Transportation and Mobility

Introduction

The Transportation and Mobility section provides the framework for decisions in San Joaquin County concerning the countywide transportation system. It provides for the safe and efficient movement of people and goods in and around the County through a variety of transportation modes. While the Transportation and Mobility section strives to encourage a multi-modal transportation system that serves the mobility needs of all residents, it also reflects the rural nature of the County. Many areas of the County, both urban cities and unincorporated areas, lack the density and population to support comprehensive transit. In addition, roadways in unincorporated San Joaquin County are becoming increasingly congested due to long commute distances, conflicts between the transport of farming equipment and commuter-oriented automobile traffic, and poor roadway conditions.

Policies in the Transportation and Mobility section encourage public transit service and pedestrian and bicycle facility improvements in appropriate areas of the County where they will be most beneficial in linking residents to work, shopping, and leisure destinations. These policies also provide public health co-benefits since many of them can have an influence on physical and mental health. For example, transportation infrastructure that promotes everyday physical activity such as walking and biking (active transportation) addresses sedentary behavior, which is a shared risk factor for obesity and other chronic diseases.

In addition, ACE Train extensions, goods movement efficiency improvements, and public transit investments offer potential solutions for alleviating congestion and provide opportunities

for long-term transportation connections both to other regional centers in the State and between communities within San Joaquin County. In rural areas of the County, policies in this section encourage an efficient and economical transportation system to move goods for the agricultural and manufacturing industries.

In addition to goals, policies, and programs, the Transportation and Mobility section includes a Circulation Diagram (Figure TM-1) and regional planned roadway improvements (Figure TM-2). The Transportation and Mobility section works closely with the Land Use section of the Community Development Element to ensure that the County transportation system can accommodate growth anticipated during the General Plan planning period. This transportation system is shown on the diagram as a set of roadway classifications, developed to guide long-range transportation system planning and programming in San Joaquin County. Roadways are classified in this system based on the linkages they provide and their function in the hierarchy of roadways.

Relationship to Other General Plan Elements

The goals and policies in the Transportation and Mobility section of the Public Facilities and Services Element are interrelated with several of the goals and policies in the Land Use section of the Community Development Element, particularly as they relate to the County's regional transit, and the creation of complete, walkable, and transit-oriented land use patterns that support alternative modes of transit. Linking transportation and land use in the policy document allows San Joaquin County to preserve and enhance valued natural and cultural resources and facilitate a more sustainable, efficient development pattern. The Public Health and Safety Element also has supporting policies related to particulate emissions from County roads and paving materials for road construction.

Regional Multimodal System

The transportation system in San Joaquin County serves both regional and local travel needs across a broad spectrum of modes. A multimodal approach to transportation is intended to create an integrated transportation and circulation system that allows for opportunities to travel by any mode of travel (e.g., walking, bicycling, transit, and automobiles) to reach key destinations in a community and region safely and directly. Multimodal approaches to transportation have multiple benefits. They can lead to safer travel for all roadway users. They can improve health by allowing people to walk or bicycle or take transit. These travel modes promote active lifestyles and reduce automobile-related emissions and pollution. Finally, they can provide options and increase mobility for people who cannot or do not drive. This multi-modal system includes the roadway, which serves automobiles, trucks, public transit, and bicycles, as well as pedestrian ways, such as sidewalks and trails, to serve all users of the public right-of-way.

The focus of this goal section is to guide the overall provision for a balanced multi-modal system of transportation facilities and services in the county.

GOAL TM-1

To maintain a comprehensive and coordinated multimodal transportation system that enhances the mobility of people, improves the environment, and is safe, efficient, and cost effective.

TM-1.1 Transportation System Safety

The County shall manage the transportation system to ensure safe operating conditions. (PSP)

TM-1.2 Emergency Services

The County shall coordinate the development and maintenance of all transportation facilities with emergency service providers to ensure continued emergency service operation and service levels. (PSP/IGC)

TM-1.3 Multimodal System

The County shall encourage, where appropriate, development of an integrated, multi-modal transportation system that offers attractive choices among modes including pedestrianways, public transportation, roadways, bikeways, rail, waterways, and aviation, and reduces air pollution and greenhouse gas emissions. (RDR/PSP)

TM-1.4 Regional Transportation Facilities

The County shall work with Caltrans, SJCOG, and the cities in the County where appropriate to plan, develop, and maintain regional transportation facilities, and to identify existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved. (PSP/IGC)

TM-1.5 Regional Transportation Plan Development

The County shall provide input into the development of the San Joaquin Council of Governments Regional Transportation Plan as appropriate to ensure County roads and facilities are adequately addressed. (PSP/IGC)

TM-1.6 Automobile Dependency Alternatives

The County shall support public and private efforts where appropriate to provide alternative choices to single occupant driving. (IGC/JP)

TM-1.7 Energy Conservation

The County shall develop the transportation system to reduce vehicle miles traveled, conserve energy resources, minimize air pollution, and reduce greenhouse gas emissions. (RDR/PSP)

TM-1.8 Multimodal Congestion Management

The County shall support, as appropriate, SJCOG efforts to monitor multimodal corridors within the County as part of the Regional Congestion Management Program. The County shall also encourage the consideration of additional multimodal corridors, where appropriate, as part of future updates to the Regional Congestion Management Program. (PSP/IGC)

TM-1.9 Facilities and Infrastructure

The County shall, based on available resources, effectively operate and maintain transportation facilities and infrastructure to preserve the quality of the system. (PSP/SO)

TM-1.10 Eliminate Gaps

The County shall strive to eliminate "gaps" in roadways, bikeways, and pedestrian networks by planning and seeking funding to construct grade-separated crossings of rail lines, canals, creeks, and other barriers to improve connectivity and encourage construction of new bikeways and pedestrianways in and between existing communities where appropriate. (RDR/PSP/FB)

TM-1.11 Transportation System Improvements

The County shall require new development to provide transportation system improvements necessary to serve the development. (RDR/FB)

TM-1.12 Transportation and Land Use

The County shall ensure that transportation system investments and improvements support existing and future sustainable land use patterns. (RDR/PSP/FB)

