	Arterial	2/4
26	West Main St	San Joaquin River (Poplar Ave)	Washington Rd	Rural Highway	2

LEGEND

Existing Expressway

Expressway Class

A

B

C

1 Map ID



NOT TO SCALE

CHANGES TO THE EXPRESSWAY NETWORK

A review of local general plans and street master plans in the County indicate that since the 1990 Regional Expressway Study, local jurisdictions have made several changes to the planned regional expressway network. Some expressway segments have been added to the planned system (Table 2-2), a few have been modified from their original description (Table 2-3), and several are no longer anticipated as expressways in these local planning documents (Table 2-4).

TABLE 2-2 ADDITIONAL PLANNED EXPRESSWAY FACILITIES					
Roadway	Segment		Facility Description	Jurisdiction	Source
	From	To			
Grayson Rd/ Howard Rd	I-5	Crows Landing Rd	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
Crows Landing Rd/ Fink Rd	I-5	Service Rd	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
SR 33	San Joaquin Co. Line	Patterson City Limits (North)	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
SR 33	Patterson City Limits (South)	Jensen Rd (Newman)	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
East Ave	Daubenberger Rd	Santa Fe Ave	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
Santa Fe Ave	South Ave (Empire)	Hatch Rd	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
Santa Fe Ave	7 th St. (Hughson)	Lester Rd (Denair)	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
Santa Fe Ave	Monte Vista Ave	Merced Co. Line	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
Yosemite Blvd (SR 132)	I St (Empire)	Eucalyptus Ave (Waterford)	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
Yosemite Blvd (SR 132)	Waterford City Limits (East)	Tuolumne Co. Line	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
SR 120	San Joaquin Co. Line	26 Mile Rd	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
SR 120	North County Corridor	Tuolumne Co. Line	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
SR 4	San Joaquin Co. Line	Calaveras Co. Line	4-lane Class C Expressway	Stanislaus County	Stanislaus County General Plan
Patterson – Northern Bypass	I-5 / Zacharias Rd	Las Palmas Ave/ Poplar Ave	Expressway	Stanislaus Co./ City of Patterson	Patterson General Plan Update

Regional Expressway Study

Several expressway segments from the 1990 Regional Expressway Study have been modified from their original description, often because of changes in local land use patterns or the results of more recent evaluations of the circulation system. Table 2-3 shows the modifications to the expressway segment limits.

TABLE 2-3 MODIFICATIONS TO THE 1990 REGIONAL EXPRESSWAY SYSTEM						
1990 Regional Expressway Study				Modification		
ID#	Roadway	Segment		Segment		Source
		From	To	From	To	
3S	Dakota Ave	Maze Blvd (SR 132)	Paradise Rd/ Carpenter Rd	Maze Blvd (SR 132)	Service Rd	Stanislaus County General Plan; Modesto General Plan
4	Kiernan Ave/ Claribel Rd	Dakota Corridor	Claus Rd	Chapman Rd	Claus Expwy ¹	Modesto General Plan
4	Pelandale Ave/ Claratina Ave	Dakota Corridor	Claus Rd	Dale Rd	Oakdale Rd	Modesto General Plan
5S	Faith Home Rd	Hatch Rd	SR 99	Hatch Rd	Keyes Rd	Stanislaus County General Plan
6	Service Rd	Carpenter Rd	Faith Home Rd	Dakota Ave	Geer Rd	Stanislaus County General Plan
12	Oakdale/ Riverbank Bypass	Claus Rd/ Claribel Rd	SR 108/120 Bypass	McHenry Ave (SR 108)	SR 108/120	North County Corridor Preliminary Design Report
17	Washington Rd	Taylor Rd	Harding Rd	SR 99	Harding Rd	Turlock General Plan; Stanislaus County General Plan
19	Keyes Rd	SR 99	Geer Rd	Faith Home Rd	Santa Fe Ave	Stanislaus County General Plan
22	Zeering Rd (Christoffersen)	Golden State Blvd	Waring Rd	Golden State Blvd	Lester Rd	Stanislaus County General Plan

Note: ¹Claus Expressway on Modesto General Plan alignment along Burlington Northern Santa Fe (BNSF) railroad

Several expressway segments identified in the 1990 Regional Expressway Study are no longer identified as planned expressway facilities in local general plans and street master plans. Table 2-4 lists these facilities.

TABLE 2-4 ELIMINATED EXPRESSWAY SEGMENTS					
1990 Regional Expressway Study				Classification	Explanation
ID #	Roadway	Segment			
		From	To		
7N	Carpenter Rd.	SR 99	Maze Blvd. (SR 132)	Principal Arterial ¹	Designated as a non-expressway Principal Arterial in Modesto General Plan.
7C	Carpenter Rd.	Maze Blvd. (SR 132)	Hatch Rd.	Principal Arterial ¹	Designated as a non-expressway Principal Arterial in Modesto General Plan.
10	Briggsmore Extension West	SR 99	Dakota Corridor	Minor Arterial ¹	Not shown in local general plans; extension across SR 99 limited by existing development
13	McHenry Ave.	Kiernan Corridor	Escalon Bypass	Major 4-lane ²	Designated as a non-expressway Major/Arterial in local general plans;
15	Waring Rd./ Verduga Rd.	Zeering Rd (Christoffersen)	SR 99	2-lane Collector ^{2,3}	Corridor has been removed from the planned expressway system ³
18	Taylor Rd.	Washington Rd.	Golden State Blvd.	2-lane Collector ^{2,3}	Corridor has been removed from the planned expressway system ³
20	Golden State Extension	Keyes Rd.	Faith Home Rd.	N/A	Not shown in any local general plan or current planning document
23	Patterson Bypass	San Joaquin River	Sperry Ave.	Bypass Alternative ⁴	Replaced by Northern Patterson Bypass alignment; Shown as a Bypass alternative ⁴
24	SR 33/Stuhr Rd.	SR 33/Orestimba Rd.	I-5/Stuhr Rd.	Major 4-lane ²	Designated as a non-expressway Major/Arterial in local general plans
25	Sperry Ave.	Patterson Bypass	I-5	Arterial ⁴	Designated as a non-expressway Arterial in City of Patterson General Plan

