

Section 1

Traffic and Circulation

This section describes how development associated with the *City of Modesto Urban Area General Plan* (UAGP) would affect transportation and circulation.

A. ENVIRONMENTAL SETTING

The following information is provided in accordance with Section 15125 of the California Environmental Quality Act (CEQA) Guidelines. This environmental setting is the baseline for determining whether an impact of the UAGP is significant.

1. Study Area for Direct Impacts

The Modesto planning area is shown in Figure V-1-1.

2. Study Area for Cumulative Impacts

Stanislaus County (County) is defined as the cumulative impact study area.

3. Existing Physical Conditions in the Study Area

a. Existing Transportation System

Modesto is the demographic and commercial hub of Stanislaus County. Regional roadway access to Modesto is provided by State Route (SR) 99, SR 108, SR 132, and SR 219. SR 99 runs north to south through the Central Valley from Red Bluff to Bakersfield. Through Stanislaus County, it is a freeway with access limited to interchanges. SR 132 is an east-west link between SR 49 and Interstate 580. SR 108 extends from Modesto across Sonora Pass to the eastern side of the Sierra Nevada (Sonora Pass is closed during the winter because of snow). SR 132 and SR 108 are essentially arterial roadways within Modesto and have direct access to adjoining parcels. SR 219 runs east to west along Kiernan Avenue north of Modesto to connect SR 108 and SR 99.

The City of Modesto (City) categorizes the roadways that constitute its circulation network as freeways, expressways, arterial streets, collector streets, and local streets. Figure V-1-1 identifies these roadways; streets not otherwise identified on the figure are local streets. Roadway functional classifications are described in Chapter V of the UAGP and are summarized as follows:

1. **Freeways:** These are intended for long-range interregional travel with access limited to specific interchanges.
2. **Expressways:** These are high-capacity travel corridors with limited access at half-mile to one-mile intervals depending on the expressway classification, with traffic signals at major intersections. City policy provides for the case-by-case consideration of more frequent access when there are demonstrable economic reasons, unusually restricted access, or a need for access to police and fire stations. In such situations, the individual access will be designed to provide safe ingress and egress without degrading the carrying capacity, flow, and efficiency of the expressway.
3. **Arterial streets:** These are intermediate capacity travel corridors primarily intended to serve major movements between different land uses or different parts of the city. Access to arterial streets is ideally limited to major traffic generators, intersections with expressways, and collector streets. Within the Baseline Developed Area, arterial streets also provide considerable direct access to abutting properties and local streets.
4. **Collector streets:** These connect local streets with arterial streets. The preferred design is to limit their length to that necessary and to discourage their use for through or regional traffic. Collectors usually provide a high level of direct access to abutting properties.
5. **Residential / local streets:** These two-lane, low-volume streets have the exclusive function of providing access to abutting properties and connecting to higher-order roadways.

Modesto is served by local and intercity bus service, intercity rail service, a bicycle circulation network, and scheduled air carrier service, in addition to the city's road system. Bus service includes the Modesto Area Express (MAX), Modesto Dial-A-Ride, Stanislaus Regional Transit (StaRT), and Greyhound. Train service includes Amtrak, Altamont Commuter Express (ACE), and Bay Area Rapid Transit (BART) connections. Air travel services are provided at the Modesto City-County Airport.

MAX provides daily, regularly scheduled, fixed-route public bus service within Modesto. Service generally is provided on arterial and collector roadways, with most routes connecting to downtown Modesto. There are two bus transfer facilities: one at Vintage Faire mall and the other in downtown Modesto. Buses are equipped with bicycle racks and wheelchair lifts. Evening service is limited. MAX also provides connecting service to Amtrak, ACE, and the Dublin / Pleasanton BART station. Modesto Dial-A-Ride provides door-to-door public transit on an on-call basis within Modesto for elderly and disabled individuals. It also provides evening and Sunday service to the general public. StaRT provides intercity, fixed-route bus service Monday through Saturday between Modesto and Turlock, Riverbank, Oakdale, Gustine, Newman, Westley, and Patterson. StaRT also provides "runabout" service that combines designated time points and curb-to-curb service to the general public, and a dial-a-ride service. Greyhound provides intercity bus service to points throughout the state and nation. The Greyhound bus station is located at 1001 9th Street in downtown Modesto.

Amtrak provides intercity passenger rail service from Modesto to the Bay Area, Sacramento, Los Angeles, and points beyond. Amtrak operates seven "San Joaquin" trains daily, offering round-trip travel between Sacramento and Los Angeles from the station located on the eastern edge of Modesto at 1700 Held Drive. MAX offers daily scheduled bus service to the station. ACE operates four daily heavy rail commuter trains from Stockton to San Jose, with Central

Valley stops in Lathrop / Manteca and Tracy. MAX provides three morning and four evening direct buses between the Vintage Faire Mall park-and-ride and the Lathrop ACE station. MAX also runs two buses from the Downtown Transportation Center to the Dublin / Pleasanton BART station each morning and evening. Modesto is served by the Union Pacific and Burlington Northern Railroads, which have main lines passing through Modesto. These railroads provide freight service to the San Joaquin Valley and beyond.

Modesto has four types of improved bikeways: Class I, Class II, Class III and Class IV. Class I bikeways are paved paths that are separated from city streets. No motor vehicles are allowed on Class I bikeways. Class II bikeways are striped lanes on major city streets. Class III bikeways are on-street routes identified by “bicycle route” signs. Class IV facilities are one-way or two-way dedicated bicycle facilities physically separated from vehicle travel lanes. Figure V-3 of the General Plan shows the existing and proposed bicycle facilities.

The Modesto City-County Airport is a general aviation airport owned jointly by the City and the County, and operated by the City. The airport has two runways: a 5,911-foot air carrier runway and a 3,459-foot general aviation runway. The Modesto City-County Airport is the base for approximately 190 general aviation aircraft, including corporate jets. Airport services include a passenger terminal and parking, hangars, aircraft fueling and maintenance, aircraft charters, and flying schools. Commercial air service was discontinued. Three car rental agencies operate at the airport.

b. Existing Travel Behavior

Census data were reviewed to determine existing travel behavior in Modesto. Data from 1990 and 2000 were compared with data from the most recent census in 2010 and data from the 2014 American Community Survey, as summarized in Table V-1-1. As of 2014, approximately 92 percent of Modesto residents commuted via private automobile (single occupant and carpool), relatively unchanged from 2000. The average travel time to work decreased slightly between 2000 and 2014, from 27 minutes in 2000 to 26 minutes in 2014. The number of people who reside and work in Modesto declined from 57 percent in 2000 to 54 percent in 2014. The percentage of workers who work from home has generally been increasing since 1990.

Table V-1-1. Changes in Commute Travel Demand for City Residents

Travel Characteristic	1990	2000	2010	2014
Travel Mode				
Single-occupant auto	79.2%	78.9%	81.8%	81.7%
Carpool	13.6%	13.7%	9.2%	10.4%
Public transit	0.9%	1.3%	1.3%	1.5%
Bicycling/walking	2.8%	2.5%	2.0%	1.9%
Other means	1.2%	0.8%	1.9%	1.0%
Work at home	2.4%	2.9%	3.8%	3.4%
Other Commute-Related Data				
Percentage who work in Modesto	61%	57%	56%	54%
Percentage who work outside Stanislaus County	17%	19%	19%	20%
Percentage who leave for work between midnight and 7 AM	32%	33%	34%	34%
Percentage who leave for work between 7 AM and 9 AM	46%	43%	40%	39%
Average travel time to work	25 minutes	27 minutes	25 minutes	26 minutes

Source: U.S. Census Bureau, 1990, 2000, 2010 and 2014.

Table V-1-2 compares the commute characteristics of Modesto residents with those of Stanislaus County, California, and the United States as a whole. Approximately 92 percent (92%) of Modesto and Stanislaus County residents commute via automobile, compared with 84 percent (84%) within California and 86 percent (86%) within the United States. Commute trips via public transit, walking and biking are lower in Modesto and Stanislaus County than the State and Country as a whole. The percentage of workers leaving their homes for work between midnight and 7:00 AM is higher, and the percentage of workers leaving their homes between 7:00 and 9:00 AM is lower for residents of Modesto and Stanislaus County, although average commute times are similar across the state and the nation. Fewer residents of Modesto commute outside their county of residence than do residents elsewhere in the country. Modesto's mode split shows a much higher level of automobile dependence than the State-wide average and a greater proportion of people working outside their county of residence than the California average.

Table V-1-2. 2014 American Community Survey Journey-to-Work Results

Travel Characteristics	Modesto	Stanislaus County	California	United States
Commute Mode Choice				
Single-occupant auto	81.7%	80.0%	73.2%	76.4%
Carpool	10.4%	11.5%	11.1%	9.6%
Public transit	1.5%	.9%	5.2%	5.1%
Bicycling / walking	1.9%	2.4%	3.8%	3.4%
Other means	1.0%	1.0%	1.3%	1.2%
Work at home	3.4%	4.2%	5.3%	4.4%
Other Commute-Related Data				
Percentage who work outside county of residence	20.3%	22.4%	16.9%	23.8%
Percentage who leave for work between midnight and 7 AM	33.9%	37.1%	31.4%	31.5%
Percentage who leave for work between 7 and 9 AM	38.7%	37.4%	42.7%	44.2%
Average travel time to work	26 minutes	26.7 minutes	27.6 minutes	25.7 minutes

Source: U.S. Census Bureau 2014.

c. Existing Roadway Segment Operations

The private automobile is the predominant travel mode in Modesto. Roadway operations are described in terms of level of service (LOS). LOS is a qualitative description of a driver's experience and includes travel speed, delays, and ease of vehicle maneuvering. Peak hour LOS for roadway segments in Modesto is evaluated by comparing the traffic volume with its vehicle capacity (the volume-to-capacity ratio) and correlating the result to a letter grade to represent the levels of congestion, as follows, with daily LOS calculated based on the per lane volume threshold for each level of service capacity as presented in Table V-1-3.

1. LOS A: free flow, low traffic volumes, and drivers can maintain their desired speed with little or no delay.
2. LOS B: stable flow, operating speeds beginning to be restricted by traffic conditions.
3. LOS C: stable flow, but speeds and maneuverability are more closely controlled by higher volumes.
4. LOS D: approaching unstable flow; tolerable operating speeds which are, however, considerably affected by operating conditions.
5. LOS E: unstable flow with yet lower operating speeds and stoppages of momentary duration.
6. LOS F: stopped flow, which may occur for short or long periods. These conditions usually result when vehicles are blocked by a restriction downstream. Volume-to-capacity ratio: greater than 1.0.

Table V-1-3. Per-Lane Roadway Segment Capacities

Type of Roadway Segment	Hourly Capacity ^{a,c}	Daily Volume Threshold ^{b,c}				
		LOS A	LOS B	LOS C	LOS D	LOS E
Freeway Mainline	2,000	8,000	12,750	18,750	23,130	25,000
Expressway – Class A	1,500	5,630	9,380	13,120	15,750	18,750
Expressway – Class B	1,250	4,690	7,820	10,940	13,130	15,630
Expressway – Class C	1,000	3,750	6,250	8,750	10,500	12,500
Principal Arterial (6 lanes)	850	3,190	5,320	7,440	8,930	10,630
Minor Arterial (4 lane facility with center left-turn lane)	925	810	2,190	3,930	6,820	11,560
Minor Arterial (4 lanes)	750	660	1,780	3,190	5,530	9,380
Minor Arterial (2 lane facility with center left-turn lane)	925	810	2,190	3,930	6,820	11,560
Major Collector (4 lane facility)	700	2,450	4,110	5,780	6,910	8,750
Downtown Collector	700	2,450	4,110	5,780	6,910	8,750
Minor Collector (2 lane facility with center left-turn lane)	925	810	2,190	3,930	6,820	11,560
Minor Collector (2 lanes)	650	570	1,540	2,760	4,800	8,130
Local Roadway	500	440	1,190	2,130	3,690	6,250
Rural Road	900	790	2,140	3,830	6,640	11,250

^a Vehicles per through lane per hour.