TM-1.13 Smart Growth

The County shall encourage "smart growth" and sustainable planning principles where appropriate, including the development of high-density and commercial development near inter-modal transit facilities. (RDR/PSP)

TM-1.14 Abandoned Railroad Rights-of-Way

The County shall consider acquiring abandoned railroad rights-of-way for use in the County's circulation system, where appropriate. (PSP)

TM-1.15 Transportation Funding

The County shall support transportation system improvements by collecting fair share transportation impact fees from new development, supporting ballot measures to maintain existing and/or establish new sales tax revenue for the maintenance and improvement of transportation infrastructure, and applying for Federal and State discretionary transportation funds. (PSP/FB)

TM-1.16 Transportation Capacity and Development

The County shall schedule transportation improvements to coordinate with land use development and transportation demand. Transportation investments and service capacity shall be planned to correspond to the development and travel demand identified by plans of local communities. (RDR/PSP)

TM-1.17 Minimize Disruptions

The County shall minimize social and economic disruptions to communities resulting from the maintenance and construction of the transportation system. (PSP/SO)

TM-1.18 Capital Improvement Program

The County shall maintain a Transportation Capital Improvement Program consistent and commensurate with developer fees established as part of the County's AB1600 compliant traffic impact mitigation fee program. (PSP/FB)

Complete Streets

"Complete streets" are streets designed and constructed to serve all users of streets, roads, and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or taking transit. Careful planning and coordinated development of complete streets infrastructure can provide long-term cost savings for the County by reducing road construction, repair and maintenance costs and expanding the tax base; it can improve public health by encouraging active lifestyles and improving roadway safety; it can provide economic benefits to property owners and businesses; and it can decrease pollution. The California Complete Streets Act (AB 1358, 2008) requires that the General Plan address the provision of complete streets. Policies in this section seek to connect, balance, and prioritize transportation modes based on surrounding uses, activities, and right-of-way allowances; integrate different types of facilities into existing streets to make them more complete; and plan and design new streets to create complete streets.

What are Complete Streets?

Complete streets are streets designed and operated to enable safe access for all users of any age and ability, including pedestrians, bicyclists, motorists, transit riders, and goods movement vehicles. There is no design prescription for a complete street. Depending on the primary use of the street and its location, "completeness" may or may not include sidewalks or trails, bike lanes or wide paved shoulders, bus lanes and bus stops, frequent and safe crossing opportunities or pedestrian signals, and/or medians, curb extensions, or roundabouts. A complete street in a rural area will be designed and operated different from one in an urban area, but both should be designed to balance safety and convenience for everyone using the road.

The focus of this goal section is to design County roadways to balance the needs of all transportation modes and provide travel options for County residents and visitors.

GOAL TM-2

To improve County roadways to include pedestrian, bicycle, and transit facilities to better serve people who use these active transportation modes.

TM-2.1 Urban Complete Streets

The County shall require new streets within Urban Communities to be designed and constructed to serve all users, including pedestrians, bicyclists, and transit passengers, of all ages and abilities. This includes:

- creating multi-modal street connections in order to establish a comprehensive, integrated, and connected transportation network for all modes of travel;
- minimizing curb cuts along non-local streets to improve safety and capacity;
- planting street trees adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and vehicular traffic, where appropriate;
- constructing sidewalks and bike lanes on both sides of streets, where feasible;
- including parking options to provide a buffer between pedestrians and vehicular traffic, where appropriate;
- coordinating with local jurisdictions and SJCOG to ensure multimodal connections are established and maintained between jurisdictions; and
- incorporating traffic-calming devices such as roundabouts, bulb-outs at intersections, and traffic tables into the transportation system where appropriate to improve safety and encourage travel by active transportation modes. (RDR/PSP)

TM-2.2 Reconstructed Urban Complete Streets

The County may require, based on community support and financial feasibility, reconstructed streets in Urban Communities to accommodate pedestrians and bicyclists, except where pedestrian or bicycle facility improvements are not feasible or determined to be cost prohibitive. New and reconstructed streets in Urban Communities shall be designed to create an environment that provides opportunities for pedestrian and bicycle activity and complementary development and land uses. (RDR/PSP)

TM-2.3 Land Use Patterns

The County shall encourage the development of uses in Urban Communities that support the use of public transit, bicycling, walking, and other alternatives to the automobile. (PSP)

TM-2.4 Rural Complete Streets

The County shall strive to serve all users on rural roadways in the County and shall design and construct rural roadways to serve safely bicyclists, transit passengers, and agricultural machinery operators. This includes:

- constructing wide shoulders to provide a safe space for bicyclists, and agricultural machinery vehicles;
- removing visual barriers along rural roads, particularly near intersections, to improve the visibility of bicyclists; and
- coordinating with local jurisdictions and SJCOG to ensure multimodal connections are established and maintained between jurisdictions. (RDR/PSP)

TM-2.5 Reconstructed Rural Complete Streets

The County may require, based on community support and feasibility and the County's Bicycle Master Plan, reconstructed streets in rural areas to accommodate bicyclists and agricultural machinery, except where facility improvements are determined to be cost prohibitive. (RDR)

TM-2.6 Funding for Complete Streets

The County shall support efforts to fund transit agencies and improvements for public transit systems, bicycle and pedestrian routes, and other alternative modes of transportation. (PSP)

TM-2.7 New Development

The County shall require all new developments to provide their fair share of roadway facilities for alternative transportation modes to reduce automobile demand. (RDR)

TM-2.8 Private Complete Streets

The County shall encourage large private developments (e.g., office parks, apartment complexes, retail centers) to provide internal complete streets that connect to the existing roadway system. (RDR)

Roadways

San Joaquin County is served by an extensive roadway network of freeways, arterials, collectors, and local roads. These roadways provide access to the surrounding counties and to local destinations, such as employment areas, shopping centers, schools, recreational opportunities, and residential communities. Planning for roadways near areas of new development can ensure that the roadway system maintains sufficient capacity and mobility. Policies in this section address improvements in the roadway system to facilitate the movement of people and goods on the highways and roads in San Joaquin County.