Notes: ¹ Modesto General Plan, 2008 ² County of Stanislaus General Plan, 2006
³ City of Turlock General Plan, 2002 ⁴ City of Patterson General Plan, 2010

Description of Eliminated Expressway Segments

Carpenter Road – SR 99 to Maze Boulevard (SR 132)

This segment of Carpenter Road is now designated as a Principal Arterial in the Modesto General Plan and a Major 4-lane road in the Stanislaus County General Plan for compatibility with local land uses.

Carpenter Road – Maze Boulevard (SR 132) to Hatch Road

This segment of Carpenter Road is now designated as a Principal Arterial in the Modesto General Plan, although it is shown as an expressway in the Stanislaus County General Plan. The Principal Arterial designation is assigned to this segment of Carpenter Road for compatibility with local land uses.

Briggsmore Extension West – SR 99 to Dakota Corridor

The extension of Briggsmore Avenue across SR 99 is not shown in any local General Plan, largely due to existing commercial development east of SR 99 that limits the opportunity to construct a new overpass. Shoemake Avenue west of SR 99 is designated as a Minor Arterial in the Modesto General Plan, although it is shown as an expressway in the Stanislaus County General Plan.

McHenry Avenue – Kiernan Corridor to Escalon Bypass

McHenry Avenue was designated as an expressway to connect Modesto and Stanislaus County with the planned SR 120 Bypass of Escalon in San Joaquin County. However, plans to construct the Escalon Bypass have been abandoned. Therefore, Stanislaus County had reclassified McHenry Avenue as a Major 4-lane street.

Waring/Verduga Corridor – Zeering Road (Christoffersen Parkway) to SR 99

According to the Turlock General Plan, the City has abandoned constructing the Waring/Verduga corridor to expressway standards.

Taylor Road – Washington Road to Golden State Boulevard

According to the Turlock General Plan, the City has abandoned constructing this segment of Taylor Road to expressway standards.

Golden State Extension – Keyes Road to Faith Home Road

This extension of Golden State Boulevard is not shown in any local general plan or current planning document. Plans to extend Golden State Boulevard as described in the 1990 Regional Expressway Study are no longer anticipated to be necessary.

Patterson Bypass – San Joaquin River to Sperry Avenue

The Patterson General Plan Update has identified the “Northern Bypass” alignment along Zacharias Road as the expressway bypass connecting I-5 with East Las Palmas Avenue near the San Joaquin River. The alignment described in the 1990 Regional Expressway Study is shown as an alternative bypass alignment.

SR 33/Stuhr Road – SR 33/Yolo Street to I-5/Stuhr Road

The two roadways that comprise this expressway are not designated as expressways in local general plans. The stretch of SR 33 between Yolo Street and Stuhr Road is classified as an Arterial in the Newman General Plan, while the segment of Stuhr Road between SR 33 and I-5 is designated as a Major 4-lane road in the Stanislaus County General Plan.

Sperry Avenue – Patterson Bypass to I-5

Sperry Avenue is now designated as an Arterial in the Patterson General Plan for compatibility with local land uses. Furthermore, with the Patterson Bypass now planned along the “Northern Bypass” alignment, upgrading Sperry Avenue to expressway standards is not needed to connect the regional expressway system to I-5 west of Patterson.

PLANNED EXPRESSWAY SYSTEM

Using the information collected in the regional expressway inventory and input received from the local agencies, this Study updates the expressways proposed in the Stanislaus County region. By reassessing the population projections and travel demand forecasts, and through an inventory of the local agencies general plans, this Study identifies the needed expressways in the region over the next 20 years.