^b Vehicles per lane per day. Peak hour capacity eight percent (8%) of daily capacity based on a review of peak hour to daily counts on over 200 roadway segments in the City.

^c Hourly and daily calculated based on the method presented in the *Highway Capacity Manual (HCM)* (Transportation Research Board 2010). LOS is assessed based on the volume in relationship to the capacity threshold. For example, a freeway lane carrying 18,700 vehicles on a daily basis would be classified as LOS C as it is between the LOS B and LOS C threshold; if the volume was 19,000 vehicles a day, it would be classified as LOS D.

Note: These are generalized capacities that can be adjusted based on local roadway conditions, including the percentage of turning traffic, intersection spacing, driveway spacing, levels of pedestrian activity, provision of on-street parking, adjacent land use types and other factors.

Source: City of Modesto, 2016.

Existing roadway segments LOS were evaluated for a select number of roadways for daily conditions within the General Plan boundary area. Existing service levels were based on comparing the observed daily traffic volume on over 70 roadway segments throughout the General Plan Planning Area to the volume thresholds presented in **Table V-1-3**. The 2008 UAGP strives to maintain LOS D operations; while the General Plan amendment would maintain this same LOS standard, a greater emphasis is placed on other travel modes with the proposed Project. The downtown area would be exempt from vehicle level of service standards.

The analysis segments currently operating at LOS E (approaching capacity) and F (over capacity) for vehicles on a daily basis are summarized in Table V-1-4:

Table V-1-4. Roadway Segments with Existing (2014) Daily Level of Service E or F

Roadway Segment	Cross Street	Classification	Lanes	Volume	Daily LOS	
4.	Claribel	McHenry to Coffee	Rural	2	16,300	E
5.	Claribel	Coffee to Oakdale	Rural	2	13,800	E
9.	Oakdale	Claribel to Claratina	Rural	2	17,900	E
21.	Oakdale	Claratina to Sylvan	Arterial	4	23,200	E
23.	Standiford	SR 99 to Prescott	Arterial	4	39,200	F
24.	Standiford	Prescott to Carver	Arterial	4	34,700	E
26.	Sylvan	McHenry to Coffee	Arterial	4	33,400	E
31.	Claus	Sylvan to Floyd	Rural	2	18,900	E
32.	Floyd	Coffee to Rose	Collector	2	13,300	E
38.	Briggsmore	Prescott to SR 99	Arterial	6	66,700	F
47.	Carpenter	SR 99 to Woodland	Arterial	4	37,200	E
52.	El Vista	Scenic to Encina	Arterial	4	32,300	E
57.	La Loma	Scenic to Yosemite	Collector	2	14,300	E
63.	Paradise	Beverly to Chicago	Collector	3 ¹	15,500	E
65.	Crows Landing	7th Street to SR 99	Arterial	2	13,700	E
66.	Crows Landing	SR 99 to Hatch	Arterial	4	30,500	E
68.	Carpenter	Paradise to Hatch	Collector	3 ¹	19,200	E
72.	Hatch	Crows Landing to Jim Way	Collector	3 ¹	17,600	E

Notes: 1. Roadway has one travel lane in each direction, plus a center two-way left-turn lane. LOS is based on thresholds for Minor Collector (2 lane facility with center left-turn lane) with capacity threshold based on two lanes.

Source: City of Modesto Traffic Counts, Fehr & Peers, 2017.

d. Existing Policies Applying to the Study Area

Below is a discussion of major federal, state, and local (County and City) policies, with a summary of policies that apply to the study area. This list provides the full range of applicable policies that a project within the study area would potentially need to comply with, including policies beyond the jurisdiction of the City. This list of laws, regulations, and programs also serves to describe the circumstances under which the Master EIR analyzed this environmental topic.

A discrete reference number, following the initials of the resource topic, is assigned to each policy or policy summary listed to facilitate its identification elsewhere in this Master EIR or, where appropriate, its incorporation as a mitigation measure into subsequent projects analyzed under this Master EIR (e.g., Transportation and Circulation policies are designated as TC-X, where X is the discrete number).

(1) Federal Policies

The federal government has a variety of funding programs for transportation, including funds for highways, roads, bridges, transit, transportation planning, bicycle and pedestrian facilities, and aviation facilities. In large part, federal programs channel funding through the California Department of Transportation (Caltrans). Federal funding through the Fixing America's Surface Transportation Act is available for surface transportation spending. The \$305 billion, five-year bill was passed in December 2015.

(2) State Policies

The state has delegated a great deal of authority for planning and prioritizing the funding of transportation projects to regional and local government. California law requires each regional transportation planning agency (RTPA) (the Stanislaus Council of Governments [StanCOG] here) to prepare a regional transportation plan (RTP) that identifies existing and future transportation demand and needs, and identifies means to meet those needs. The RTP is the long-range plan for funding transportation projects.

Working from the RTP, the RTPA must prepare a regional transportation improvement program (RTIP) that identifies and prioritizes individual transportation projects to be undertaken to meet regional needs. The projects must be analyzed sufficiently to justify their inclusion in the RTIP and to estimate their costs. The RTIP is forwarded to the California Transportation Commission for inclusion in the State Transportation Improvement Program (STIP), making individual projects eligible for federal and state transportation funding. State law now provides that 75 percent of the funds made available through the STIP must go to regional projects, and 25 percent is programmed for interregional improvements.

For the 20-year planning horizon, Caltrans' concept LOS for SR 99 is LOS C in rural areas and LOS D in urban / developed areas. A ten- to twelve-lane SR 99 freeway will be needed to meet this objective, with twelve lanes needed from Hatch Road to the San Joaquin / Stanislaus County line. However, as detailed in the April 2011 State Route 99 Stanislaus County Corridor System Management Plan, there are financial, environmental and right-of-way constraints that will likely preclude the construction of a twelve lane SR 99 facility through Modesto. Current plans identify an eight lane facility, including high-occupancy vehicle lanes. Auxiliary lanes may be provided between some interchanges though Modesto.

(3) Stanislaus Council of Governments Policies

The Stanislaus Council of Governments (StanCOG) is responsible for planning and allocating federal, state, and regional funding for transportation projects. Modesto uses locally-collected Capital Improvement Program funds and other local funds to match against state and federal transportation funds administered by StanCOG. StanCOG's Regional Transportation Program (RTP) is a funding plan for transportation investments.

The 2014 StanCOG Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) focuses on creating a more sustainable transportation system and land use development pattern, and includes transportation projects such as highway and road construction, airports, alternative fuel vehicle acquisition, public transit, and bicycle paths (Stanislaus Council of Governments 2014). The RTP identifies a number of improvements within Modesto, including; widening SR 132 to expressway width from SR 99 to west of Dakota Avenue; widening SR 99 from Kiernan Avenue to SR 132; reconstructing the Pelandale Avenue/SR 99 interchange in north Modesto (under construction as of September 2016, with completion expected in early 2017); and widening of several roadways including portions of Oakdale Road, Roselle Avenue, Dale Road, Crows Landing Road and Claratina Avenue.

In addition to the RTP/SCS and RTIP discussed above, state law requires StanCOG to prepare a congestion management program (CMP) that establishes LOS performance standards for state highways and principal arterials within the county. A CMP must contain the following components: an element defining the affected transportation system and LOS, a performance element evaluating the system's performance across several transportation modes, a travel demand element, a program for analyzing the impact of land use decisions, and a seven-year capital improvement program. In addition, under CMP law, local jurisdictions are required to prepare and implement a deficiency plan when congestion on a roadway segment exceeds the adopted LOS standard. The deficiency plan must identify the cause of the deficiency, improvements needed to cure the deficiency, and an action plan for implementing those solutions. Implementation of the CMP makes the County eligible to receive increased gasoline and diesel sales tax funds from the state.

StanCOG prepared a CMP in 2009. The CMP document identifies a number of existing and projected roadway deficiencies which were incorporated into the RTP/SCS.

The RTP/SCS contains a variety of general goals and policies that may relate to Modesto under given circumstances. These are provided below.

TC-1: Goal 1. Mobility and Accessibility: Improve the ability of people and goods to move between desired locations; and, provide a variety of transportation choices.

Objective 1A: Apply new technologies to make travel more reliable, convenient, and accessible for all modes.

Objective 1B: Implement the projects identified in the 2013 StanCOG Non-Motorized Transportation Plan to ensure a workable network of alternative modes of transportation in the system.

Objective 1C: Integrate the regional expressway study into the 2014 RTP/SCS and local general plans.

Objective 1D: Implement complete streets projects to improve roadways impact of quality of life throughout the region and provide greater transportation choices.

Objective 1E: Expand transportation mode choice for all residents and visitors.

TC-2: Goal 2. Social Equity: Promote and provide equitable opportunities to access transportation services for all populations and ensure all populations share in the benefits of transportation improvements and provide a range of transportation and housing choices.

Objective 2A: Provide an equitable level of transportation for all modes for all users.

TC-3: Goal 3. Economic and Community Vitality: Foster job creation in agricultural and non-agricultural sectors, and encourage business attraction, retention, and expansion by improving quality of life through new and revitalized communities.

Objective 3A: Improve the movement of goods in the region by supporting the enhancement of goods by land (including rail) and air.

TC-4: Goal 4. Sustainable Development Pattern: Provide mixed land uses and compact development patterns, and direct development toward existing infrastructure to preserve agricultural land, open space, and natural resources.

Objective 4A: Preserve farmland and natural resources by integrating land use and transportation planning.

TC-5: Goal 5. Environmental Quality: Consider the environmental impacts when making transportation investments and minimize direct and indirect impacts on clear air and the environment.

Objective 5A: Lower overall vehicle miles traveled, reduce greenhouse gas emissions, and improve overall air quality.

TC-6: Goal 6. Health & Safety: Operate and maintain the transportation system to ensure public safety and security; and improve the health of residents by improving air quality and providing more transportation options.

Objective 6A: Maximize safety and comfort for transit users.

Objective 6b: Promote non-motorized modes of transportation to help encourage healthy travel.

TC-7: Goal 7. System Preservation: Maintain the transportation system in a state of good repair, and protect the region's transportation investments by maximizing the use of existing facilities.

Objective 7A: Protect the region's investment by preserving the condition of the existing transportation system.

(4) San Joaquin Valley Air Pollution Control District Policies

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted a transportation control measure (TCM) plan intended to reduce vehicle trips, vehicle miles traveled, vehicle idling, and traffic congestion. This is an attempt by the SJVAPCD to address mobile-source emissions. The TCMs include programs for improved public transit, employer-based transportation management plans, traffic flow improvement programs that achieve emissions reductions, and programs to limit or restrict vehicle use in downtown areas (San Joaquin Valley Air Pollution Control District 2005). With the continued non-attainment status for a number of pollutants, tighter controls over mobile emissions will be needed if the air pollution control district is to reduce smog levels to acceptable standards.

(5) Stanislaus County Policies

The County updated the Circulation Element of its county-wide general plan in 2016. The Circulation Element of the *Stanislaus County General Plan* (County General Plan) identifies the goals, policies, and implementation measures that ensure compatibility between planned land use, infrastructure, and transportation modes. The Circulation Element establishes policies applicable to unincorporated areas of the county. These relate to Modesto in that the City and County jurisdictions share common roads, and County policies in areas adjoining the city may affect city traffic patterns. The City and County may need to coordinate their policies in these areas.

Roadways within the unincorporated County are classified as follows:

- a. Interstate Freeway: These are interregional roadways, with access restricted to interchanges at primary arterials. Access to interstate freeways is typically at a minimum of two-mile spacing.
- b. Freeways and Expressways: Freeways and expressways provide for through-traffic movement, with no direct access to abutting property. Access is provided by interchanges.
- c. Principal Arterials: The function of a principal arterial is to move high volumes of people and goods between urban areas within the county at higher speeds, while still providing access to abutting properties as permitted by the standards for each principal arterial class. On-street parking is not permitted, although bicycle and pedestrian facilities may be provided. Farm equipment is permitted.
- d. Minor Arterials: The function of a minor arterial is to carry moderate- to high-volume traffic to and from collectors to other minor arterials, principal arterials, expressways, and freeways with a secondary function of land access.
- e. Major Collectors: These roadways serve a dual function by providing both land access and mobility for medium-length trips. Collectors serve as transition facilities, providing a connection between lower and higher level roadways.
- f. Minor Collectors: These roadways serve a dual function by providing both land access and mobility for medium-length trips. Collectors serve as transition

facilities, providing a connection between lower and higher level roadways. Rights-of-way for minor collectors are typically less than major collectors.