The focus of this goal section is to maintain and improve the quality of the County's roadways to efficiently move automobile and truck traffic within and through the County.

GOAL TM-3

To maintain a safe, efficient, and cost-effective roadway system for the movement of people and goods.

TM-3.1 Roadway Provision

The County shall maintain Level of Service (LOS) standards consistent with the San Joaquin Council of Governments (SJCOG) Congestion Management Program (CMP) for State highways and designated County roadways and intersections of regional significance. Per the CMP, all designated CMP roadways and intersections shall operate at an LOS D or better except for roadways with "grandfathered" LOS. LOS for State highways shall be maintained in cooperation with Caltrans. The County LOS standards for intersections is LOS "D" or better on Minor Arterials and roadways of higher classification and LOS "C" or better on all other non-CMP designated County roadways and intersections. The County shall also maintain the following:

- on State highways, LOS D or Caltrans standards whichever is stricter.
- within a city's sphere of influence, LOS D, or the city planned standards for that level of service.
- on Mountain House Gateways, as defined in the Master Plan, LOS D, on all other Mountain House roads, LOS C.

For State highways are designated as part of SJCOG's CMP, both the Caltrans and CMP LOS standards shall apply. Where roadways are designated as part of SJCOG's CMP, both the

County and CMP LOS standards shall apply. (RDR/PSP)

TM-3.2 Urban Roadways
The County shall require, where feasible, new development in Urban Communities to construct roadways to County standards and complete streets principles, including curb, gutter, and sidewalks. Bike lanes shall be required, where feasible, for improvements identified in the San Joaquin County Bicycle Master Plan. (RDR)

TM-3.3 Onsite Circulation Systems
The County shall require new development to design on-site circulation systems and parking facilities to minimize backup on County roadways. (RDR)

TM-3.4 Roadway Plan Coordination
The County shall coordinate roadway improvements with regional plans, such as the countywide Regional Transportation Plan and Regional Transportation Improvement Plan Program, the Congestion Management Program, and the Measure K Strategic Plan Funding Program. (PSP/IGC)

TM-3.5 Variations in Roadway Alignment
The County shall consider variations in the alignment of designated roadways to be in conformity with the General Plan if the alignment does not result in traffic safety problems or reductions in needed capacity; does not constrain the proper development of contiguous properties, and does not conflict with or preempt other General Plan-specified uses or facilities; or if the alignment is in conformance with an adopted special purpose plan or specific plan. (RDR/PSP)

TM-3.6 Right-of-Way Preservation
The County shall strive to preserve road rights-of-way necessary to implement the circulation system included in the General Plan using Special Purpose Plans or other means, where appropriate. (PSP)

TM-3.7 Frontage Standards
For developments that are located adjacent to a County roadway, the County shall require access onto County roads. (RDR)

TM-3.8 Level of Service Implementation
The County shall base the Level of Service for intersections and roadways on AM or PM peak-hour volumes. (RDR/PSP)

TM-3.9 Functional Classification
The County shall plan for a road system of adequate capacity and design to provide reasonable and safe access by vehicles with minimum delay. The road system shall be based on a functional classification and shall contain the types of roads outlined in Table TM-1 and Table TM-2. General alignments for Minor Arterials and higher classifications are shown on the General Plan Circulation Diagram. Table TM-2 presents standards and a description of each road. Roads carrying recreational traffic may require higher standards. (RDR/PSP)

TABLE TM-1 FUNCTIONAL CLASSIFICATION DESCRIPTIONS	
Classification	**Description**
Freeway	Designed as the primary facility for intercity and regional traffic
Expressway	Designed for high speed intercommunity traffic between important centers of activity or employment; may be a two-lane undivided roadway in rural areas or a multi-lane divided roadway in urban areas. Access in areas of development should be limited to freeways, arterials, and rural roads.
Principal Arterial	Designed: 1) as the highest type of road carrying local traffic within urban communities, providing access routes to shopping areas, places of employment, community centers, recreational areas, and other places of assembly and freeways; and 2) as a principal carrier of traffic between communities, providing access routes to places of employment, recreation areas, and freeways. Access should be limited to that from commercial and industrial areas and should generally be no closer together than one-quarter mile.
Minor Arterial	Designed as a secondary type of facility carrying local through traffic to areas similar to those served by Principal Arterials and feeding the Principal Arterials. Access should be limited to that from commercial, industrial, and multi-family properties.
Collector	Designed to provide principal access to residential areas or to connect streets of higher classifications to permit adequate traffic circulation. Collectors in San Joaquin County are divided into two categories: major collector and minor collector.
Local Residential	Designed to provide access to adjacent residential lots and to feed traffic to Collectors.
Local Commercial and Industrial	Designed to provide access to adjacent commercial and industrial properties and to feed to Minor Arterials.
Rural Residential	Designed to provide local access in rural residential areas.
Rural	Designed to provide access in agricultural areas.

TABLE TM-2

FUNCTIONAL CLASSIFICATION STANDARDS

Functional Classification		Right-of-Way[1]	Lanes	Access Control	Capacity (Vehicles/Day)	On-Street Parking
Freeway		225'	4 – 8	No intersections, fully controlled access	74,000 – 148,000	No
Expressway	Urban	110 – 202'	4 -6	Controlled intersections and access, may be grade separated	35,000 – 55,000	No
	Rural	84'	2			
Principal Arterial		110' – 136'	4 – 6	Partially controlled intersections and access; at grade	35,000 – 50,000	No
Minor Arterial		84' – 110'	4	Intersections at grade; partially controlled access	31,000	Yes
Collector		60'	2	Intersections at grade; driveway access	14,000	Yes
Local Residential		50'	2	Intersections at grade; frequent driveways	5,000	Yes
Local Commercial and Industrial		60'	2	Intersections at grade; driveway access	10,000	Discouraged
Rural Residential		50'	2	Intersections at grade; driveway access	5,000	Discouraged
Rural		50'	2	Intersections at grade; driveway access	28,000	Discouraged

Note: [1]Mountain House has different ROW standards which can be found in the Mountain House Master Plan, Table 9.6, Mountain House Road Classifications and standards, Page 9.20.