IDENTIFICATION OF EXPRESSWAY SEGMENTS

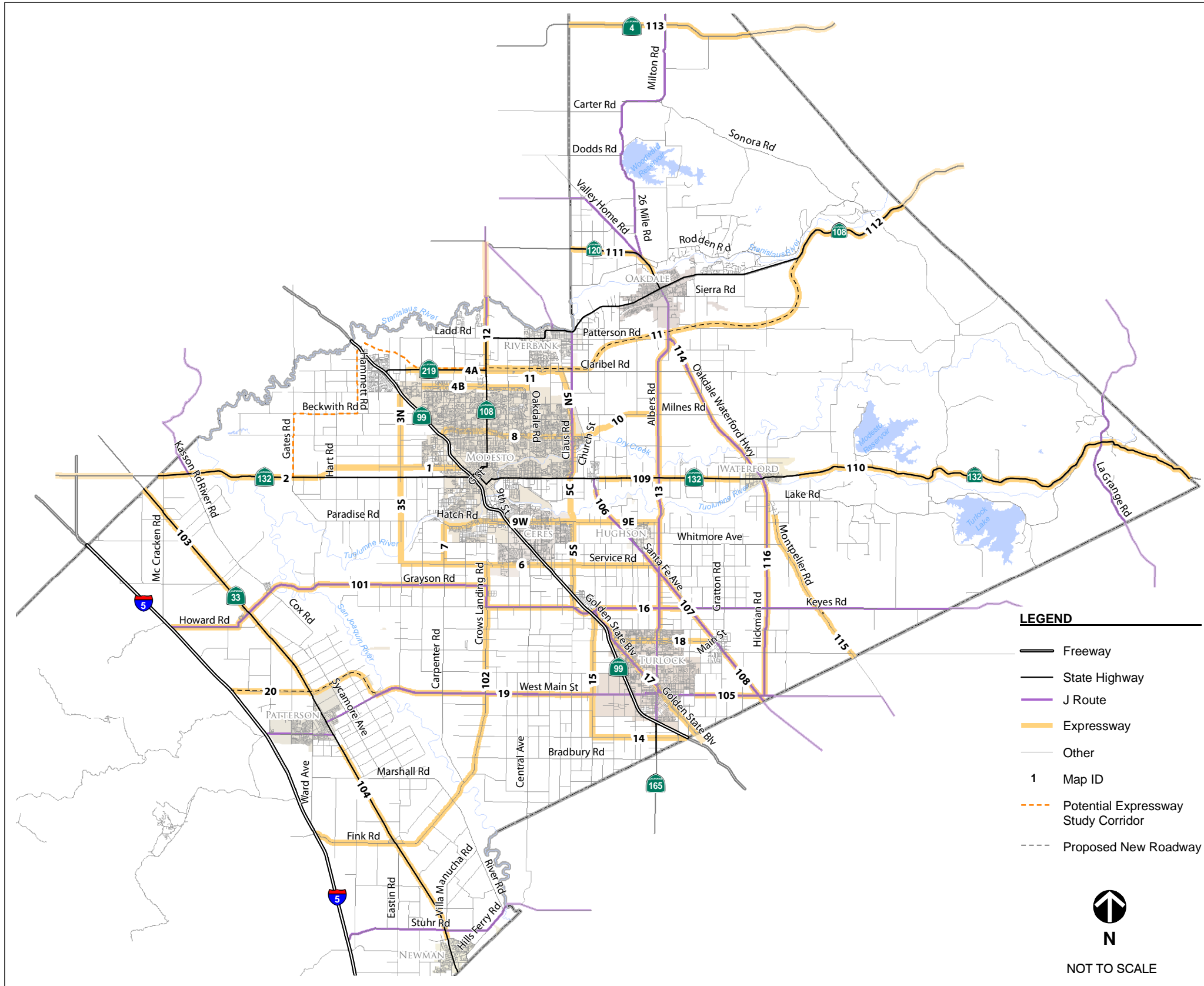
Identifying an updated regional expressway network began with the planned expressway system in the 1990 study and was modified using the information gathered in the regional expressway inventory. The inventory included a review of local general plans, street master plans, and planning and environmental studies on proposed regional roadway projects. Meetings with StanCOG and local agencies led to further refinement of the planned expressway system.

The local jurisdictions provided input into this update, including modifications to the planned regional expressway system—adding, modifying, and removing expressway segments—and identifying study corridors for potential future regional expressways. To address regional connectivity it was also recommended that freeways, state routes, and county J-routes be included on the regional expressway map. This provides greater detail on how all major transportation facilities function to distribute traffic to desired locations within and beyond Stanislaus County.

The following changes were made to the planned regional expressway network:

- The previously planned SR-120 Oakdale Bypass Expressway north of Oakdale was removed from the regional expressway system
- McHenry Avenue north of Kiernan Avenue that is identified as a non-expressway Major in the Stanislaus County General Plan was added as an expressway facility from Kiernan Avenue to the San Joaquin County line
- Oakdale-Waterford Highway, Montpelier Road, and Hickman Road were added as expressway facilities
- The expressway designation on Keyes Road was extended west from its current terminus at Faith Home Road to Crows Landing Road
- Potential Expressway Study Corridors were identified as follows:
 - North County Corridor between SR 99 and McHenry Avenue (SR 108)
 - Between the Hammett Road interchange at SR 99 and Gates Road / SR 132 along existing county roadways
- North County Corridor and Patterson Bypass were shown as proposed new roadways

Figure 3.1 depicts the updated regional expressway system.