- g. Rural Local: Rural local roadways serve as land access facilities in the agricultural areas of the County by providing direct access to abutting property and movement of small volumes of people and goods for medium length trips.
- h. Urban Local: Urban Local roadways serve as land access facilities in the urban and industrial areas of the County by providing direct access to abutting property and movement of small volumes of people and goods for short trips.
- i. Private: This classification includes agricultural access easements and is included primarily to conform to state-mandated standards for private access roads in the state responsibility area as designated by the California Department of Forestry and Fire Protection. The County does not maintain private roadways.

Stanislaus County policies:

TC-8: As a matter of policy, Stanislaus County strives to maintain LOS D or better on all roadways (daily LOS) and LOS C or better at all intersections (peak hour LOS). (County General Plan, Circulation Element)

TC-9: Policy Two

The Circulation system shall be designed and maintained to promote safety by combining multiple modes of transportation into a single, cohesive system.

Implementation Measures

1. The County shall maintain LOS D or better for all County roadways (Daily LOS) and LOS C or better at intersections (Peak Hour LOS), except within the sphere of influence of a city that has adopted a lower level of service standard, the city standard shall apply. The County may allow either a higher or lower level of service standard for roadways and intersections within urban areas such as Community Plan areas, but in no case shall the adopted LOS fall below LOS D.
2. The County will annually review and update its transportation funding mechanisms and, as necessary, adjust its traffic impact fee to ensure that adequate funds are collected from local, State, and federal sources to implement improvements required to maintain the County's level of service standard on all County roadways.
3. The County will work with StanCOG and the cities to monitor the performance of the County's circulation system and implement improvements as required by the State-mandated Congestion Management System.
4. The County will work with StanCOG and the cities to identify and secure funding for improvements to the regional and local circulation system.

5. The County shall evaluate the circulation system and recommend amendments a minimum of once every five years.
6. The County will work with staff of the nine cities, StanCOG and Caltrans to establish more coordinated standards and routes for Expressways, Principal & Minor Arterials, and Major & Minor Collectors that cross jurisdictional lines.
7. Within the spheres of influence of any city, roadway improvements, dedications, building setbacks and road reservations shall meet the development standards of the city consistent with the Spheres of Influence Policy in the Land Use Element of the General Plan, except in those areas subject to an individual city/county agreement.
8. Private roadways in areas of the County protected by the California Department of Forestry and Fire Protection shall be designed consistent with the standards of that agency, the local fire protection district and the Department of Public Works.
9. Street and road standards proposed in any new development that differ from those established in the latest County's Standards and Specifications shall be approved by the Department of Public Works, and shall comply with nationally recognized standards.
10. Traffic control devices (e.g., traffic signals, roundabouts), traffic calming, and other transportation system management techniques shall be utilized to control the flow of traffic, improve traffic safety, and minimize delays.
11. On-site circulation among adjacent parcels shall include shared driveways and reciprocal access easements to limit the number of egress points onto a public road.
12. Development shall be designed to provide open street patterns, with multiple points of ingress and egress, to facilitate emergency response, to minimize traffic congestion, and to facilitate use by diverse modes of transportation.
13. Promote the transformation of major transportation corridors into boulevards that are attractive, comfortable, and safe for pedestrians by incorporating wide sidewalks to accommodate pedestrian traffic; amenities and landscaping; on-street parking between sidewalks and travel lanes; enhanced pedestrian street crossings; buildings located at the back of sidewalk; building entrances oriented to the street; transparent ground floor frontage; street trees and furnishings; and pedestrian-scale lighting and signage.
14. A strategy plan should be prepared that includes the identification of areas and/or projects to which new multi-modal transportation guidelines shall apply. New guidelines shall identify strategies for creating communities that increase the convenience, safety and comfort of people using bicycle, pedestrian and public transit facilities. Existing policies and standards, such as landscaping, parking, and building setback requirements, may require variations

on a case by case basis, specifically in Central Business Districts.
(County General Plan, Circulation Element)

TC-10: Policy Six

The County shall strive to reduce motor vehicle emissions and vehicle miles traveled (VMT) by encouraging the use of alternatives to single occupant vehicle.

Implementation Measures

1. The use of alternative modes of transportation will continue to be encouraged by participating in programs to promote walking, bicycling, ridesharing, and transit use for commuting and recreation.
2. The County will continue to work with StanCOG, Caltrans, and the cities to identify and secure funding for the development and improvement of bikeways, pedestrian pathways, park-and-ride facilities, transit systems, and other alternatives to the single-occupant vehicles.
3. Facilities to support the use of, and transfer between, alternative modes of transportation (i.e., pedestrian, rideshare, bicycle, bus, rail and aviation) shall be provided in new development.
4. The County will continue to work with the Stanislaus Council of Governments and the San Joaquin Valley Air Pollution Control District to develop and implement transportation control measures to improve air quality through reduction in vehicle trips and vehicle miles of travel.
5. Developers will construct or pay the cost of new pedestrian pathways, bikeways, rideshare facilities, transit amenities, and other improvements necessary to serve the development and to mitigate impacts to the existing circulation system caused by the development.
6. The County shall continue using Compressed Natural Gas (CNG) or another alternative energy source in its fleet vehicles and will pursue special grants and funding sources to offset the costs of continued-use of CNG in County-owned buses. (County General Plan, Circulation Element)

TC-11: Policy Seven

Bikeways and pedestrian paths shall be designed to provide safe and reasonable access from residential areas to major bicycle and pedestrian traffic destinations such as schools, recreation and transportation facilities, centers of employment, and shopping areas.

Implementation Measures

1. Bikeways shall be considered and implemented in accordance with the StanCOG Non-Motorized Transportation Plan and adopted Community Plans or Specific Plans when constructing or improving

the roadway system in the unincorporated area outside the spheres of influence of the cities.

2. Within the sphere of influence of a city, bikeways and pedestrian facilities and amenities shall be provided in accordance with the applicable city's general plan and development standards.
3. Facilities to safely move, and support the use of, bicycles, pedestrians, transit and ridesharing shall be considered and implemented in all new development and roadway construction.
4. Class I bicycle and multi-use paths shall be considered to provide connectivity between major origins-destinations or to major recreational areas when on-road provisions for bicycle traffic cannot be accommodated or no alternative roadway alignment provides adequate connectivity.
5. To safely accommodate bicycle traffic, adequate pavement shoulder and/or striping shall be planned and implemented when constructing new roadways or implementing major rehabilitation projects.
6. Whenever a roadway is resurfaced or restored, adequate pavement shoulder and/or striping will be considered to safely accommodate bicycle travel ... where adequate right-of-way exists.
7. Federal funds, special grants, and other sources of funding shall be pursued for the development and improvement of bikeways and pedestrian pathways. (County General Plan, Circulation Element)

TC-12: Policy Eight

Promote public transit as a viable transportation choice.

Implementation Measures:

1. Continue to operate existing transit systems and coordinate with other County transit operators to provide public transit serving Stanislaus County.
2. The County shall continue to work with the Stanislaus Council of Governments (StanCOG) to seek funding to market and promote rideshare programs and where possible, encourage all County employees to use public transit to commute to work.
3. Ensure that provisions are made in proposed development for access to current and future public transit services. In particular, continuous segments of walls or fences should not impede pedestrian access to Expressways, Principal and Minor Arterials, and Major and Minor Collectors with transit service.
4. Where appropriate, new development projects shall promote the coordination and continuity of all transportation modes and facilities, including park and ride facilities at major activity centers.
5. Where appropriate, new development projects shall include bus turnouts and site improvements associated with bus stop accessibility for persons with disabilities, including curb cuts for wheelchair

access. Where feasible, developments should be encouraged along established or proposed transit routes. The costs associated with site improvements shall be paid by the developer.

6. Where possible, coordinate public transportation with land use planning, transportation planning and air quality policies such that transit investments are complementary to land use planning and air quality policies.
7. Financing mechanisms shall be investigated to recover the cost of providing transit service and infrastructure to support new development.
8. The County shall encourage infill development of vacant parcels and redevelopment projects that will align with and improve the overall effectiveness of the public transit system.
9. Increase transit use through higher-frequency service of at least 15-minute headways in downtown areas and along major transportation corridors. Transit and land use will be interconnected to support increased ridership. (County General Plan, Circulation Element)

TC-13: Policy Ten

The Airport Land Use Commission Plan and County Airport Regulations ... shall be updated as necessary, maintained and enforced. (County General Plan, Circulation Element)

(6) City of Modesto Policies

The purpose of Modesto's transportation system is to move people and goods safely, conveniently, and efficiently. The system should provide transportation choices that are safe, reliable, effective, and economical for all users to decrease household transportation costs, improve air quality, reduce greenhouse gas emissions, and promote public health. Figure V-1 of the UAGP presents the roadway designations and major features of transportation system within the General Plan boundary.

(a) Policies Relating to Street Designations

The following describes policies related to general street designations.

TC-14: Roadway Facilities. There are seven major roadway facility types in Modesto as shown on the UAGP Circulation diagram and listed below. (UAGP Policy V-H.1)

Freeway. This classification defines the highest volume, total access-control highways with high design speeds (55–65 mph).

State Highway. This classification applies to streets that are acquired, laid-out, constructed, improved, or maintained as a state highway pursuant to constitutional or legislative authorization. This facility type can be designated a freeway, expressway, arterial, or other roadway classification.

Expressway. The purpose of an expressway is to facilitate automobile and transit trips across town rapidly. Bicycles can be accommodated. Pedestrians are generally not expected. Expressways should have signalized intersections or roundabouts at arterial streets (one mile apart) and right-turn-only access to collector streets (one-half mile apart). Expressways may include either Class I or Class II bicycle facilities. Driveway access from fronting properties should not be allowed without specific authorization from the City Council (see Policy V.H.12, below).

Arterial Street. Arterials allow movement of people by all modes and provide safe and convenient access to businesses for people using any travel mode. Arterial streets may be classified either as principal or minor arterials. A principal arterial typically has six lanes, while a minor arterial has four lanes. All arterials should have on-street bicycle facilities. Driveway access from fronting properties should be designed according to the City’s Standard Specifications.

Collector Street. Collectors are primarily lined with residential development and serve a function similar to that of local streets, but with higher traffic volumes. Collector streets serve pedestrian and bicycle traffic, as well as automobiles and sometimes transit. Collectors may be classified either as “major” or “minor;” a major collector typically has four lanes, while a minor collector has two lanes. Driveway access from fronting properties should be designed according to the City’s Standard Specifications.

Local Street. The primary purpose of local streets is to connect people to their neighbors and neighborhood. Cars are not excluded, but they are not the focus of transportation. Driveway access from fronting properties should be designed according to the City’s Standard Specifications.

Downtown Street. All downtown streets are designated as collectors, and downtown collector streets function differently from collector streets in other parts of the city. All downtown streets are constrained and will not be widened except as noted in Policy V.A.8. Certain downtown streets are expected to carry through traffic. These include:

- D Street (State Route 132)
- G and H Streets
- K and L Streets (State Route 108)
- 9th Street (State Route 132)
- Paradise Road

TC-15: Expressways. This classification defines high-volume, access-controlled roadways. Expressway locations / alignments are shown in the UAGP Circulation and Transportation Diagram, Figure V-2. Street Details in the City of Modesto’s *Standard Specifications* illustrate the intersection cross-section requirements for expressway intersections with arterial and collector streets.

This General Plan provides for a system of expressways throughout the City. The City will continue to include these expressways in its Circulation and Transportation plan and to implement them in cooperation with the development community according to applicable design standards.