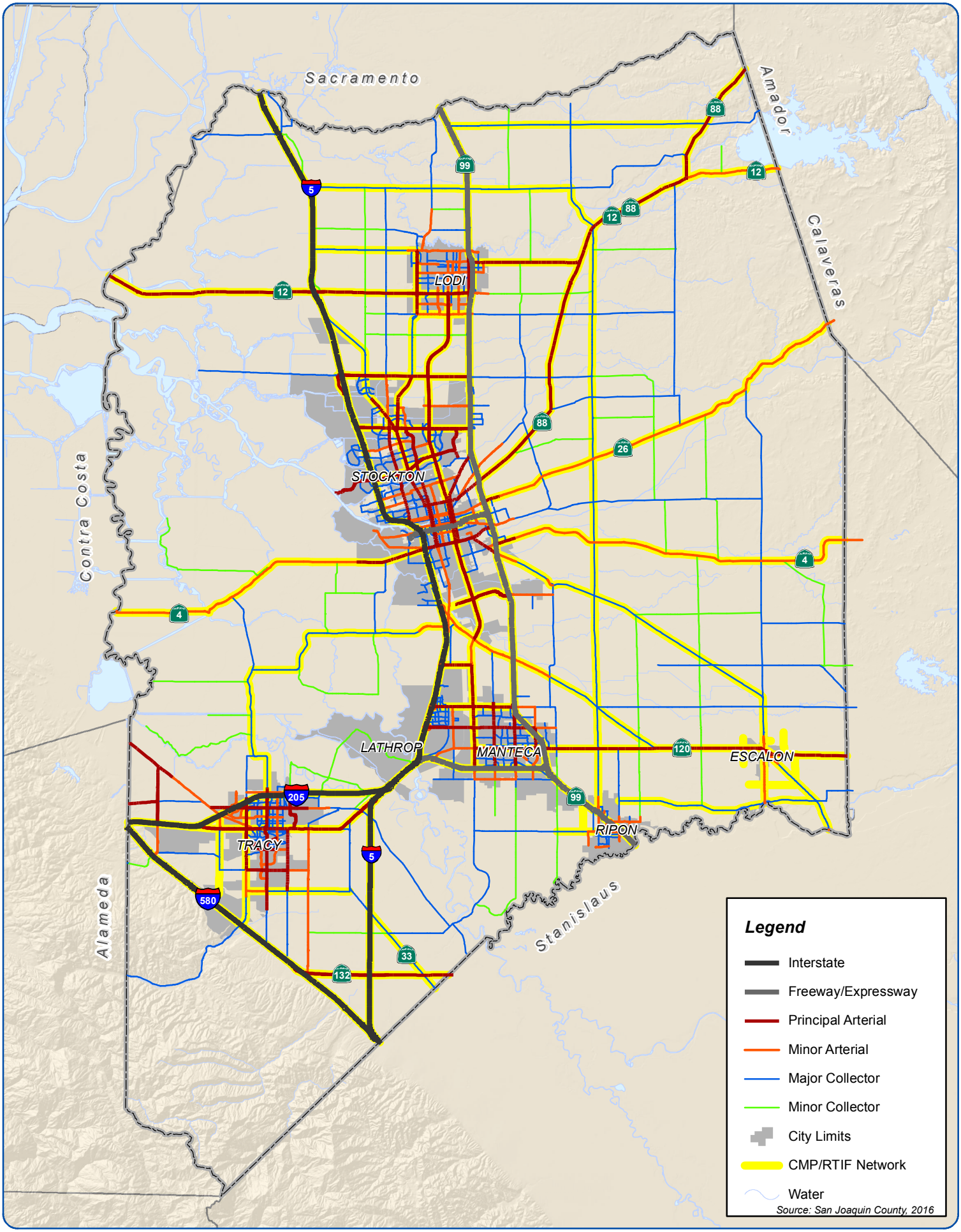

Figure TM-1
Circulation Diagram

This page is intentionally left blank

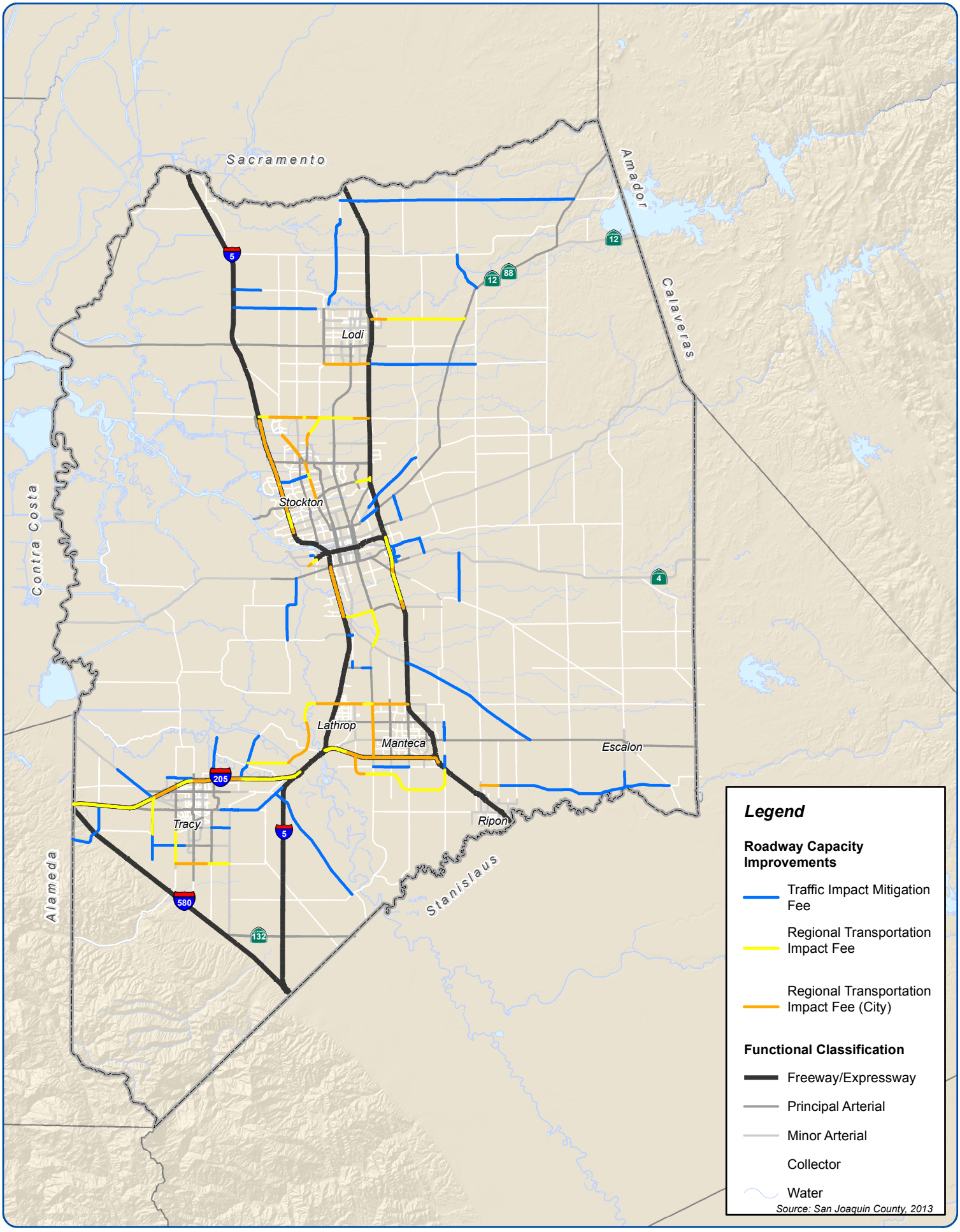

Figure TM-2
Planned Roadway Capacity Improvements

This page is intentionally left blank

TM-3.10 Rural Road Traffic

The County should monitor the use of rural roads by commuters as bypass routes from gridlocked arterials to gather data for use in any future traffic studies or plans designed to reduce the traffic impact on the operation of agricultural machinery. (PSP/PSR)

TM-3.11 Rural Traffic Management Areas

The County shall mitigate excessive commuter diversion traffic through the development and adoption of rural traffic management plans. Where applicable, the County shall prepare a rural traffic management plan when public concerns are raised about excessive traffic or the County identifies issue areas, County Public Works Director confirms that a defined rural area is experiencing excessive commuter traffic due to diversion, and a survey of an area's property owners, with at least 33 percent responding, shows at least 50 percent are in support the preparation of a plan. (PSP)

TM-3.12 Development Rights-of-Way

The County shall require dedication and improvement of necessary on and off-site rights-of-way at the time of new development, in accordance with the County's Functional Classification, Standard Drawings, and Level of Service Standards. (RDR)

TM-3.13 HOV Lanes and Ramp Metering

The County shall coordinate with Caltrans to ensure installation of HOV lanes and ramp metering devices along congested commuter corridors, as identified by SJCOG's Northern San Joaquin Valley Regional Ramp Metering and HOV Master Plan, do not negatively impact County roads. (PSP/IGC)

TM-3.14 Reduced Parking Requirements

The County may reduce automobile parking area requirements for new developments in exchange for owner-supplied amenities or facilities (e.g., transit facilities, secure bicycle storage facilities) or in-lieu fee payments for public transit. (RDR)

Pedestrian and Bicycle Facilities

Bike and pedestrian facilities provide opportunities for travel as well as numerous recreational opportunities for County residents. Trails help promote healthy, active living and can reduce automobile dependence. Bicycle, and pedestrian facilities in the unincorporated areas of the County are generally discontinuous or non-existent due to insufficient funding and the rural nature of most of the County. The policies in this section support a variety of bikeway, sidewalk, and trail improvement projects aimed at creating walkable, bikeable neighborhoods and interconnecting communities throughout the County. The policies also reflect the rural character of the County by balancing the need for safe and adequate sidewalks and bike facilities with the desire to retain the small-town character of rural communities.