ID#	Expressway/Freeway Facility			Current Status		Future/Planned Classification	
	Route	From Segment	To	Classification	# of Lanes	County GP Designation	City GP Designation
1	SR 132	SR 99	Dakota Ave	Future Roadway - Not Yet Constructed		Expressway (4 Lanes)	Expressway (4 Lanes)
2	SR 132	Dakota Ave	San Joaquin Co. Line	Conventional Highway	2	Expressway (4 Lanes)	N/A
3N	Dakota Ave	SR 99	SR 132 (Modesto Freeway)	Rural Road	2	Expressway (4/6 Lanes)	Expressway (4/6 Lanes)
35	Dakota Ave	SR 132 (Modesto Freeway)	Service Rd	Future Roadway - Not Yet Constructed		Expressway (4 Lanes)	Expressway (4 Lanes)
4A	Kiernan Ave/ Claribel Rd	Chapman Ave	Claus Rd	Conventional Highway	2	Expressway (6 Lanes)	Expressway (6 Lanes)
4B	Pelandale Ave/ Claratina Ave	Dale Rd	Oakdale Rd	Arterial/Expressway	2/6	Expressway (4/6 Lanes)	Expressway (6 Lanes)
5N	Claus Rd	Claribel Rd	Briggsmore Ave	Arterial/Expressway	2'	Expressway (6 Lanes)	Expressway (6 Lanes)
5C	Claus Rd/ Garner Rd	Briggsmore Ave	Hatch Rd	Expressway/ Industrial Collector	4/6	Expressway (4 Lanes)	Expressway (6 Lanes)
55	Faith Home Rd	Hatch Rd	Keyes Rd	Semi-Rural Arterial/Expwy	2	Expressway (4 Lanes)	Expressway
6	Service Rd	Dakota Ave	Geer Rd	Rural Road/Expwy	2	Expressway (4 Lanes)	Expressway/ Arterial
7	Carpenter Rd	Hatch Rd	Service Rd	Rural Road	2	Expressway (6 Lanes)	Principal Arterial/ Expressway
8	Briggsmore Ave	SR 99	Claus Rd	Expressway	4/6	Not Shown in County GP	Expressway (6 Lanes)
9W	Hatch Rd	Carpenter Rd	Faith Home Rd	Urban Arterial/ Expressway	2/4	Expressway (4 Lanes)	Expressway
9E	Hatch Rd	Faith Home Rd	Geer Rd	Rural Road	2	Expressway (4 Lanes)	Expressway/ Arterial
10	Briggsmore Ave	Claus Rd	Albers Rd	Rural Road	2/4	Expressway (4 Lanes)	Expressway (4 Lanes)
11	North County Corridor	SR 99 / Hammett Rd	SR 120/108	Future Roadway - Not Yet Constructed		Not shown in County GP	Not shown in City GPs
12	McHenry Ave	Kiernan Ave (SR 219)	San Joaquin Co. Line	Rural Highway	2	Major 4-Lane	N/A
13	Geer Rd/ Albers Rd	North County Corridor	Christoffersen Pkwy	Rural Highway	2	Expressway (4/6 Lanes)	N/A
14	Harding Rd	Washington Rd	SR 99	Rural Road	2	Expressway (4 Lanes)	Expressway
15	Washington Rd	Taylor Rd	Harding Rd	Rural Road	2	Expressway (4 Lanes)	Expressway
16	Keyes Rd	Crows Landing Rd	Santa Fe Ave	Rural Highway	2	Expressway (4/6 Lanes)	Expressway/ Arterial
17	Golden State Blvd	Keyes Rd	Merced Co. Line	Expressway/Arterial	2 & 4	Major 4-Lane/ Expressway (4 Lanes)	Expressway
18	Christoffersen Pkwy	Golden State Blvd	Lester Rd (Denair)	Expressway	4	Expressway (4 Lanes)	Expressway
19	West Main St	San Joaquin River (Poplar Ave)	Washington Rd	Rural Highway	2	Expressway (4/6 Lanes)	N/A
20	Patterson Bypass	I-5/Zacharias Rd	San Joaquin River (Poplar Ave)	Future Roadway - Not Yet Constructed		Not Shown in County GP	Expressway
101	Grayson/Howard	I-5	Crows Landing Rd	Rural Highway	2	Expressway (4 Lanes)	N/A
102	Crows Landing/Fink	I-5	Service Rd	Rural Highway	2	Expressway (4/6 Lanes)	N/A
103	SR 33	Patterson City Limits	San Joaquin Co. Line	Conventional Highway	2	Expressway (4 Lanes)	N/A
104	SR 33	Patterson City Limits	Jensen Rd (Newman)	Conventional Highway	2	Expressway (4 Lanes)	N/A
105	East Ave	Verduga Rd	Santa Fe Ave	Rural Road	2	Expressway (4 Lanes)	Arterial/2-Lane Collector
106	Santa Fe	South Ave (Empire)	Hatch Rd	Rural Highway	2	Expressway (4 Lanes)	N/A
107	Santa Fe	7th St (Hughson)	Lester Rd (Denair)	Rural Highway	2	Expressway (4 Lanes)	Arterial
108	Santa Fe	Monte Vista Ave	Merced Co. Line	Rural Highway	2	Expressway (4 Lanes)	N/A
109	Yosemite Blvd (SR 132)	I St (Empire)	Eucalyptus (Waterford)	Conventional Highway	2	Expressway (4 Lanes)	N/A
110	Yosemite Blvd (SR 132)	Waterford City Limit	Tuolumne Co. Line	Conventional Highway	2	Expressway (4 Lanes)	N/A
111	SR 120	San Joaquin Co. Line	26 Mile Rd	Conventional Highway	2	Expressway (4 Lanes)	N/A
112	SR 120	North County Corridor	Tuolumne Co. Line	Conventional Highway	2	Expressway (4 Lanes)	N/A
113	SR 4	San Joaquin Co. Line	Tuolumne Co. Line	Conventional Highway	2	Expressway (4 Lanes)	N/A
114	Oakdale-Waterford Rd	Albers Rd	Waterford City Limits	Rural Road	2	Major 4-Lane	N/A
115	Montpelier Rd	TID Canal (South of Hickman)	Merced Co. Line	Rural Road	2	Collector	N/A
116	Hickman Rd	Yosemite Blvd (SR 132)	East Ave	Rural Highway	2	Collector	N/A
	Interstate 5	Merced Co. Line	San Joaquin Co. Line	Freeway	4	6-Lane Freeway	
	SR 99	Merced Co. Line	San Joaquin Co. Line	Freeway	6	8-Lane Freeway	

Note: North County Corridor (11) alignment still under study.
Patterson Bypass (20) alignment still under study.

Regionally Significant Roadways (Non-Expressways)

To plan for future population growth and best alleviate projected congestion, it was determined that freeways, state routes, and signed county routes (J-routes) should be depicted on the map in addition to expressways to show countywide connectivity and integration of regionally significant roadway facilities.