- (1) Regulate and limit the number and design of expressway access locations in order to ensure the overall operational viability of expressways in the community.
- (2) Any consideration of access to expressways is contingent on the ability of an applicant to provide a properly designed solution consistent with the adopted City standard specifications for access to expressways. The City Engineer may approve variations and deviations from adopted standard specifications pursuant to Section 7-1.701(I)(2) of the Municipal Code.
- (3) Any access to expressways from private parcels will be at the sole expense of the property owner, including any reconstruction of the expressway that may be necessitated.
- (4) The City may allow expressway access to non-residential uses on a case-by-case basis per the following criteria:

When an applicant demonstrates to the City Council's satisfaction that economic purposes are clearly restricted by denial of access to a particular parcel, and when the applicant demonstrates to the City Council's satisfaction that there are either no or only highly restrictive alternative access solutions available to a particular parcel under consideration; or,

For infill site developments, when an applicant demonstrates to the City Council's satisfaction that the economic benefits derived from development of the remnant parcel override the need to limit access to that parcel; or,

It is recognized that City of Modesto emergency facilities, such as police and fire stations, will be located from time to time on expressways and, further, that direct access is desirable. In these cases, direct access is allowed subject to approval by the City Engineer. Design of such access should have City Council approval prior to implementation.

- (5) The City has adopted access management policies that include design standards for expressway access (General Plan Amendment 2001-02, August 28, 2001, modified by General Plan Amendment 2010-01). The purpose of the guidelines and design standards is to provide safe ingress and egress to adjacent parcels while at the same time not degrading the carrying capacity, flow, and efficiency of the expressway. (UAGP Policy V-H.15)

(b) Circulation and Transportation Policies – Overall

The Citywide Transportation goal is to provide meaningful transportation choices, increase non-automobile mode share and facilitate the provision of complete streets. This will be accomplished through the provision of transportation choices that are safe, reliable, effective, and economical for all users with the goal to decrease household transportation costs, improve air quality, reduce greenhouse gas emissions, and promote public health. The transportation system will be robustly multi-modal, recognizing that adding capacity for automobiles is often the least cost-effective improvement. The following policies are aimed to achieve this goal.

TC-17: Gap Closures. Identify gaps in the pedestrian and bicycle transportation systems and plan facilities to close those gaps. (UAGP Policy V.A.1)

TC-18: Encourage Pedestrians and Bicycle Use. Streets, pedestrian paths, and bike paths contribute to a system of fully-connected routes to all destinations. Their designs encourage pedestrian and bicycle use when small and spatially defined by buildings, trees, and lighting, and when high-speed traffic is discouraged. (UAGP Policy V.A.2)

TC-19: Transportation Improvement Program. Prepare and maintain a citywide transportation improvement program for all modes of travel, considering the development context when selecting which improvements should be included in the Capital Improvement Program. (UAGP Policy V.A.3)

TC-20: Capital Facilities Fee Program. Update and maintain a Capital Facilities Fee program to contribute to multi-modal transportation improvement projects of local and regional significance. (UAGP Policy V.A.4)

TC-21: Mediating Mode Conflicts. In the case of conflict between motorized and non-motorized transportation modes, roadway or right-of-way features may be added or altered to protect pedestrians and bicyclists, consistent with Urban Area General Plan goals. (UAGP Policy V.A.5)

TC-22: Level of Service and Mitigating Travel Demand. Over time, improve both the Level of Service and Quality of Service (see Tables V-1 and V-2, respectively) for all transportation modes (vehicle, transit, bicycle and pedestrian) on City roadways consistent with the financial resources reasonably available to the City and without unreasonably burdening property owners or developers. On roadways where the automobile LOS is expected to be level F, consider mitigation measures other than road widening, such as the addition of bicycle lanes, improved pedestrian access, improved transit service, and the establishment of walkable development patterns to improve the quality of service for all travel modes. (UAGP Policy V.A.6)

TC-23: Complete Streets. Where traffic volumes, development types and access patterns provide opportunity, a four-lane street may be narrowed to a two-lane street, with a center turn lane, in order to better accommodate on-street parking, bicycle facilities and other amenities.

These types of complete street retrofit projects are generally intended to enhance facilities for non-motorized travel modes, within an existing right-of-way, without resulting in reduced functionality for the motoring public. Maintaining high-quality transit service is equally important. (UAGP Policy V.A.7)

TC-24: Constrained Streets. Many streets in the built city are constrained from further widening by existing development. For street segments identified in the table below right-of-way dedications in conjunction with any development will be limited to obtaining that necessary to close a gap in: a) the number of vehicle lanes; b) bicycle lanes; c) sidewalk/curb/gutter; or, d) be a feasible mitigation measure that can't otherwise be achieved by means such as restriping within the existing right-of-way. Standard design specifications such as travel lane width or intersection design criteria may be waived or modified at the discretion of the City Engineer. Additional right-of-way may be needed at key arterial / arterial intersections to allow for turning lanes, if appropriate at any particular location(s). (UAGP Policy V.A.8)

Constrained Streets	
Street	Segment
Briggsmore Avenue	Sisk Road to Oakdale Road
Coffee Road	Scenic Drive to Claratina Avenue
Dale Road	Standiford Avenue to Pelandale Avenue
Hatch Road	Carpenter Road to 7 th Street / SR 99
Lakewood Avenue	Scenic Drive to Briggsmore Avenue
McHenry Avenue	Needham Street to Granger Avenue
Oakdale Road / El Vista Avenue	Sylvan Avenue to Yosemite Boulevard
Orangeburg Avenue	Evergreen Avenue to Coffee Road
Paradise Road	1st Street to Carpenter Road
Scenic Drive	Burney Street to Claus Road
Sisk Road	Briggsmore Avenue to Kiernan Avenue
Standiford Avenue / Sylvan Avenue	Dale Road to Oakdale Road
Tully Road	Pelandale Avenue to 9th Street
Yosemite Boulevard	D Street to general plan boundary
All downtown streets	As shown on UAGP Figure V-1

The City also intends to reduce per capita automobile vehicle miles traveled and per capita automobile trips through the implementation of the following policies.

TC-25: Street Grid. Design roadways and roadway connections to: provide a grid street system featuring short blocks and frequent connections to collectors and arterials to improve connectivity and accessibility for all modes; increase route choice; better accommodate public transit services; and, reduce trip lengths, traffic congestion, and pollution. To promote walking, limit block size to no more than 600 feet on a side, and provide internal access via alleys or walkways (any block-face less than 400 feet long need not have alleys or walkways). Cul-de-sacs are discouraged; when deemed necessary, cul-de-sacs should include pedestrian and bicycle connections to the greatest extent possible. (UAGP Policy V.B.1)

TC-26: Intersection Density. Frequent multiple-leg intersections increase street connectivity and walkability, while reducing trip lengths. Intersection density will be used to measure the degree of walkability of an area where streets have not yet been laid out. LEED ND defines walkability as a minimum threshold of 140 intersections per square mile. Higher intersection density indicates that an area is more walkable. For reference, Modesto's one-square-mile downtown grid contains approximately 140 intersections. (UAGP Policy V.B.2)

TC-27: Street or Alley Closures. Any street or alley closures or abandonments will be evaluated for their impact on walkability and vehicle miles traveled. (UAGP Policy V.B.3)

As the City develops, revisions to the transportation system should be considered in a context-sensitive manner and the effects of new development and changes to the City's transportation infrastructure on all modes of travel (train, bus, car, bicycle, and walking) should be evaluated.

TC-28: Transportation Study Thresholds. UAGP Figure II-1 delineates the functional geographic areas (Downtown, Baseline Developed Area, Planned Urbanizing Area) of the city described below. For CEQA purposes, the following are Modesto's thresholds for performing transportation studies.

Downtown Area: This area is exempt from automobile Level of Service standards and no traffic impact analysis will be required for new development.

Baseline Developed Area: If a proposal is consistent with the Urban Area General Plan, no traffic impact analysis will be required. If a general plan amendment is needed, a traffic impact analysis may be required if the proposal would result in at least 100 peak hour trips above and beyond what was assumed in the analysis for the Urban Area General Plan Master Environmental Impact Report, if determined to be necessary. LOS "D" is the significance threshold.

Planned Urbanizing Area: In new specific plan areas that are outside city limits, a traffic study may be required if project-related traffic, as measured in Average Daily Trips, is expected to be at least ten percent (10%) greater than anticipated to result from the General Plan land use designations. The purpose of such a study would be to determine the amount of feasible automobile-oriented and non-auto-oriented mitigation associated with the project. Once a specific plan has been approved and the area annexed to the city, traffic study policies for the Baseline Developed Area will apply. LOS "D" is the significance threshold. (UAGP Policy V.C.1)

TC-29: Traffic Study. If required, a Comprehensive Traffic Study should conform to the City of Modesto *Traffic Impact Study Criteria*. These *Criteria* will be amended to reflect general plan goals and policies, including definition of metrics for all both motorized and non-motorized transportation modes. (UAGP Policy V.C.2)

TC-30: Travel Mitigation Downtown. Streets and roads in the downtown area are constrained (see Policy V.A.6). Transportation mitigation may be applied to projects in that area to facilitate non-automobile travel through means such as sidewalk widening and adding bicycle lanes and increasing transit service. (UAGP Policy V.C.3)

TC-31: Downtown Site Access Study. If it is determined that a site access study is needed to analyze proposed development in the downtown area, that study should evaluate movement conflicts across all modes (walking, bicycle, car, bus, train) with an emphasis on facilitating non-automobile travel. (UAGP Policy V.C.4)

TC-32: Travel Mitigation Outside of Downtown. Outside of the downtown area, consider and balance the effects of automobile traffic mitigation on non-automobile travel – particularly in areas where the city is attempting to improve conditions that support non-automobile travel – when considering solutions to traffic circulation problems. (UAGP Policy V.C.5)

TC-33: Prioritizing Transportation Investments. Strive to achieve high quality of service, as depicted in UAGP Table V-2 (FDOT Figure 1-2, 2009), for each non-automobile travel mode appropriate to the location in the City.

Downtown Area: Pedestrian and bus quality of service should be A/B. Bicycle quality of service should be C/D or better.

Baseline Developed Area: Pedestrian quality of service should be C/D on arterial streets and A/B on local and collector streets. Bicycle quality of service should be A/B on local and collector streets, C/D on arterial streets, and E/F on expressways. Bus quality of service should range from C/D to E/F, depending upon boardings. Consider improving accessibility along impacted routes by implementing Transportation Demand Management strategies. (UAGP Policy V.C.6)

TC-34: Corridor Studies. Prepare corridor planning studies for the following roads, shown on UAGP Figure V-1, and other roadways as deemed appropriate (See also Policies III.C.1, C.2, and C.7) (UAGP Policy V.C.7):

- State Route 108 / McHenry Avenue;
- Crows Landing Road;
- Paradise Road;
- State Route 132/Yosemite Boulevard; and,
- North 9th Street.