The focus of this goal section is to improve the pedestrian and bicycling opportunities for County residents and visitors and provide alternatives to the automobile.

GOAL TM-4

To maintain and expand a safe, continuous, and convenient bicycle system and pedestrian network.

TM-4.1 Pedestrian and Bicycle Network Continuity

The County shall strive to eliminate gaps in the rural bicycle network by constructing or designating new bike facilities, where appropriate, and in accordance with the San Joaquin County Bicycle Master Plan. (RDR/PSP/IGC)

TM-4.2 Speed Management Policies

The County shall strive to implement current CVC codes for uses as speed management policies that support driving speeds on all streets within Urban and Rural Communities and City Fringe Areas that are safe for pedestrians and bicyclists. (RDR)

TM-4.3 Bicycle Safety

The County shall support bicycle safety programs for children and commuters in the County. (PSP/IGC)

TM-4.4 Safe Pedestrian Crossings

The County shall continue to enhance pedestrian safety at intersections in Urban and Rural Communities and City Fringe Areas by providing safe, well-placed pedestrian crossings, bulb-outs that reduce crossing widths, and/or audio sound warnings, where applicable, warranted, and financially feasible. (PSP)

TM-4.5 Bicycle Storage

The County shall encourage bicycle storage facilities (i.e., bicycle racks, lockers) at all new major transportation terminals and employment centers consistent with Development Title, Section 9. (RDR)

TM-4.6 Bicycle Route System

The County shall encourage bicycle facilities and routes in unincorporated areas to interface with city bicycle routes and provide for inter- and intra-county bicycle circulation. (RDR/PSP/IGC)

TM-4.7 Bicycle Connectivity

The County shall support development of the bicycle system to connect residential areas with commercial areas, employment centers, educational facilities, local and regional recreational facilities, and other major attractions. (PSP)

TM-4.8 Bicycle Route Facilities (RDR)

The County shall ensure County roads planned as part of the regional bicycle route network are constructed to have adequate width. (RDR/PSP)