With each of the major (regional) roadway types included on the map, the implementing agencies have better information in planning for a comprehensive system to accommodate the movement of people and goods. Each of these additional roadway facilities are described below.

Freeways

Interstate 5 (I-5) and State Route (SR) 99 are the two freeway facilities in Stanislaus County. Both freeways are primary north-south corridors for the movement of people and goods throughout Stanislaus County and the San Joaquin Valley. These routes carry a significant number of interregional trips between southern and northern California, and are major trucking routes.

- *I-5* is a 4-lane freeway facility that runs along the west side of Stanislaus County and the San Joaquin Valley adjacent to the Coast Range. It is located entirely in the unincorporated county with infrequent interchanges that provide access to the cities and communities in western Stanislaus County, including the cities of Newman and Patterson and the unincorporated communities of Westley, Grayson, and Crows Landing. I-5 is a major federal interstate highway that extends from the Canadian border to Mexico.
- *SR 99* is a 6-lane freeway facility in Stanislaus County, and connects the largest urban areas in the County to other metropolitan areas in the San Joaquin Valley. The three largest cities in the County (Modesto, Turlock, and Ceres) are located along the SR 99 corridor, as are the unincorporated communities of Keyes and Salida. Together, these cities and communities account for approximately two-thirds of the County's total population.

State Highways

In addition to the I-5 and SR 99 freeways, seven state highways traverse Stanislaus County: State Routes 4, 33, 108, 120, 132, 165, and 219.

- *SR 4* is a two-lane east-west facility that runs through the northeastern part of the County. It is primarily a commute and recreational route for traffic traveling to and from communities in Calaveras County and the Sierra Nevada. The entire length of SR 4 in Stanislaus County is included as an expressway facility in this study.
- *SR 33* is a two-lane north-south highway that parallels I-5 on the west side of the County. SR 33 travels through the cities of Newman and Patterson and the unincorporated communities of Crows Landing and Westley. This facility is planned to be an expressway outside of the urban areas of Patterson and Newman.
- *SR 108* is an east-west highway that travels through the center of the cities of Modesto, Riverbank, and Oakdale. Its junction with SR 99 in central Modesto is its current western terminus. To the east, SR 108 continues towards Sonora in Tuolumne County and the recreational areas of Stanislaus National Forest. As part of the proposed North County Corridor project, Caltrans plans to replace the existing SR 108 alignment through Riverbank and Oakdale with the proposed North County Corridor expressway. If constructed, the new SR 108 would pass south of Riverbank and Oakdale, connecting to SR 219 and the existing SR 108 alignment north of Modesto, and to SR 120 approximately six miles east of Oakdale.

- *SR 120* runs east-west through the City of Oakdale and near the unincorporated community of Knights Ferry in the northeastern part of the County. It is a major recreational route for traffic traveling to and from Yosemite National Park and the adjacent Sierra Nevada areas. It is co-signed with SR 108 between Oakdale and west of Chinese Camp in Tuolumne County. It is planned as an expressway west of Oakdale from the San Joaquin County line to 26 Mile Road, as well as east of the North County Corridor to the Tuolumne County line where it has already been improved to a 4-lane expressway.
- *SR 132* is one of the primary east-west routes in the County, traveling the length of the County from I-580 and I-5 just west of the San Joaquin County line to Coulterville in Mariposa County. SR 132 passes through downtown Modesto, Empire, Waterford, and La Grange as it crosses Stanislaus County. Most of the segments outside the urban areas of Modesto, Empire, and Waterford are identified as expressways. In addition, studies are underway to investigate the potential to shift the alignment of SR 132 to a new expressway facility north of the current alignment on Maze Boulevard west of SR 99.
- *SR 165* is a two-lane north-south highway located in the southern portion of the County between the Merced County line and SR 99 in Turlock. It connects Turlock to the Merced County communities of Hilmar-Irwin and Los Banos as it heads south towards I-5.
- *SR 219* runs along Kiernan Avenue north of Modesto. It connects SR 99 in Salida at the Kiernan Avenue interchange to SR 108 (McHenry Avenue) just north of the Modesto city limits. The majority of this segment is planned as an expressway that will function as the primary connection between SR 99 and the initial segment of the proposed North County Corridor.

County Highways (J-Routes)

Stanislaus County features nine signed county J-Routes that provide interregional connections between communities within and outside Stanislaus County.

- *County Route J-3* is signed along Kasson Road north of SR 132 near Vernalis in the northwestern portion of Stanislaus County. It runs north to the San Joaquin County cities of Manteca, Stockton, and Lodi.
- *County Route J-6* is a north-south route that connects Modesto with the City of Escalon in San Joaquin County. It is signed along McHenry Avenue north of its junction with SR 108 at Ladd Road and Patterson Road. It heads north to the City of Escalon in San Joaquin County before continuing north to SR 26 east of Stockton.
- *County Route J-7* is signed along several roadways in Stanislaus County generally paralleling the Burlington Northern Santa Fe (BNSF) Railroad. It connects the communities of Denair, Hughson, Empire, Modesto, and Riverbank in Stanislaus County, and continues to Escalon and Stockton in San Joaquin County and Winton, Atwater, and Merced in Merced County. In Stanislaus County, it includes Santa Fe Avenue from the Merced County line to SR 132, Claus Road from SR 132 to SR 108, and First Street in Riverbank from SR 108 to the San Joaquin County line. Most of this route, excluding First Street and Claus Road in Riverbank and sections of Santa Fe Avenue in Denair, Hughson, and Empire, is identified as a future expressway.