(c) Roadway Policies

Specific roadway policies have the goal of improving the roadway network for safety and public health to support a healthy, safe Modesto by reducing trip lengths and vehicle miles traveled per capita, reducing collision rates, supporting the increased use of alternative modes, and helping reduce greenhouse gas emissions and other air pollutants, while balancing the transportation needs of all travelers. Specific Policies to achieve these goals include:

TC-35: Coordinate Planning Efforts. Coordinate the City’s streets and highways system with Caltrans’, the County’s, and other jurisdictions’ existing facilities and plans. (UAGP Policy V.H.3)

TC-36: Transportation Demand Management. Prepare and maintain a Transportation Demand Management Plan that includes a focus on the Downtown area to reduce automobile trips and single-occupancy vehicle trips. (UAGP Policy V.H.4)

TC-37: Driveway Consolidation. Consolidate driveways to reduce potential vehicle-pedestrian conflicts. (UAGP Policy V.H.5)

- TC-38: Advanced Technology.** Coordinate with Caltrans to promote the application of advanced technology to help manage congestion and enhance roadway capacity and safety. (UAGP Policy V.H.6)
- TC-39: Roundabouts.** The City of Modesto *Roundabout Policies* (City Council Resolution 2004-451 as amended) provide guidance that pertains to the development of the roundabouts. (UAGP Policy V.H.7)
- TC-40: Intersection Control.** The type(s) of intersection control(s) (e.g. traffic signal, traffic circle, etc.) will be determined by the City Engineer at the time of project design. (UAGP Policy V.H.8)
- TC-41: Standard Specifications.** The City’s Standard Specifications Manual applies to the construction of new roadway facilities. More design detail is provided in the City’s adopted *Standard Specifications*. Update the Standard Specifications to be consistent with the General Plan. (UAGP Policy V.H.9)
- TC-42: Transportation Priorities Near Downtown Multi-Modal Transportation Center.** Evaluate the function and priorities of streets near the downtown multi-modal transportation center. (UAGP Policy V.H.12)
- TC-43: Truck Routes.** Evaluate the need to identify new truck routes and the potential abandonment of existing truck routes due to increased truck traffic, increased size of trucks, and conflicts with pedestrian-oriented areas and noise-sensitive land uses. (UAGP Policy V.H.13)
- TC-44: Reduce Parking Demand Downtown.** Reduce parking demand downtown through a Parking Management Plan that addresses pricing, on-street parking restrictions, smart meters, locations of public parking structures, carpool parking, car rental, car sharing, and electric vehicle parking. (UAGP Policy V.H.14)

(d) Bicycle Policies

Overall goals for Bicycle use are to increase bicycle trips and reduce automobile trips by making bicycling easier and more convenient and by eliminating safety concerns as a barrier to the use of bicycles for transportation. This goal would be achieved through the implementation of the following policies.

- TC-45: Bicycle Facility Types.** UAGP Figure V-3 shows the planned bicycle network. The bicycle network consists of these facility types:

Class I Bicycle Facility (Bike Path)

A Class I facility is grade-separated from the road, is primarily for recreational purposes, and often has limited connectivity to the road network.

Class II Bicycle Facility (Bike Lane)

A Class II facility is delineated by a lane stripe and sometimes a buffer in the traveled roadway. It is used primarily for transportation, provides excellent connectivity with the road network, and convenient access to destinations.

Where the traveled roadway isn't wide enough to accommodate a full Class II facility, a sharrow can be used if vehicle speeds don't exceed 25 mph. A sharrow is a shared lane marking that helps bicyclists and motorists with the lateral positioning of a bicycle in a travel lane.

Class III Bicycle Facility (Bike Route)

A Class III facility is a bike route with signage at the roadway edge that does not include striping. Class III facilities are typically located either on local streets or on other roadways to close a gap between sections of Class II Bike Lane.

Class IV Bicycle Facility (Cycle Track)

A Class IV facility is a two-way, dedicated cycle track that is physically separated from vehicle travel lanes. (UAGP Policy V.E.1)

TC-46: Funding for Bicycle Facilities. Consider funding bicycle facilities as a priority in the Capital Improvement Program. (UAGP Policy V.E.2)

TC-47: Opportunities to Add Bicycle Facilities. When streets are repaired or resurfaced, add bicycle facilities to those streets as appropriate with striping, stencils, and/or signage, consistent with Figure V-3 of the UAGP. (UAGP Policy V.E.3)

TC-48: Increase Ridership. Increase bicycle ridership for transportation purposes through the addition of bicycle facilities, such as a bike-share program, and other system improvements. (UAGP Policy V.E.4)

TC-49: Network Deficiencies. Identify deficiencies and take action to correct deficiencies in the bicycle transportation network. (UAGP Policy V.E.5)

TC-50: Actively Plan New Facilities. Street projects should be evaluated to determine how the planned bicycle facilities can be accommodated. (UAGP Policy V.E.6)

TC-21: Facilities on Constrained Streets. Where right-of-way constraints exist, a "sharrow" may be used to supplement Class II bicycle facilities where vehicle speeds do not exceed 25 mph. (UAGP Policy V.E.7)

TC-52: Bicycles at Signalized Intersections. Protected intersection design features, bike boxes and bicycle detection systems may be used to delineate bicycle facilities, improve safety, and allow bicycle traffic to trigger the green phase of a traffic signal. In accordance with California Vehicle Code Section 21450.5, sensors that detect the presence of a

waiting bicycle should be added to signalized intersections when signals are installed, upgraded and/or maintained. Other markings and signage may be used as approved by the City Engineer. (UAGP Policy V.E.8)

TC-53: Signal Timing. The green phase of traffic signals throughout Modesto should be timed to allow bicycle riders of all ages and abilities to cross the street safely. (UAGP Policy V.E.9)

TC-54: Bicycle Circulation Near the Downtown Passenger Rail Station. Plan for the future multi-modal transportation center, by facilitating improved bicycle access and parking in and around downtown, to establish safe and convenient bicycle connections to and from the site. (UAGP Policy V.E.10)

(e) Pedestrian Policies

The overall goal for Pedestrian activity is to ensure that pedestrians of all ages and abilities feel safe using pedestrian facilities to eliminate safety as a barrier to walking for transportation. This goal would be achieved through the implementation of the following policies.

TC-55: Median Refuges. Add median refuges along arterials and four-lane collectors in areas where pedestrian traffic is to be facilitated to give pedestrians a safe halfway point for street crossings. (UAGP Policy V.D.1)

TC-56: Bulbouts. Add sidewalk bulbouts in areas where pedestrian traffic is to be facilitated to reduce crossing distance and improve visibility of pedestrians to other roadway users. (UAGP Policy V.D.2)

TC-57: Network Deficiencies. Identify gaps, needs, and deficiencies in the pedestrian transportation network. (UAGP Policy V.D.3)

TC-58: Signal Timing. The green phase of traffic signals citywide should be timed to allow pedestrians of all ages and abilities to safely cross the street. The Federal Highway Administration's *Best Practices Design Guide for Designing Sidewalks and Trails for Access*, suggests crossing times should allow for pedestrians traveling at 3.5 feet per second or slower. (UAGP Policy V.D.4)

TC-59: ADA Compliance. Construct or modify curbs and sidewalks to comply with the Americans with Disabilities Act. (UAGP Policy V.D.5)

TC-60: Pedestrian Circulation Near the Downtown Multi-Modal Transportation Center. In planning for a future multi-modal transportation center, facilitate pedestrian access to and from the facility through curb extensions and generous sidewalks. (UAGP Policy V.D.6)

TC-61: Street Trees. Plant and maintain large species trees along streets to separate pedestrians from moving traffic for safety and to create an inviting walking environment. (UAGP Policy V.D.7)

(f) Transit Policies

Overall goals for Transit are to increase transit use through higher-frequency service of at least 15-minute headways downtown and along major transportation corridors. Transit and land use will be interconnected to support increased ridership. This would be achieved through the implementation of the following policies.

TC-62: High-Frequency Service. Provide the most frequent service feasible in order to facilitate the highest quality public transportation. (UAGP Policy V.F.1)

TC-63: Balance Farebox Recovery and Service. Maintain farebox recovery ratios sufficient to meet state requirements while maximizing service, especially in the heavy use areas identified in Goal V.F. (UAGP Policy V.F.2)

TC-64: Minimum Service Density. Provide service on a half-mile grid where feasible to make the service as accessible as possible. Newly developing areas should provide a street pattern capable of accommodating transit service on a half-mile grid. Sidewalks should be provided in the development of new roadway systems to accommodate bus stops, and to minimize walking distance between them. (UAGP Policy V.F.3)

TC-65: Two-Way Service. Provide two-way service on bus routes where feasible. (UAGP Policy V.F.4)

TC-66: Park-and-Ride Locations. Locate park-and-ride facilities in cooperation with transit providers to maximize transit use and designed to accommodate not only motorists, but also other users of public transit and van or carpooling. (UAGP Policy V.F.5)

TC-67: Plans to Improve Service. Prepare feasibility studies and plans for the establishment of bus rapid transit and other local transit service to improve transit service in those areas where ridership is expected to increase. (UAGP Policy V.F.6)

TC-68: Bus Pullouts. Consider Bus pullouts with new development in the Planned Urbanizing Area to support transit passenger loading and unloading. (UAGP Policy V.F.7)

TC-69: Park-and-Ride. Work with new development to provide park-and-ride spaces to promote and support transit ridership. (UAGP Policy V.F.8)

TC-70: Coordinate Transit Service. Coordinate bus and other transit feeder service with passenger rail and other long-distance transit service to facilitate transfers between services and reduce automobile use. (UAGP Policy V.F.9)

TC-71: Improve Reliability. Consider upgrades to bus facilities, such as arrival / departure boards and mobile phone applications to improve predictability of service for riders. (UAGP Policy V.F.10)

TC-72: Downtown Multi-Modal Transportation Center. To the extent necessary, and without reducing public transportation services, reorient transit service to facilitate convenient access to and from the Downtown multi-modal transportation center. (UAGP Policy V.F.11)

(g) Rail Policies

Overall goals for Rail include policies related to freight and passenger rail. To support the provision of passenger rail, the overall goal is to strengthen Modesto's value as county seat and center of activity and transportation in Stanislaus County by building a passenger rail station in downtown, consistent with the California High Speed Rail Authority's service goals and with the Altamont Commuter Express' expansion plans.

TC-73: Include Historic Landmark. The eventual design of the downtown passenger rail station should incorporate Landmark 19, the Southern Pacific Transportation Center and be compatible with its architecture. (UAGP Policy V.G.1)

TC-74: Plan for a Passenger Rail Station. Prepare planning and technical studies and engineering documents as needed in support of a downtown passenger rail station. (UAGP Policy V.G.2)

TC-75: Support Passenger Rail. Seek funding for a Downtown multi-modal transportation station, including passenger rail service, and for service to that station. Support the efforts of the San Joaquin Regional Rail Commission and other agencies to do the same, and to manage and improve passenger rail service in the northern San Joaquin Valley. (UAGP Policy V.G.3)

TC-76: Extend ACE Service. Support the extension of the Altamont Commuter Express from Stockton to Merced with service in Modesto. (UAGP Policy V.G.4)

TC-77: Freight Rail. Encourages the extended and increased use of rail as an alternative transportation mode for the movement of goods. Support the intermodal linkage of "truck on rail" as a technique for reducing through-truck traffic on highway corridors. (UAGP Policy V.G.5)

TC-78: Rail Crossings. To provide acceptable traffic operations and to maintain safe crossings, support the construction of grade-separated crossings for all new heavy rail crossings. Maintain existing at-grade crossings, and evaluate new development projects to ensure that railroad crossing operations are not compromised. Seek state funding and grants to improve railroad crossings within the City. (UAGP Policy V.G.6)

(h) Policies Related to the Modesto City-County Airport

The overall airport-related goal is to promote and improve general and commercial aviation facilities.

TC-79: Plan for Air Transportation. Support aviation services at the Modesto City-County Airport and promote airline service that meets the present and future needs of the community. Adopt and maintain an Airport Master Plan. (UAGP Policy V.I.1)

TC-80: Ground Transportation. Provide efficient ground transportation connections and enhance connectivity between SR99 and the Modesto City-County Airport. (UAGP Policy V.I.2)

TC-81: Consistency with ALUC Plan. Land use around Modesto City-County Airport will be consistent with the Stanislaus County's Airport Land Use Commission (ALUC) plan adopted in accordance with Section 21676 of the Public Utilities Code. The ALUC plan provides for the orderly growth of the Airport and the area surrounding the Airport within the jurisdiction of the Airport Land Use Commission. (UAGP Policy V.I.3)

TC-82: Noise Mitigation. Mitigation measures suggested by the Airport Master Plan and related documents will be considered at the implementation of inter-regional air service, including a voluntary noise reduction program for residential units impacted by noise levels that exceed acceptable state standards. (UAGP Policy V.I.4)

(i) Policies That Reduce or Avoid Impacts

1. Stanislaus Council of Governments Policies

The following StanCOG policies will reduce the cumulative impacts identified in the EIR prepared for the RTP, by guiding equitable transportation systems design, function and operation: TC-1 through TC-7.