TM-4.9 Parking Facility Design

The County shall ensure that new automobile parking facilities are designed to facilitate safe and convenient pedestrian access, including clearly defined corridors and walkways connecting parking areas with buildings. (RDR/PSP)

TM-4.10 Bicycle Master Plan

The County shall maintain the Bicycle Master Plan and implement it as funding is made available. (PSP)

TM-4.11 Pedestrian Planning

The County shall consider the safety and accessibility of pedestrians when producing transportation plans, studies, and reports. (PSP/PSR)

TM-4.12 Sidewalk Design

The County shall require that sidewalks in Urban Communities and City Fringe Areas be developed at sufficient width to accommodate pedestrians in accordance with the Americans with Disabilities Act. (RDR)

Public Transit

Effective public transit reduces traffic congestion, helps improve air quality, and provides essential services to youth, seniors, and persons with disabilities. Increasing the availability of public transit can also provide economic benefits to the County and its residents. The San Joaquin Regional Transit District, the transit provider for San Joaquin County, provides public transit services in the Stockton Metropolitan Area, as well as Intercity, Interregional, and rural transit services Countywide. Additionally, the County is served by municipal transit service providers in Tracy, Lodi, and Manteca as well as regional transit service providers based out of neighboring Solano, Calaveras, and Sacramento Counties. Given the number of regional and municipal transit agencies, service coordination continues to be a key challenge to providing seamless transit services.

The focus of this goal section is to improve the transit system to meet the varied transportation needs of County residents and serves as an alternative to automobile transit.

GOAL TM-5

To maintain a public transit system that meets the needs of all County residents while providing a convenient, reliable alternative to automobile travel.

TM-5.1 Transit for All

The County shall encourage a well-designed transit system that meets the transportation needs of San Joaquin County residents and visitors including seniors, the disabled, and transit-dependent persons. (PSP)

TM-5.2 Maintain Services

The County shall encourage transit providers to maintain services within the County that are timely, cost-effective, and responsive to growth patterns and enhance transit where feasible. (PSP/IGC)

TM-5.3 Variety of Transit Types

The County shall consider a variety of transit types including regional rail, bus rapid transit, regional and local buses, express buses, and neighborhood shuttles, to meet the needs of residents, workers, and visitors. (PSP)

TM-5.4 Alternative to the Automobile

The County shall promote public and private transit systems in addition to the automobile. (PSP)

TM-5.5 Access to Services

The County shall support the expansion of public transit service to provide County residents with access to commercial services (e.g., grocery stores) and other essential services, such as medical, social service, and personal business destinations. (PSP/IGC)

TM-5.6 Unmet Needs
The County shall encourage the San Joaquin Council of Governments and San Joaquin Regional Transit to identify unmet transit needs and collaborate with appropriate agencies and entities to serve those who have no other reasonable alternatives for transportation. (PSP/IGC)

TM-5.7 Intercity Bus Service
The County shall encourage the San Joaquin Regional Transit District and other regional bus service providers to support intercity bus service that connects all cities in San Joaquin County, as well as major passenger destinations, including airports and train stations. (PSP/IGC)

TM-5.8 Increased Rail Frequency
The County shall encourage increased passenger rail service (e.g., Amtrak, ACE) frequency to the County. (PSP/IGC)

TM-5.9 Commuter Transit Service
The County shall advocate commuter transit service (PSP/IGC)

TM-5.10 Multimodal Rail Stations
The County shall support the development of multi-modal rail stations in Stockton, Lodi, Manteca, and Tracy that include park and ride facilities, commuter bus service, express bus service, and/or cross-platform transfer capabilities. (PSP/IGC)

TM-5.11 Amtrak Service
The County shall support Amtrak stations in all cities of the County. (PSP/IGC)

TM-5.12 Higher Speed Rail
The County shall support the concept of developing passenger service along existing rail corridors to Sacramento and the Bay area to a capability of 79 miles-per-hour in the short term. In the longer term, the County supports upgrading rail service to a capability of 125 miles-per-hour along existing or new alignments. (PSP/IGC)

TM-5.13 High Speed Rail
The County shall coordinate with the California High Speed Rail Authority, cities, and other local agencies to locate High Speed Rail corridors in San Joaquin County in a manner that minimizes disruptions. (PSP/IGC)

TM-5.14 Rail Crossings
The County shall ensure all at-grade rail crossings with roads have appropriate safety equipment. (RDR/PSR)

Congestion Management and Transportation Control Measures

Coordinating the many forms of transportation that use San Joaquin County's transportation system is critical to achieving maximum road efficiency and minimizing costly road expansion or construction. Transportation Demand Management (TDM) programs are strategies designed to reduce the demand for the automobile as a mode of travel. By encouraging the use of alternative transportation modes or alternative types of commuting, the vehicle demand on the existing roadway system is managed or reduced and system efficiency is improved. TDM strategies can also help reduce the need for capacity-enhancing improvement projects on County roadways.

The focus of this goal section is to reduce single-occupant automobile use through a variety of cooperative efforts and infrastructure improvements.

GOAL TM-6

To maintain congestion management strategies to reduce single-occupant automobile use.

TM-6.1 Increase Vehicle Occupancy

The County shall work with a broad range of agencies (e.g., San Joaquin Council of Governments, San Joaquin Regional Transit, San Joaquin Valley Air Pollution Control District, Caltrans) to comply with stat laws that increase vehicle occupancy including the provision of traveler information, shuttles, preferential parking for carpools/vanpools, transit pass subsidies, and other methods. (PSP/IGC)

TM-6.2 Regional Travel Demand Management Plan

The County shall encourage implementation of the current San Joaquin Council of Governments Regional Travel Demand Management Plan. (PSP/IGC)

TM-6.3 Transportation Demand Management

The County shall support efforts by the San Joaquin Council of Governments Commute Connections to facilitate implementation of the Federal Requirement established in Rule 9410 (eTRIP rule). (PSP/IGC)

TM-6.4 Park-and-Ride Facilities

The County shall support implementation of the San Joaquin Council of Governments Park and Ride Plan and collaborate with Caltrans to identify locations for future park-and-ride lots to facilitate more carpooling, vanpooling, and transit use. (PSP/IGC)

TM-6.5 Transportation Management Associations

The County shall encourage large commercial, retail, and residential developments to participate in or create Transportation Management Associations (i.e., a public/private partnership to address regional transportation issues). (RDR)

TM-6.6 Bicycle Facilities at Park-and-Ride Lots

The County shall encourage bicycling to park-and-ride lots through the provision of bicycle facilities such as bicycle parking. (RDR)

TM-6.7 Bicyclist Amenities

The County shall encourage new large employers to provide bicycle racks. (RDR)

Goods Movement

The movement of goods through the county, either via highway, rail, or air, is a key component of the economic vitality and growth of the region.