- *County Route J-9* is signed along several county roads through the eastern section of the County as it heads north towards San Joaquin County. It includes Hickman Road south of Waterford, F Street in Waterford, Oakdale-Waterford Highway, Albers Road north of Oakdale-Waterford Highway, Valley Home Road, and Lone Tree Road. Along its route, it connects the communities of Valley Home, Oakdale, Waterford, and Hickman. It also connects these communities to the San Joaquin County community of French Camp as it heads west towards I-5. The segment north of Waterford along Oakdale-Waterford Highway is identified as a future expressway.
- *County Route J-14* is a north-south route that connects Turlock, Hughson, and Oakdale as it heads north towards SR 26 and Rancho Calaveras in Calaveras County. It is signed along Lander Avenue, Olive Street, Golden State Boulevard, and Geer Road in Turlock; Geer Road, Albers Road, and Yosemite Avenue from Turlock to Oakdale; and 26 Mile Road, Sonora Road, and Milton Road north of Oakdale. The segment between Turlock and Oakdale along Geer-Albers Road is identified as a future expressway.
- *County Route J-16* is an east-west route that connects the communities of Westley, Grayson, and Keyes. It runs along Howard Road, Grayson Road, Crows Landing Road, and Keyes Road as it heads from I-5 east towards Merced and Mariposa counties. The segment along Howard Road and Grayson Road is identified as a future expressway, as is a segment along Keyes Road between Crows Landing Road and Santa Fe Avenue.
- *County Route J-17* is an east-west route that connects Patterson and Turlock. It runs along Sperry Avenue, Las Palmas Avenue, West Main Street, and East Avenue in Stanislaus County as it heads east from I-5 towards SR 59 in Merced County. The segment along West Main Street from the San Joaquin River to Washington Road and along East Avenue from Verduga Road to Santa Fe Avenue is identified as a future expressway.
- *County Route J-18* runs east-west through the southwestern portion of the County. It runs just north of Newman along Stuhr Road and Hills Ferry Road, and is the primary connection from I-5 to Newman. Outside of Stanislaus County, it heads east through Merced County south of the communities of Hilmar-Irwin and Livingston towards SR 99.
- *County Route J-59* is signed along La Grange Road in the eastern portion of the County. It runs through the town of La Grange near SR 132. It connects to SR 59 to the south in the Merced County community of Snelling and to SR 108/120 to the north in Tuolumne County west of Jamestown and Chinese Camp.

TRANSPORTATION PLANNING FOR THE FUTURE

The 1990 Regional Expressway Study identified significant growth and traffic levels as key issues driving the need for a regional expressway system. As envisioned in the 1990 Study, the primary goal of the regional expressway system was to relieve traffic congestion on major travel corridors in the County.

Since the 1990 Regional Expressway Study was adopted, new legislation, environmental factors, and limited transportation funding have led to a greater emphasis on developing an integrated approach to relieving traffic congestion and planning for future transportation improvements. This includes focusing on all modes of transportation as a means to reduce vehicular traffic congestion, optimizing transportation investments, enhancing community development, and addressing environmental and economic sustainability.

Looking ahead, it is important that the implementation of the regional expressway system strive to achieve these goals. With this in mind, this Regional Expressway Study update identifies potential ways that the planned system can be incorporated into a multi-modal approach to reduce traffic congestion while also supporting multi-modal mobility and regional connectivity, improving travel demand and transportation system management, meeting environmental and economic goals, and efficiently serving all travelers in the region. It also discusses additional strategies to meet these goals as potential alternatives to constructing expressways.

TRANSPORTATION PLANNING CONTEXT

Many transportation planning documents for the region, such as StanCOG's recently adopted 2009 Congestion Management Process (CMP) and the 2011 Regional Transportation Plan (RTP), have already begun to lay the groundwork for employing a multi-faceted approach.

Congestion Management Plan

In June 1990, California voters approved legislation requiring Congestion Management Plans be developed to address congestion on California's highways and roads. The following year, the federal surface transportation authorization bill, Intermodal Surface Transportation Efficiency Act (ISTEA) introduced the Federal Congestion Management System (CMS). Subsequent reauthorizations of the federal surface transportation act have continued to shape the CMS to require travel demand management, operational management, air quality, and all modes of transportation be considered in managing congestion.

StanCOG first adopted a Congestion Management Plan in 1995, and continues to develop congestion management strategies consistent with state and federal legislation. In January 2010, the StanCOG Policy Board adopted the latest Congestion Management Process (CMP). The 2009 CMP includes a range of strategies to manage congestion as potential alternatives to roadway widening projects, including land use and growth management, public transit improvements, intelligent transportation systems (ITS) strategies, travel demand management (TDM) programs, and non-motorized transportation (bicycle and pedestrian) investments.

Regional Transportation Plan

Similar to the 2009 CMP, the 2011 Regional Transportation Plan (RTP) also addresses multi-modal strategies to improve the regional transportation system and reduce congestion on the roadway network. The 2011 RTP states that reducing congestion, commute times, and carbon emissions caused by growth is important to achieving a better quality of life. A primary focus of the 2011 RTP is to support development and transportation investments that reduce congestion and greenhouse gas (GHG) emissions while protecting agricultural land and natural resources and enhancing economic vitality. The

2011 RTP includes investments in transit, bicycle, pedestrian, air, and rail transport in addition to roadway improvements to support this approach.

Both the CMP and RTP acknowledge that the rural nature of the region has led to segregated land uses, which is a significant determinant of congestion. Land use and transportation planners recognize that an important part of addressing traffic congestion is managing the origin and destination of trips. Development patterns that encourage transit usage, walking, biking, and alternative modes of transportation ultimately reduce vehicle miles traveled (VMT), thus relieving congestion. StanCOG, through the CMP and RTP processes, coordinates with the local jurisdictions—the land use authorities—to develop land use and growth management strategies to encourage the development of sustainable communities.