2. County Policies

County policies do not apply to Modesto. However, they are important at the City's edge where City and County roads connect. Policies TC-8 through TC-13 would reduce traffic impacts on roads that connect to the City's network by promoting coordination and cooperation among StanCOG, the County and the City.

3. Modesto Policies

Implementation of City policies as noted in TC-14 through TC-82 will avoid or reduce the severity of transportation and circulation impacts within the planning area by requiring payment of fees, maintenance of the network for various travel modes and construction of transportation system improvements.

B. THRESHOLDS OF SIGNIFICANCE

The following information is provided by Appendix G, Environmental Checklist, of the State CEQA Guidelines. The proposed UAGP could result in a significant impact if it would:

- (1) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit;
- (2) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- (3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- (4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- (5) Result in inadequate emergency access; or,
- (6) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

In addition to the Appendix G thresholds (1) – (6), above, the City has selected “LOS D or better” for daily traffic conditions as the standard for evaluation of impacts of the UAGP, except for locations where alternative standards have been adopted.

- (7) For non-exempt City of Modesto roadways, an impact is considered significant if the roadway’s projected LOS would exceed level D.
- (8) For Caltrans facilities, an impact is considered significant if the roadway’s projected LOS would exceed level D.
- (9) For Stanislaus County roadway, an impact is considered significant if the roadway’s projected daily LOS would exceed level D.

On roadways where the LOS is expected to exceed the threshold, the City would consider the effects of possible mitigation on the entire roadway system, as roadway widening could result in

secondary impacts on the non-motorized transportation network, potentially degrading the overall transportation network.

C. IMPACT DISCUSSION

This section analyzes potential impacts of the proposed UAGP on transportation and traffic. For this assessment, daily roadway segment operations were analyzed under existing and proposed Plan conditions. Peak hour intersection levels of service were not assessed under proposed Plan conditions as this analysis is intended to provide a general assessment of transportation network capacity as identified in the Circulation Element. More detailed analysis will be required for future development projects to identify project-specific impacts as well as roadway network improvements needed to support those developments, in combination with other planned and pending developments.

1. Model Methodology

A computerized traffic model, known as the Three-County (San Joaquin, Stanislaus, and Merced) developed by StanCOG as part of the San Joaquin Valley Model Improvement Program (SJV MIP), which was managed by FresnoCOG, was used as the basis of developing the General Plan Model. The Model applies trip generation rates to land use data to forecast total trips produced and attracted by traffic analysis zones (TAZs) throughout the planning area on an average weekday. The model also has the ability to develop peak hour roadway segment forecasts, estimate vehicle trips in terms of single-occupancy and multi-occupant trips, estimate non-auto trips, and develop estimates for vehicle miles of travel for different land uses within different areas of the City. For the assessment of General Plan Alternatives, daily roadway segment levels of service and estimates of vehicle miles of travel were used as key metrics.

The Model was calibrated to a 2014 base year. The City's land use and zoning designations within the Baseline Developed Area, Downtown Area, and Planned Urbanizing Area were translated into residential dwelling unit and employment totals for input into the Model based on density assumptions made by the City, as summarized in Table V-1-5. More information relating to the travel demand model used for this analysis can be found in the validation document in Appendix A.

Table V-1-5. Dwelling Unit and Employment Density Assumptions by Land Use Designation

Land Use Designation	Zoning Code	Dwelling Units Per Acre	Jobs Per Acre
Downtown	D	5.0	56.6
Residential	R	6.6	0.0
Commercial	C	0.0	24.0
Mixed Use	MU	8.0	10.0
Industrial	I	0	16.0
Regional Commercial	RC	0	24.0
Business Park	BP	0	26.0
Open Space	OS	0.1	0.0
Village Residential	VR	6.3	0.7
Business-Commercial-Residential	BCR	6.0	15.6

Notes: 2.8 persons per dwelling unit.

Salida Community Plan contains 7,900 dwelling units.

Source: City of Modesto, Planning.

The forecast model does not take into consideration some foreseeable travel changes, including increased use of transportation network companies, such as Uber and Lyft, nor the potential for autonomous vehicles. Although the technology for autonomous vehicles is expected to be available over the planning horizon, the federal and State legal and policy frameworks are uncertain. Initial modeling of an autonomous future indicates that with automated and connected vehicles, the capacity of the existing transportation system would increase as vehicles can travel closer together; however, these efficiencies are only realized when a high percentage of vehicles on the roadway are automated and connected. There is also the potential for vehicle travel to increase with zero-occupancy vehicles on the roadway. As the technology advances, and the federal and State legal and policy frameworks are developed, future studies may be conducted to assess the implications of autonomous travel on Modesto roadways.

a. Roadway Improvements

The General Plan Circulation Network contains several new roadways plus extensive widening along SR 99 and city arterials and expressways. Several of these projects have been selected from StanCOG's RTP to be funded by the Countywide transportation sales tax and other state and federal funds. Some of the changes are highlighted below:

(1) New Facilities

Examples of new facilities include the North County Corridor along the northern boundary of the City, a new alignment for State Route 132 west of SR 99, the extension of Brink Road from North Avenue to Dakota Avenue/Salida Boulevard, the extension of Prescott Road north to Bangs Avenue, the extension of Tuolumne Boulevard east, the realignment of Claus Expressway, the extension of Claratina Avenue east past Claus Road, the extension of Roselle Avenue to Lakewood, the extension of Garner Road to Faith Home Road as an expressway, the extension of Garst Road from Frazine

Road to Church Road, the extension of Floyd Avenue east of Claus Road, the extension of Chapman Road north of the MID Canal, and the development of roadways within the Salida Community Plan area according to the adopted Community Plan. New roadways to support future development will also be constructed, with new and expanded roadways subject to separate environmental review.

(2) Expanded Facilities

Examples of planned improvements to existing freeway, expressway, and arterial facilities are listed below.

- SR 99 is to be widened from a six-lane freeway to an eight-lane freeway.
- Further widening of Kiernan Avenue / Claribel Road.
- Briggsmore Avenue is to be widened to a six-lane facility throughout its length.
- Hatch Road is to be widened to four lanes throughout its length.
- Maze Road, Paradise Road, and Whitmore Avenue are to be widened to four lanes.
- Dale Road is to be widened to six lanes from Veneman Avenue to Kiernan Avenue.
- Tully Road is to be widened to six lanes, north of Sylvan Avenue.
- McHenry Avenue is to be widened to four lanes north of Kiernan Avenue.
- McHenry Avenue is to be widened to six lanes between Kiernan Avenue and Coralwood Road.
- Coffee Road is to be widened to four lanes north of Mable Avenue.
- Oakdale Road / Mitchell Road is to be widened to six lanes (El Vista Avenue connecting these two segments would remain as four lanes).
- Roselle Avenue is to be widened to four lanes.

(3) Proposed Circulation Amendments

The following are proposed amendments to the planned circulation system under the proposed UAGP as compared to the current UAGP:

- Yosemite Boulevard, west of El Vista Avenue, to be reduced from a six-lane principal arterial to a four-lane minor arterial street.
- Sylvan Avenue, to be reduced from a six-lane principal arterial to a four-lane minor arterial street.
- Standiford Avenue to be reduced from a six-lane principal arterial to a four-lane minor arterial street.
- Carpenter Road to be reduced from a six-lane principal arterial to a four-lane minor arterial street.
- Crows Landing Road to be reduced from a six-lane principal arterial to a four-lane minor arterial street.

- Bangs Avenue to be reduced from a four-lane major collector to a two-lane minor collector.
- Hatch Road to be downgraded from a Class C expressway to a minor arterial street.

2. Analysis Results and Direct Impacts

As discussed above, the traffic study prepared for the Master EIR update was based on the Modesto General Plan Model, which pivoted from the Three-County model (Appendix A). The study area for this model covers all of San Joaquin, Stanislaus and Merced Counties. Current- and future-year road capacity was developed considering local agency general plans, capital improvement programs, and the STIP.

Impact TRAF-1: Implementation of the proposed Project could result in conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. (Significant and Unavoidable)

For the purposes of this EIR, the following thresholds of significance are used to determine if the proposed General Plan has an impact under the terms of Criteria 1.

(a) **Vehicle Traffic:**

- (i) *Proposed General Plan Amendment:* A significant impact would occur for vehicle traffic if either of the following occur:
1. The level of service (LOS) of the segment degrades from acceptable (LOS D) under Existing Conditions to Unacceptable under proposed General Plan conditions; or,
 2. For segments where the LOS is already deficient under existing conditions, the proposed General Plan increases traffic volumes by more than ten percent (>10.0%).

Roadway segment LOS were calculated to evaluate the effect of the growth projected by the UAGP, combined with the proposed roadway network revisions described above, on roadway operations. Daily LOS are presented in Table V-1-6. Planned roadway improvements would improve the operations of several roadway segments that currently operate near or over capacity. Development under the current UAGP could degrade the operations of numerous roadway segments to at or over-capacity conditions, with approximately 47 roadway segments projected to operate at LOS E or F on a daily basis. The proposed UAGP Plan would improve the operation of most roadway segments projected to operate at LOS E or F under the current UAGP, and would result in seven (7) fewer roadway segments projected to operate at LOS E or F, for a total of 26 roadway segments projected to operate LOS E and 14 segments projected to operate at LOS F. Two segments that are projected to operate at LOS D or better under the current UAGP

are projected to degrade to LOS E operations (segments 70 and 72, Hatch Road) primarily due to a change in roadway designation.

The increase in traffic over the current condition is significant and the proposed UAGP would result in significant level of service impacts to roadway and freeway segments by worsening already deficient conditions or resulting in new deficiencies; however, it should be noted that the proposed UAGP would generally reduce levels of vehicle congestion as compared to the current UAGP. The impacts related to noise and air quality as a result of increased traffic are discussed in Sections V-5-2 and V-5-3 of this document.

Implementation of applicable UAGP policies has the potential to reduce the severity of impacts by requiring project specific transportation analysis, provision of alternative transportation modes, and coordination with regional agencies. Specifically, City Policies listed above as TC-14 through TC-72 would reduce the severity of potential impacts, but would not reduce the impacts to a less than significant level.

Significance Level: Significant and unavoidable.

Table V-1-6. Daily Roadway Segment Volumes with Level of Service

ID	Roadway	Cross Street	Class	Base Year			Class	No Project			Class	General Plan Buildout		
				Lanes	Volume	LOS		Lanes	Volume	LOS		Lanes	Volume	LOS
1	Kiernan	Stoddard to Dale	Epxy (Class B)	4	30,000	B	Epxy (Class B)	6	36,500	B	Epxy (Class B)	6	46,400	B
2	Kiernan	Tully to McHenry ¹	Arterial	4	14,900	B	Epxy (Class B)	6	33,300	B	Freeway	6	46,200	A
3	McHenry	Charity to Claribel	Arterial	4	22,800	C	Arterial	6	24,200	B	Arterial	6	25,100	B
4	Claribel ³	McHenry to Coffee	Rural	2	16,300	E	Epxy (Class B)	6	56,500	C	Freeway	6	54,800	B
5	Claribel ³	Coffee to Oakdale	Rural	2	13,800	E	Epxy (Class B)	6	51,300	C	Freeway	6	63,600	B
6	Dale	Bangs to Pelandale	Arterial	5	19,700	C	Arterial	6	64,100	F	Arterial	6	63,100	E
7	Carver	Bangs to Pelandale	Rural	2	3,800	B	Collector	2	9,200	D	Collector	2	15,700	E
8	Coffee	Claribel to Claratina	Arterial	2	8,700	D	Arterial	4	29,800	E	Arterial	4	23,500	E
9	Oakdale	Claribel to Claratina	Rural	2	17,900	E	Arterial	6	50,400	D	Arterial	6	49,300	D
10	Roselle	Claribel to Plainview	Rural	2	7,100	C	Arterial	4	30,100	E	Arterial	4	14,300	D
11	Sisk	Pelandale to Standiford	Arterial	4	25,900	D	Arterial	4	44,600	F	Arterial	4	37,800	F
12	Pelandale	SR99 to Dale	Arterial	6	35,900	C	Arterial	6	59,500	E	Arterial	6	60,900	E
13	Pelandale	Prescott to Carver	Epxy (Class B)	6	27,100	A	Epxy (Class B)	6	65,900	D	Epxy (Class B)	6	58,100	C
14	Claratina	McHenry to Coffee	Epxy (Class B)	2	18,600	C	Epxy (Class B)	6	55,000	C	Epxy (Class B)	6	42,000	B
15	Claratina	Coffee to Oakdale	Epxy (Class B)	2	9,700	B	Epxy (Class B)	6	50,500	C	Epxy (Class B)	6	30,800	B
16	Claratina	Oakdale to Roselle				N/A	Arterial	6	46,700	D	Arterial	6	20,400	B
17	Dale	Pelandale to Standiford	Arterial	4	20,000	D	Arterial	6	61,700	E	Arterial	6	56,200	E
18	Prescott	Pelandale to Standiford	Arterial	4	15,500	C	Arterial	4	23,400	E	Arterial	4	26,100	E
19	Carver	Pelandale to Standiford	Collector	2	6,300	D	Collector	2	12,500	E	Collector	2	16,200	E
20	Tully	Pelandale to Standiford	Arterial	4	20,900	C	Arterial	6	54,600	E	Arterial	6	41,900	C
21	Oakdale	Claratina to	Arterial	4	23,200	E	Arterial	6	66,400	F	Arterial	6	58,800	E