The policies in this section seek to support the efficient movement of goods through the County while reducing impacts on communities and sensitive land uses.

GOAL TM-7

To maintain an efficient transportation network to facilitate the movement of goods within and through the County.

TM-7.1 Efficient Goods Movement

The County shall encourage infrastructure improvements and the use of emerging technologies that facilitate the timely and efficient movement of goods the efficient intermodal transfer of goods between truck, rail, marine, and air transportation modes. (PSP)

TM-7.2 Critical Facilities Access
The County shall require new development to provide adequate access to facilities critical to goods movement, including railroad yards, intermodal facilities, the Port of Stockton, the Stockton Metropolitan Airport, and Interstate highways. (RDR)

TM-7.3 Goods Movement Connections
The County shall work with Caltrans, cities, and major shipping entities to improve and enhance the STAA Terminal Access routes and connections between and among goods movement modes and facilities (e.g., truck routs/terminals, railroads/yards, shipping lanes/ports, and air-transport/airports). This will include at a minimum adequate STAA Terminal "T" and "S" signage as appropriate. (RDR/PSP/IGC)

TM-7.4 Intermodal Freight Facilities
The County shall continue to encourage the modernization and expansion of intermodal freight facilities that support goods movement by rail and improve the efficiency of goods movement among various types of transport (e.g., truck to rail). (RDR/PSP)

TM-7.5 Mode Conflicts and Hazards
The County shall strive to minimize traffic conflicts among automobiles, trucks, and trains, and shall strive to ensure adequate safety measures are in place to protect residents from truck and rail hazards. (RDR/PSP)

TM-7.6 Surface Transportation Assistance Act
The County shall coordinate with Caltrans to identify appropriate truck routes consistent with the Surface Transportation Assistance Act (STAA) of 1982 and shall assist with future planning/programming of truck routes and signage within the County. (PSP/IGC)

TM-7.7 Truck Traffic Noise Minimization
The County shall seek to minimize noise and other impacts of truck traffic, deliveries, and staging in residential neighborhoods. (RDR)

TM-7.8 Short Line Rail Facilities
The County shall encourage State or Federal programs designed to expand short-haul rail lines within the County as a way of reducing the number of trucks on County roads. (PSP/IGC)

TM-7.9 Port of Stockton
The County shall encourage Port of Stockton efforts to maintain and enhance the deep water shipping channel and future facility expansion plans. (IGC)

TM-7.10 Stockton Metropolitan Airport
The County shall maintain Stockton Metropolitan Airport as an essential part of the County's goods movement system. (PSP)

Air Transportation

San Joaquin County's aviation system consists of six public-use airports plus multiple facilities that have restricted or private use. Airports in nearby counties also provide services to San Joaquin County residents. Agricultural producers, fire fighters, emergency medical, and private users all depend on aviation services in the County. Private aircraft also uses aviation facilities for commercial and recreational purposes. Airports in the County provide local access to the national aviation system, enabling the traveling public and freight and cargo movers to connect with airports in major metropolitan areas. Currently, the County's role in air transportation is limited to land use regulation through the General Plan and Zoning Ordinance. The County coordinates with the Airport Land Use Commission (ALUC), which makes recommendations to ensure orderly growth around the airport and protect

the safety of nearby residents. State and Federal agencies have primary jurisdiction over airport facilities and operations.

The policies in this section support and protect the continued use of airports by all users.

GOAL TM-8

To ensure that the air transportation system accommodates the growth of air commerce and general aviation needs within the parameters of compatible surrounding uses.

TM-8.1 Stockton Metropolitan Airport

The County shall develop the Stockton Metropolitan Airport with sufficient capacity to accommodate forecasted needs for commercial air facilities for the region. (RDR/PSP)

TM-8.2 Airport Promotion

The County shall promote Stockton Metropolitan Airport to the public and businesses for commute and long-distance passenger flights and for air cargo. (PSP)

TM-8.3 Public Access Airports

The County shall support the continued operation of public access airports to accommodate local aviation demand. (PSP)

TM-8.4 Efficient Ground Connections

The County shall promote efficient ground connections to its air transport facilities. (RDR/PSP)

TM-8.5 Compatible Land Uses

The County shall require that only compatible land uses be permitted near airports, in accordance with the Airport Land Use Plan. (RDR)

TM-8.6 Airport Operations

The County shall ensure that airport operations are protected from:

- projections of structures into navigable airspace;
- light and glare;
- emissions affecting visibility;
- interference with communications; and
- bird hazards, such as from ponds and landfills. (RDR)

Emerging Technologies and Services

Transportation is one of the sectors that contributes to greenhouse gas emissions (GHG) in San Joaquin County. Transportation-related GHG emissions represent approximately 62 percent of the total 2007 GHG emissions. Investing in alternative technologies can reduce the amount of GHG emissions in San Joaquin County and increase the health, safety, and happiness of San Joaquin residents.

The focus of this goal section is to support the development and installment of alternative fuel and electric transportation technologies.

GOAL TM-9

To use emerging transportation technologies and services to increase transportation system efficiency.