ROLE OF REGIONAL EXPRESSWAYS

The system of regional expressways outlined in this update, in conjunction with other transportation and land use policies and investments, support efforts to increase the use of alternative modes of transportation, reduce greenhouse gas emissions, and encourage the development of sustainable communities. Over time, economic forces, new legislation, and public values will continue to shape the need and role of expressways in the transportation network.

Multi-Functional Expressways

StanCOG encourages that expressways be designed to support multiple transportation modes and trip functions as a means to reduce traffic congestion. Expressways provide unique opportunities to create a regional transportation network for transit, bicycles, and goods movement in addition to conventional auto traffic. In urban developed areas, expressways may have a context-sensitive design that supports multiple modes of transportation, such as a complete street configuration.

Expressways and Public Transit

The limited access nature of expressways presents an opportunity to provide transit service with higher speeds and limited stops. As roadway segments identified in this study are improved to expressway standards, local transit operators may investigate the potential to provide express intra-city and regional transit service along these facilities. The provision of high-quality transit service on expressways, with stations or stops near major regional destinations, may attract additional riders and reduce traffic congestion by decreasing the use of single-occupancy vehicles.

In urban areas, expressways present the opportunity to offer transit service with fewer stops and at higher speeds than typical arterial and collector streets. Providing “limited stop” service along expressways that connect residential neighborhoods to schools, employment centers, and services may also attract additional riders and reduce traffic congestion. With intensified development near transit stops at intersections and interchanges with other facilities, expressways may also offer suitable conditions to support bus rapid transit (BRT) or other high-performance transit service.

In rural areas, expressways allow intercity and regional transit services to provide more consistent high-speed service between communities. As travel between Stanislaus County and adjacent counties increases, expressways also present opportunities to offer high-speed regional transit service across county lines.

High-speed rail service may potentially run through Stanislaus County in the future, with a station proposed in downtown Modesto that would provide high-speed inter-city rail connections to other major cities throughout northern and southern California. Expressways can allow for more direct and efficient connections to the high-speed rail system for travelers throughout Stanislaus County.

Expressways and Non-Motorized Transportation

Unlike freeways, expressways can accommodate bicyclists and pedestrians. Furthermore, the regional nature of expressways provides opportunities for a regional bicycle and pedestrian network. However, the high speeds and limited-access characteristics that make expressways attractive to motorists can also pose barriers and safety risks for bicyclists and pedestrians, and thus require more detailed attention to planning and design considerations.

For bicyclists, expressways can be convenient, direct travel routes with few driveway conflicts and well-spaced intersections. They are ideal for commuting to work or for long-distance trips. However, the higher speeds and freeway-like crossing movements make on-street bicycle travel potentially dangerous for young or novice cyclists. However, parallel multi-use bike and pedestrian trails within the expressway right-of-way are ideal for providing cycling and walking paths accessible to all, if space is available. These paths support cycling and walking while reducing interaction with high-speed vehicles on the expressway. This may increase safety for bicyclists and pedestrians, and supports the non-motorized use of expressways for all regardless of skill level. In some cases, planned expressways run near waterways or rail facilities that can provide ideal corridors for these facilities.

Pedestrians may walk along expressways for a variety of reasons. Generally, few destinations front expressways because direct access to adjacent land uses is limited. However, several commercial developments and schools in Stanislaus County are currently located along existing expressways. Such destinations increase the likelihood of pedestrian travel along expressways near these developments.

In the 2011 RTP, StanCOG discussed the concepts of Complete Streets, which has recently increased in popularity. Historically, streets have been built that are safe and comfortable only for automobile travel. Communities have become inconvenient places to walk, bicycle or take transit, leaving little choice for mobility. Complete Streets is a paradigm shift in traditional road construction philosophy. Instead of project-by-project effort to accommodate bicycle- and pedestrian-friendly improvements, complete streets ensure that new road construction and improvements evaluate how the right-of-way serves all modes of travel, not just the automobile. Typically, complete streets include comfortably sized and protected sidewalks, bicycle facilities, well designed and well placed crosswalks, bus pullouts (or special designated bus lanes), street trees, and center medians to encourage safe travel by all modes.

Expressways and Goods Movement

Currently, I-5 and SR-99 are both major thoroughfares for regional traffic and primary truck routes for regional goods movement within Stanislaus County and the Central Valley and beyond. As traffic congestion escalates on these major facilities, the vital movement of goods and products into and out of the region will face increased delays. The establishment of east/west expressways and parallel systems to I-5 and SR-99 can relieve congestion on these major regional facilities potentially routing traffic to the expressway system and improving goods movement on I-5 and SR-99.

Planned industrial developments in the southern portion of the county will also play an integral role in future goods movement. These facilities' proximity to the California Northern Railroad line adjacent to SR-33 may increase the use of air and rail transport as an alternative to truck goods movement. Other sites near major railroad lines may become candidates for intermodal transfer facilities to transfer goods between trains and trucks for further distribution. The planned expressway system supports intermodal connections for goods movement in the region, providing convenient access to these types of facilities. This will reduce regional truck traffic on the major thoroughfares and increase the efficiency of existing and future truck routes, relieving congestion on local roads related to truck traffic.

Maximizing Expressway Efficiency

Travel demand management (TDM) and transportation systems management (TSM) strategies as described in the 2011 RTP are intended to maximize the efficiency of a transportation network. These strategies may be used to increase the effectiveness of future expressways to reduce traffic congestion as well as potential alternatives to expressway improvements by getting the most out of the existing transportation system.