Chapter V. Environmental Analysis

ID	Roadway	Cross Street	Class	Base Year			Class	No Project			General Plan Buildout			
				Lanes	Volume	LOS		Lanes	Volume	LOS	Class	Lanes	Volume	LOS
		Sylvan												
22	Roselle	Claratina to Sylvan	Rural	2	13,800	C	Arterial	4	22,200	E	Arterial	4	15,200	D
23	Standiford	SR 99 to Prescott	Arterial	4	39,200	F	Arterial	6	65,700	F	Arterial	4	55,500	F
24	Standiford	Prescott to Carver	Arterial	4	34,700	E	Arterial	6	59,100	E	Arterial	4	47,100	F
25	McHenry	Standiford to Rumble	Arterial	6	40,500	C	Arterial	6	72,800	F	Arterial	6	57,100	E
26	Sylvan	McHenry to Coffee	Arterial	4	33,400	E	Arterial	6	58,900	E	Arterial	4	41,900	F
27	Sylvan	Oakdale to Roselle	Arterial	4	18,600	D	Arterial	4	35,400	E	Arterial	4	26,900	E
28	N Dakota	Beckwith to North	Arterial	2	5,500	C	Expy (Class B)	6	6,000	A	Arterial	2	8,600	A
29	Rumble	Sisk to Prescott	Collector	2	5,700	D	Collector	2	11,500	E	Collector	2	7,200	D
30	Rumble	McHenry to Coffee	Collector	2	7,400	D	Collector	2	14,600	E	Collector	2	8,800	D
31	Claus	Sylvan to Floyd	Rural	2	18,900	E	Expy (Class B)	6	48,700	C	Expy (Class B)	6	53,900	C
32	Floyd	Coffee to Rose	Collector	2	13,300	E	Collector	2	19,000	F	Collector	2	14,800	E
33	Floyd	Oakdale to Roselle	Arterial	4	17,000	D	Arterial	4	23,300	E	Arterial	4	18,400	D
34	Sisk	Plaza to Briggsmore	Arterial	4	22,700	D	Arterial	4	36,500	E	Arterial	4	35,200	E
35	Carver	Mt Vernon to Briggsmore	Collector	2	8,700	D	Collector	2	18,500	F	Collector	2	17,200	F
36	College	Mt Vernon to Briggsmore	Collector	2	6,800	D	Collector	2	11,400	E	Collector	2	8,400	D
37	Oakdale	Floyd to Celeste	Arterial	4	31,000	D	Arterial	6	69,800	F	Arterial	6	59,500	E
38	Briggsmore	Prescott to SR 99	Arterial	6	66,700	F	Arterial	6	106,900	F	Arterial	6	98,000	F
39	Briggsmore	Carver to Tully	Expy (Class B)	4	51,500	D	Expy (Class B)	6	87,800	E	Expy (Class B)	6	70,900	D
40	McHenry	Rumble to Briggsmore	Arterial	6	40,500	C	Arterial	6	75,800	F	Arterial	6	58,200	E
41	Carver	Briggsmore to Orangeburg	Collector	2	7,000	D	Collector	2	13,100	E	Collector	2	10,500	E
42	Briggsmore	Coffee to Rose	Expy (Class B)	4	37,200	C	Expy (Class B)	6	84,600	E	Expy (Class B)	6	63,700	C
43	Briggsmore	Oakdale to Roselle	Expy (Class B)	4	29,700	B	Expy (Class B)	6	63,600	C	Expy (Class B)	6	45,500	B

Chapter V. Environmental Analysis

ID	Roadway	Cross Street	Class	Base Year			Class	No Project			General Plan Buildout			
				Lanes	Volume	LOS		Lanes	Volume	LOS	Class	Lanes	Volume	LOS
44	Claus	Briggsmore to Orangeburg	Arterial	5	27,000	D	Epxy (Class B)	6	75,500	D	Epxy (Class B)	6	66,200	D
45	Shoemake	North Dakota to Brink	Rural	2	1,100	A	Arterial	2	1,300	A	Arterial	2	1,300	A
46	Blue Gum	Rosemore to N Carpenter	Arterial	4	16,200	D	Arterial	4	17,600	D	Arterial	4	17,800	D
47	Carpenter	SR 99 to Woodland	Arterial	4	37,200	E	Arterial	6	90,600	F	Arterial	5	62,100	F
48	Coffee	Fairmont to Morris	Arterial	4	22,400	D	Arterial	4	41,400	E	Arterial	4	29,900	E
49	Lakewood	Orangeburg to Scenic	Arterial	2	10,400	D	Arterial	4	32,400	E	Arterial	4	25,400	E
50	Woodland	North Dakota to Morse	Rural	2	1,800	B	Arterial	2	1,900	B	Arterial	2	1,900	B
51	Woodland	Rosemore to N Carpenter	Collector	2	5,400	C	Collector	2	6,300	D	Collector	2	6,000	D
52	El Vista	Scenic to Encina	Arterial	4	32,300	E	Arterial	4	50,600	F	Arterial	4	39,500	E
53	Claus	Orangeburg to Scenic	Epxy (Class C)	4	26,800	C	Epxy (Class B)	6	74,700	D	Epxy (Class B)	6	65,000	C
54	Kansas	N Dakota to Morse				N/A	Arterial	2	300	A	Arterial	2	300	A
55	Kansas	N Emerald to SR 99	Collector	3 ²	12,400	D	Arterial	2	16,100	E	Arterial	2	13,700	E
56	McHenry	Morris to Needham	Arterial	4	31,500	D	Arterial	4	58,200	F	Arterial	4	46,500	F
57	La Loma	Scenic to Yosemite	Collector	2	14,300	E	Collector	2	19,100	F	Collector	2	17,900	F
58	Maze	Carpenter to Emerald	Arterial	2	11,800	D	Arterial	4	15,900	D	Arterial	2	13,000	D
59	H Street	SR 99 to 9th Street	Arterial	3	16,800	D	Arterial	3	33,400	E	Arterial	3	29,500	E
60	Yosemite	La Loma to Mitchell	Arterial	4	24,700	D	Arterial	4	34,200	E	Arterial	4	30,200	E
61	Claus	Creekwood to Yosemite	Epxy (Class C)	6	19,200	A	Epxy (Class B)	6	54,000	C	Epxy (Class B)	6	47,000	C
62	Garner	Yosemite to Leckron	Collector	3 ²	8,600	D	Epxy (Class B)	6	47,400	C	Epxy (Class B)	6	41,400	B
63	Paradise	Beverly to Chicago	Collector	3 ²	15,500	E	Arterial	4	34,100	E	Arterial	4	24,000	E
64	Tuolumne	SR 99 to 7th Street	Arterial	4	13,100	C	Arterial	4	19,100	D	Arterial	4	14,200	D
65	Crows Landing	7th Street to SR 99	Arterial	2	13,700	E	Arterial	4	32,000	E	Arterial	4	33,400	E

ID	Roadway	Cross Street	Class	Base Year			Class	No Project			Class	General Plan Buildout		
				Lanes	Volume	LOS		Lanes	Volume	LOS		Lanes	Volume	LOS
66	Crows Landing	SR 99 to Hatch	Arterial	4	30,500	E	Arterial	4	56,400	F	Arterial	4	80,300	F
67	7th Street	SR 99 to Hatch	Arterial	2	6,100	C	Arterial	4	13,600	D	Arterial	4	11,700	C
68	Carpenter	Paradise to Hatch	Collector	3 ²	19,200	E	Arterial	6	64,300	F	Arterial	4	43,500	F
69	Hatch	Carpenter to Ustick	Rural	2	4,800	C	Expy (Class B)	4	21,800	A	Arterial	4	12,900	D
70	Hatch	Dallas to Crows Landing	Collector	3 ²	7,300	C	Expy (Class B)	4	31,300	A	Arterial	4	22,300	E
71	Crows Landing	Hatch to Winmoore	Arterial	4	19,700	D	Arterial	4	41,000	F	Arterial	4	53,300	F
72	Hatch	Crows Landing to Jim Way	Collector	3 ²	17,600	E	Expy (Class B)	4	33,400	A	Arterial	4	26,500	E
73	Whitmore	Ustick to Crows Landing	Rural	2	6,100	C	Arterial	4	8,400	C	Arterial	4	18,900	D
74	Whitmore	Crows Landing to Morgan	Collector	3 ²	13,400	D	Arterial	4	27,600	E	Arterial	4	31,600	E
75	SR 99	At Hatch Road	Freeway	6	104,000	C	Freeway	6	140,800	E	Freeway	6	135,000	D
76	SR 99	At Crows Landing Road	Freeway	6	102,000	C	Freeway	6	143,800	E	Freeway	6	151,100	F
77	SR 99	At SR 132	Freeway	6	128,000	D	Freeway	8	185,800	E	Freeway	8	204,400	F
78	SR 99	At Briggsmore Avenue	Freeway	6	100,000	C	Freeway	8	178,700	D	Freeway	8	173,800	D
79	SR 99	At Pelandale Avenue	Freeway	6	100,000	C	Freeway	8	182,000	D	Freeway	8	158,700	D
80	SR 99	At Kiernan Avenue	Freeway	6	104,000	C	Freeway	8	177,200	D	Freeway	8	157,200	D

Note: 1. Roadway was a two-lane facility when traffic counts were collected and was operating unacceptably. With completion of improvements to provide two lanes in each direction, roadway is operating at acceptable levels.

2. Roadway has one travel lane in each direction, plus a center two-way left-turn lane. Level of service is based on thresholds for Minor Collector (2 lane facility with center left-turn lane) with capacity threshold based on two lanes.

3. In future with proposed project and project alternative, facility is commonly known as North County Corridor and would be designed to freeway standards.

Bold indicates potentially deficient operations.

Source: City of Modesto General Plan Travel Model

Impact TRAF-2

Implementation of the proposed Project could conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. (Significant and Unavoidable)

The UAGP circulation element and the amendments being proposed are consistent with the RTPs proposed circulation improvements. StanCOG's current population projection for Modesto by 2040 is approximately 280,000. This is less than the City's estimated holding capacity under the UAGP, approximately 380,000 residents, reflecting that the population projected with UAGP buildout may not occur until after 2040.

The EIR prepared for StanCOG's 2014 RTP analyzed the potential impacts of the proposed RTP road network improvements. StanCOG analyzed future traffic volumes to 2040 based on its travel demand model. Significance findings were based on whether the RTP projects would result in an LOS in excess of LOS D in urban areas and LOS C in rural areas of the county.

StanCOG did not identify any significant and unavoidable impacts directly related to transportation and circulation from its 2014 RTP. The potentially significant impacts are noted below.