TM-9.1 Facilities for Emerging Technologies

The County shall support the development of alternative fueling stations (e.g., electric and hydrogen) for emerging technologies. (RDR/PSP)

TM-9.2 Use of Public Right-of-Way

The County shall encourage the use of parking lots of major employers, commercial shopping centers, and truck stops for alternative fueling stations (e.g., electric) for automobiles and goods movement trucks. (RDR/PSP)

Peak Hour Level of Service Criteria Example

Table 4-4. Local Arterial LOS Criteria (2010 HCM Planning Method)

K-Factor	D-Factor	Class I Highway - Level				Class I Highway - Rolling				Class II Highway - Rolling			
		LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E
0.09	50%	5,500	9,300	16,500	31,200	4,200	8,400	15,700	30,300	5,000	9,800	18,200	31,200
	55%	4,900	8,700	14,900	30,200	3,700	7,900	14,000	29,200	4,100	8,700	16,000	30,200
	60%	4,400	8,100	13,900	27,600	3,700	6,200	12,800	26,800	3,700	7,900	14,600	27,600
	65%	4,100	7,900	12,900	25,500	3,400	5,900	11,400	24,700	3,300	5,900	13,200	25,500
0.10	50%	5,000	8,400	14,800	28,000	3,800	7,600	14,200	27,200	4,400	8,800	16,300	28,000
	55%	4,400	7,900	13,400	27,100	3,300	7,100	12,600	26,300	3,700	7,900	14,400	27,100
	60%	4,000	7,300	12,500	24,900	3,300	5,600	11,500	24,100	3,300	7,100	13,100	24,900
	65%	3,700	7,100	11,600	23,000	3,000	5,300	10,300	22,300	3,000	5,300	11,900	2,300
0.12	50%	4,100	7,000	12,400	23,400	3,100	6,300	11,800	22,700	3,700	7,400	13,600	23,400
	55%	3,700	6,500	11,200	22,600	2,800	5,900	10,500	21,900	3,100	6,500	12,000	22,600
	60%	3,300	6,100	10,400	20,700	2,700	4,700	9,600	20,100	2,700	5,900	10,900	20,700
	65%	3,100	5,900	9,600	19,100	2,500	4,400	8,500	18,500	2,400	4,400	9,900	19,100
0.14	50%	3,500	6,000	10,600	20,000	2,700	5,400	10,100	19,400	3,200	6,300	11,700	20,000
	55%	3,100	5,600	9,600	19,400	2,400	5,100	9,000	18,800	2,600	5,600	10,300	19,400
	60%	2,800	5,200	8,900	17,700	2,300	4,000	8,200	17,200	2,300	5,100	9,400	17,700
	65%	2,600	5,100	8,200	16,400	2,100	3,800	7,300	15,900	2,100	3,800	8,500	16,400

K-Factor is the proportion of traffic occurring in the peak-hour for the study segment; D-Factor is the proportion of traffic occuring in the peak direction for the study segment.

Class I Highway - Level is a roadway on flat terrain on which motorists expect to travel at relatively high speeds. It can be a major intercity route, primary arterial connecting major traffic generators, daily commuter route, or primary link in state or national highway networks.

Class I Highway - Rolling is similar in use to Class I Level but motorists may need to travel at lower speeds than a Class I Level due to the horizontal or vertical changes in the terrain.

Class II Highway - Rolling is a highway on which motorists expected to travel at moderate speeds. It can be highway serving as access routes to Class I facilities, serving as scenic or recreational routes, or passing through rugged terrain.

Source: Highway Capacity Manual (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 15 (Two-Lane Highways), Exhibit 15-30.

Table 4-4. Local Arterial LOS Criteria (2010 HCM Planning Method)

K-Factor	D-Factor	Two-Lane Streets				Four-Lane Streets				Six-Lane Streets			
		LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E
Posted Speed - 30 mi/h													
0.09	0.55	NA	5,900	15,400	19,900	NA	11,300	31,400	37,900	NA	16,300	46,400	54,300
	0.60	NA	5,400	14,100	18,300	NA	10,300	28,800	34,800	NA	15,000	42,500	49,800
0.10	0.55	NA	5,300	13,800	17,900	NA	10,100	28,200	34,100	NA	14,700	41,800	48,900
	0.60	NA	4,800	12,700	16,400	NA	9,300	25,900	31,300	NA	13,500	38,300	44,800
0.11	0.55	NA	4,800	12,600	16,300	NA	9,200	25,700	31,000	NA	13,400	38,000	44,500
	0.60	NA	4,400	11,500	14,900	NA	8,400	23,500	28,400	NA	12,200	34,800	40,800
Posted Speed - 45 mi/h													
0.09	0.55	NA	10,300	18600.0	19,900	NA	21,400	37,200	37,900	NA	31,900	54,000	54,300
	0.60	NA	9,400	17100.0	18,300	NA	19,600	34,100	34,800	NA	29,200	49,500	49,800
0.10	0.55	NA	9,300	16800.0	17,900	NA	19,300	33,500	34,100	NA	28,700	48,600	48,900
	0.60	NA	8,500	15400.0	16,400	NA	17,700	30,700	31,300	NA	26,300	44,500	44,800
0.11	0.55	NA	8,400	15300.0	16,300	NA	17,500	30,500	31,000	NA	26,100	44,200	44,500
	0.60	NA	7,700	14000.0	14,900	NA	16,100	27,900	28,400	NA	23,900	40,500	40,800

Notes: NA = not applicable; LOS cannot be achieved with the stated assumptions.
General assumptions include no roundabouts or all-way STOP-controlled intersections along the facility; coordinated, semi-actuated traffic signals; arrival type 4; 120-s cycle time; protected left-turn phases; 0.45 weighted average g/C ratio; exclusive left-turn lanes with adequate queue storage provided at traffic signals; no exclusive right-turn lanes provided; no restrictive median; 2-mi facility length; 10% of traffic turns left and 10% turns right at each traffic signal; peak hour factor = 0.92; and base saturation flow rate = 1,900 pc/h/ln.
Additional assumptions for 30-mi/h facilities: signal spacing = 1,050 ft and 20 access points/mi.
Additional assumptions for 45-mi/h facilities: signal spacing = 1,500 ft and 10 access points/mi.

This page is intentionally left blank.