TDM strategies reduce overall demand on the roadway network or shift demand away from peak periods to maximize the efficiency of the transportation network. These strategies include:

- promoting ridesharing (carpool and vanpool options) to accommodate growth in person-trips while minimizing increases in vehicle trips
- supporting alternative work programs, such as telecommuting and alternate work hours to shift traffic patterns away from peak commute times
- encouraging alternative modes of travel by providing transit, neighborhood electric vehicle (NEV), bicycle, and/or pedestrian facilities, completing bicycle and pedestrian networks, and helping offset travel costs for transit or bicycle commuters

In addition to managing demand on the transportation network, TSM strategies may be employed to more efficiently use transportation infrastructure. These strategies often use various types of technology integrated into intelligent transportation systems (ITS), and include:

- optimizing or synchronizing signal timing plans to reduce delay, travel time, and emissions while increasing vehicle throughput
- coordinating signals for transit or providing transit signal priority to increase efficiency and encourage the use of transit
- using traveler information systems to alert drivers of traffic and weather conditions that may affect traffic flows

With fewer traffic controlled intersections and stronger access controls, expressways provide smoother traffic flows than other local arterial streets. ITS technology, such as traffic and incident management systems, optimizing traffic signal timing, or synchronizing traffic signals (if signalized intersections are spaced appropriately), can also help sustain traffic flows on expressway corridors. In addition to reducing overall traffic congestion, these efforts reduce vehicle stops and starts and can decrease emissions per mile traveled when compared to travel on other local streets.

Expressways and Future Development

Managing the transportation system to maximize efficiency requires coordinating with local land use plans and managing future growth. Development patterns are a major factor in determining future travel demand including the role and need for expressways.

Development patterns are shaped by both government policies and market forces. Over the last several decades, development has evolved from towns of commercial “main streets,” industrial factories, and modest single-family neighborhoods to malls, business parks, and residential subdivisions. Recent trends have seen the emergence of big-box shopping centers, open-air “lifestyle centers,” and a rapid rise and fall in development and real estate values, particularly in Stanislaus County.

Recent California legislation has prioritized the reduction of greenhouse gas emissions. Signed in 2006, Assembly Bill (AB) 32 requires the State to reduce GHG emissions to 1990 levels by 2020. With transportation accounting for approximately 40 percent of the GHG emissions in California, more efficient land use patterns are one method to reduce transportation related emissions to help meet the goals of AB 32. Senate Bill (SB) 375 specifically targets GHG emissions related to transportation and land development by addressing the sprawling development patterns have contributed to increased vehicle miles traveled (VMT) and GHG emissions. To combat the trend of sprawl development, SB 375 calls for the integration of transportation and land use planning. The intent is to create development that consists of—to a greater extent—a mix of housing types and greater access to nearby goods and services. Combined with recently adopted land use and transportation plans, this encourages development that supports transit usage, walking, biking, and other modes of transportation and may slowly influence a shift in travel behavior that reduces VMT, reliance on automobile travel, and GHG emissions.

AB 32 and SB 375 urge the State's urban areas to develop plans to create more efficient land use patterns. The resulting Sustainable Communities Strategies (SCS) are expected to lead to denser, better connected communities, fostering a balance between social, economic and environmental components of the community. SB 375 requires that as part of all future Regional Transportation Plans, MPOs must prepare an SCS, which sets forth a vision for growth for the region taking into account the transportation, housing, environmental, and economic needs of the region. The SCS is an enhanced land use element by which the region will meet its GHG emission reduction targets.

StanCOG will utilize the Regional Expressway Study as one foundational tool in the development of the future SCS. Generally, StanCOG will utilize the outlined expressways and overlay the local agencies' land use patterns to determine which corridors can accommodate more density and how to better manage the origins and destinations of trips. This exercise will lead to a "Smart Growth Concept Map" and will help direct development to areas best able to accommodate growth based on established smart growth principals. Ultimately, such growth could reduce short-term and long-term infrastructure and maintenance costs.

StanCOG staff will further discuss the development of the SCS with the local jurisdictions each month at the Technical Advisory Committee meeting. For more information, please contact the office at 209/525.4600.

CONCLUSIONS

The 2010 Regional Expressway Study update refines the previously planned regional expressway system identified in the 1990 Study to reflect recent changes in local land use patterns and/or the results of circulation system evaluations. The update process included a review of the 1990 Regional Expressway Study, local general plans, and other planning documents, and incorporated input from stakeholders and local agencies to develop a vision for the future. In general, the update has built on the originally planned expressway system with minor modifications to incorporate changes in land use and circulation priorities.

The Regional Expressway Study is designed to be a living document, with modifications and updates as regional needs and priorities change. This document should be revisited and revised, coinciding with future updates to the StanCOG Regional Transportation Plan (RTP) and/or significant changes to the proposed land use patterns within the region.

This report is intended to be used by the local jurisdictions to incorporate regional expressway planning into upcoming updates to local general plans and other planning documents. With an increased emphasis on integrating land use and transportation planning, the Regional Expressway Study will feature prominently in future planning processes.

This update also explores the role regional expressways may play in reducing congestion, encouraging multi-modal mobility, preserving agricultural and natural resources, improving air quality, and supporting the development of sustainable communities. Accommodating multiple modes of transportation, including transit, bicycling, and walking, in addition to vehicular travel, helps meet the goals of the regional expressway system by reducing congestion and minimizing environmental impacts by reducing VMT.



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