1. Implementation of the RTP/SCS would reduce total VMT and CVMT as defined by total and peak hour congested vehicle miles traveled, when compared to 2040 conditions without the RTP/SCS.
2. The RTP/SCS would generally be consistent with applicable alternative transportation plans and policies.

Development potential under the Proposed UAGP would contribute to the need improvements to the regional transportation system, including development of the expressway system identified by StanCOG and improvements to the freeway system, and could accelerate when some identified improvements are necessary if the City of Modesto grows at a rate faster than assumed in the 2014 RTP. Additionally, should Tier I improvements identified in the StanCOG RTP/SCS not be constructed, roadway conditions could be worse than presented in Table V-1-6.

Implementation of all applicable UAGP policies, including continued coordination with Caltrans and StanCOG to implement regional transportation improvements that would provide travel capacity on the regional roadway network, would reduce the demand for vehicle travel through Modesto. These policies are listed above as TC-14 through TC-72. New development would be required to evaluate its project-specific impacts to the transportation system and fund improvements to maintain acceptable levels of service, except where exemptions are identified in the UAGP. However, even with implementation of these policies, the potential impact to the regional transportation network could remain significant and unavoidable as the City of Modesto cannot assure the completion of roadway improvement projects in other jurisdictions.

Significance Level: Significant and unavoidable.

Impact TRAF-3 Implementation of the proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. (No Impact)

The Modesto City-County Airport is located within the city limits. As such, the proposed Project has the potential to create land uses that may not be compatible with the airport use. However, given the nature of the proposed General Plan and the nature of services provided at the Modesto City-County Airport, the proposed Project is not expected to result in any changes to air traffic patterns or safety. Additionally, the proposed UAGP includes policies (TC-79 through TC-82) that would substantially reduce safety risks. Therefore, there would be no impact.

Significance Level: Less than significant.

Impact TRAF-4 Implementation of the proposed Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)

Because the proposed UAGP is a program-level planning effort, it does not directly address project-level design features or building specifications. However, the proposed Project includes policies that would reduce hazards to the public from a design feature or incompatible uses. Policies TC-14 through TC-27, listed above, address street classification and design, multi-modal transportation, gap closures to sidewalks and bicycle facilities, transportation facilities' relationship to fronting properties, structures and uses, complete streets, and Capital Facilities Fees – all of which contribute to safe streets design and compatible uses.

Significance Level: Less than significant.

Impact TRAF-5 Implementation of the proposed Project would not result in inadequate emergency access. (Less than Significant)

Because the proposed UAGP is a program-level planning effort, it does not directly address project-level design features or building specifications; however, the proposed UAGP includes policies that would ensure efficient circulation and adequate access are provided in the City, which would help facilitate emergency response. Policies TC-14 through TC-27, listed above, address street classification and design, multi-modal transportation, gap closures to sidewalks and bicycle facilities, transportation facilities' relationship to fronting properties, structures and uses, and complete streets – all of which contribute to safe street design, efficient traffic flow and opportunities for transportation system users to safely yield to code-red emergency vehicles.

Significance Level: Less than significant.

Impact TRAF-6

Implementation of the proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (Less than Significant)

The proposed UAGP transportation system is centered on a complete-streets approach, which would improve the performance and safety of transit, bicycle, and transit facilities. Policies TC-14 through TC-27, listed above, address street classification and design, multi-modal transportation, gap closures to sidewalks and bicycle facilities and complete streets. Implementation of these proposed UAGP policies would ensure that impacts, if any, related to the performance and safety of public transit, bicycle, and/or pedestrian facilities would be reduced to a less than significant level. Additionally, the proposed UAGP does not conflict with the StanCOG Non-Motorized Transportation Plan and implementation of the UAGP would further the implementation of the City's Non-Motorized Transportation Plan that matches the bicycle circulation diagram shown on Figure V-3 of the proposed General Plan amendment.

Significance Level: Less than significant.

D. CUMULATIVE IMPACTS

The analysis of the proposed Project, above, addresses cumulative impacts to the transportation network in the City and its surroundings. Accordingly, cumulative impacts associated with the proposed Project would be the same as the direct impacts.

E. ADDITIONAL INFORMATION ON VEHICLE MILES TRAVELED

An important consideration related to VMT analysis is that Senate Bill (SB) 743 proposes to change the metric used to identify potential significant transportation impacts in CEQA analysis. SB 743 directed the California Governor's Office of Planning and Research (OPR) to identify a new metric and to recommend analysis methodology and thresholds. OPR selected VMT as the preferred metric and has finalized guidance material that is anticipated to go into effect by 2020. However, SB 743 does not prevent a city or county from continuing to analyze delay or LOS as part of other plans (i.e., the general plan), studies, or on-going network monitoring, but once the new CEQA Guidelines are adopted, LOS metrics may no longer constitute the sole basis for CEQA impacts.

SB 743 did not change the discretion that lead agencies have to select methodology or define their own significance thresholds, but the guidance being developed by OPR should be carefully considered by lead agencies when they ultimately finalize their own recommended practices. A key factor should be how the lead agency / community values VMT reduction especially with regard to its influence on reducing greenhouse gases, promoting active transportation, and encouraging infill development, all of which, are identified as objectives in the legislative intent of SB 743. Absent a locally established VMT threshold, the current OPR threshold guidance as contained in *Technical Advisory on Evaluating Transportation Impacts in CEQA*, OPR, November 2017, should be used. OPR recommends that for land use projects, VMT thresholds are set at fifteen percent (15%) below baseline VMT/capita for the city or region in suburban areas.

The purpose of significance thresholds is to identify clearly the significance of project-related impacts. For this Master EIR, a VMT assessment was prepared for informational purposes only.

1. VMT Analysis Methodology

Vehicle miles traveled (VMT) is an estimate of the total amount of travel occurring within the model area. VMT estimates for the base year, without project (current UAGP), Proposed Project and Project Alternative were developed using the General Plan model for several accounting methods. Additionally, VMT was also estimated for all land uses within Stanislaus County. The three VMT accounting methods include a boundary method, an origin-destination (OD) shared accounting method and an OD total accounting method, as described below.

A boundary based estimate captures all the VMT on a roadway network within a specified geographic area such as the city limits, General Plan Boundary or Sphere of Influence Boundary. A limitation of this method is that it does not capture trips that extend beyond a jurisdiction's boundary and includes through traffic on regional roadway facilities over which the City has no control, such as State Route 99. However, this information can be useful in estimating total greenhouse gas emissions within a specified geographic area. For this assessment, the Sphere of Influence boundary was used.

An OD method tracks all vehicular trips generated by the City of Modesto across the entire regional network. Four types of trips are isolated:

- Internal-Internal (II) trips: Include all trips that begin and end within the City of Modesto. This calculation is the same for both the OD shared accounting method and the OD total accounting method;
- Internal-External (IX) trips: Includes all trips that begin within city limits and end outside city limits. For the OD shared accounting method, only half the trip length is included in the VMT calculation. For the OD total accounting method, the entire trip length is included in the VMT calculation;
- External-Internal (XI) trips: Includes all trips that begin outside city limits and end inside city limits. For the OD shared accounting method, only half the trip length is included in the VMT calculation. For the OD total accounting method, the entire trip length is included in the VMT calculation; and,
- External-External (XX) trips: Trips that begin and end outside the City of Modesto are not included. The City of Modesto assumes no responsibility for External-External trip type VMTs, which is the same for both the OD shared accounting and the OD total accounting methods.

To estimate VMT per service population, trips are multiplied by the trip distance for all trip types to estimate VMT and then divided by the residential and working population of the Modesto sphere of influence.

Trips that have neither an origin nor destination within the Modesto sphere of influence are not included in the OD method VMT totals as City General Plan policies cannot appreciably affect the amount of through traffic in a jurisdiction.

2. VMT Analysis Results

Results are presented in Table V-1-6 for the Boundary Method, Table V-1-7 for the OD Shared Accounting Method, and in Table V-1-8 for the OD Total Accounting Method. VMT estimates for Stanislaus County were also developed based on the OD Total Accounting Method, as presented in Table V-1-9.

Table V-1-6. City of Modesto Vehicle Miles of Travel – Boundary Method

Performance Measure	Base Year Conditions	No Project (Current General Plan)	With Project (General Plan Buildout)
Daily VMT	3,971,900	8,147,100	7,134,600

Source: Fehr & Peers, 2017.

Table V-1-7. City of Modesto Vehicle Miles of Travel – OD Shared Accounting Method

Performance Measure	Base Year Conditions	No Project (Current General Plan)	With Project (General Plan Buildout)
Households	85,700	179,000	133,300
Population	245,200	517,800	390,300
Employment	113,300	356,600	301,200
Daily VMT	2,744,400	7,324,000	6,031,300
Daily VMT per Household	32.02	40.92	45.25
Daily VMT per Service Population ¹	7.66	8.38	8.72

Note: 1. Service population is the sum of employees and residential population

Source: Fehr & Peers, 2017.

Table V-1-8. City of Modesto Vehicle Miles of Travel – OD Full Accounting Method

Performance Measure	Base Year Conditions	No Project (Current General Plan)	With Project (General Plan Buildout)
Households	85,700	179,000	133,300
Population	245,200	517,800	390,300
Employment	113,300	356,600	301,200
Daily VMT	4,158,100	11,648,700	9,857,400
Daily VMT per Household	48.52	65.08	73.95
Daily VMT per Service Population ¹	11.60	13.32	14.26

Note: 1. Service population is the sum of employees and residential population

Source: Fehr & Peers, 2017

Table V-1-9. Stanislaus County Vehicle Miles of Travel – OD Full Accounting Method

Performance Measure	Base Year Conditions	No Project (Current General Plan)	With Project (General Plan Buildout)
Households	165,800	308,800	264,200
Population	482,500	898,800	773,600
Employment	182,300	485,300	434,400
Daily VMT	7,842,900	15,595,100	14,237,700
Daily VMT per Household	47.30	50.50	53.89
Daily VMT per Service Population ¹	11.80	11.27	11.79

Note: 1. Service population is the sum of employees and residential population
Source: Fehr & Peers, 2017

Results of the VMT assessment indicate that development consistent with the current General Plan and regional transportation funding priorities would increase the absolute amount of VMT, and would also increase VMT on a per household and per service population basis as compared to existing conditions. Implementation of the proposed General Plan Amendment Project would reduce the total net increase in VMT as compared to the current General Plan, as the projections of population and employment growth are lower than the current General Plan. However, VMT per service population would increase under the proposed General Plan Amendment Project as the estimate of the number of jobs per household increases, resulting in increased commute trips into Modesto.

F. POLICIES ADOPTED TO MINIMIZE SIGNIFICANT EFFECTS

The following summarizes the UAGP's policies that reduce Project-related impacts in accordance with Section 15126.4 of the State CEQA Guidelines. These are policies that reduce the need for new roads, promote alternative modes to automobile travel, reduce potential traffic generation, and provide for the integrated planning of future transportation projects.

Section 15130 of the State CEQA Guidelines provides that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency is required to identify facts and analysis supporting this conclusion.

1. Policies That Reduce Direct Impacts

The proposed UAGP policies listed above (TC-14 through TC-82) would reduce the potential impacts identified, although some impacts would remain significant and unavoidable. The subject policies would reduce project impacts by requiring transportation-related fees to be paid, requiring transportation improvements to be constructed, requiring traffic studies to determine project-related impacts and specific methods to reduce them, and by promoting multi-modal transportation investment.

2. Policies That Reduce Cumulative Impacts

The proposed UAGP policies listed above (TC-14 through TC-82) would reduce potential impacts as explained above. Nonetheless, there would be cumulative impacts to which new development would make a considerable contribution. This is a significant and unavoidable impact.

G. MONITORING POLICIES THAT REDUCE IMPACTS

The following information is provided in accordance with PRC Section 211081.6. The policies identified in this Master EIR have been drawn from the proposed UAGP amendment, and they are implemented by that plan. City staff provides the City Council with an annual report on UAGP implementation; therefore, no separate mitigation monitoring program is required for the UAGP Master EIR.