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Executive Summary
This 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is an expression of the collective regional goals and priorities as our communities continue to grow, demands on our transportation network increase, and our work to protect the quality of our air and water continues.

The RTP lays out a plan to enhance our regional transportation infrastructure, while the SCS puts focus on how and where our communities will potentially grow. Combining the RTP and SCS ensures that land use and transportation planning decisions are coordinated, and that needed infrastructure will be built to address actual development trends.

The population in Stanislaus County continues to grow as our cities attract new employers, and as housing shortages in the Bay Area push more families further into the Central Valley in search of affordable housing. These trends have underscored the need to address both internal transportation choices and multimodal connections to neighboring regions. A robust and efficient transportation system is key to economic prosperity, good health, and quality of life for our residents.

This Plan was developed by the Stanislaus Council of Governments (StanCOG) in accordance with state and federal requirements, including the Sustainable Communities and Climate Protection Act of 2008 (SB 375), intended to support the State’s broader climate goals by encouraging coordinated regional transportation and land use planning that reduces greenhouse gas (GHG) emissions from passenger vehicle use, and the Fixing America’s Surface Transportation Act (FAST Act) which authorized funding for federal transit, rail and highway programs through Fiscal Year (FY) 2020, created a new discretionary freight-focused grant program, and reaffirmed the performance management requirements established under MAP-21.
EXECUTIVE SUMMARY

The 2018 RTP/SCS is a plan for the Stanislaus region to meet its transportation needs for the 25-year period from 2017 to 2042, considering existing and projected future land use patterns as well as forecasted population and job growth. Understanding that continued growth in the region will occur with or without implementation of the RTP/SCS, it is intended to provide a framework for how to responsibly accommodate this growth such that the Stanislaus region can maintain its quality of life and meet other important local, state, and federal goals requirements, including those summarized in Figure 1.1.

The 2018 RTP/SCS is based on approximately $7.4 billion in revenue from available transportation funding sources over the course of the planning period. It identifies and prioritizes expenditures of this anticipated funding for transportation projects of all transportation modes: highways, streets and roads, transit, rail, bicycle and pedestrian, aviation, as well as transportation demand management measures and intelligent transportation systems.

The 2018 RTP/SCS is based on a preferred land use and transportation scenario, referred to as Scenario 2 (Preferred Scenario/Infill Redevelopment), which defines a pattern of future growth and transportation system investment for the region emphasizing a more transit-oriented development and a compact infill approach to land use and housing as compared to Scenario 1 (General Plan Trend/Business As Usual).

Scenario 2 consists of an intensified land use distribution approach that concentrates the forecasted population and employment growth in existing urban areas. This scenario emphasizes compact, mixed-use development, especially in the downtown areas of the County’s existing urban areas. This focus intends to limit growth outside of the city boundaries, in order to minimize impacts on rural areas which contain the majority of agricultural land throughout the County. The transportation network includes additional highway, local street, active transportation, and transit investments to serve a more concentrated urban growth pattern. Scenario 2 also includes additional investments for bicycle and pedestrian improvements, which complement public transit and other non-vehicle alternatives.

Figure 1.1 - Key Statutes, Regulations, and Initiatives

- **Fixing America’s Surface Transportation Act (FAST Act)**
  The FAST Act requires MPOs to implement a performance-based approach to planning.

- **Sustainable Communities and Climate Protection Act of 2008 (SB 375)**
  Requires that California’s MPOs prepare a Sustainable Communities Strategy (SCS) that achieves greenhouse gas (GHG) reduction targets.

- **California Global Warming Solutions Act of 2006 (AB 32 and SB 32)**
  Requires that GHG emissions within California be at 1990 levels by the year 2020. SB 32 requires reductions of at least 40 percent below 1990 levels by the year 2030.

- **Title VI of the Civil Rights Act of 1964.**
  Prohibits discrimination on the basis of race, color, or national origin by recipients of federal funds.

- **Presidential Executive Order 12898 on environmental justice (EJ).**
  Requires recipients of federal funding “identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations.”

- **Federal Congestion Management Process (CMP).**
  Requires that metropolitan areas, with a population exceeding 200,000 (known as Transportation Management Areas (TMAs)), develop a CMP. Federal law also states that Federal funds may not be programmed in the carbon monoxide and ozone non-attainment areas of the TMAs for any project resulting in significant increase in single occupant vehicle (SOV) capacity unless that project is based on a CMP.

- **Congestion Management Program.**
  The California-mandated program aimed at reducing congestion on highways and roads in California.

- **The California Complete Streets Act of 2008.**
  Requires that roadways be designed to safely accommodate all users, including bicyclists, pedestrians, transit riders, children, older people, and disabled people, as well as motorists.

- **Measure L (Local Roads First).**
  A half-cent sales tax referendum passed in November 2016 by the voters of Stanislaus County to fund needed transportation improvements.

- **Clean Air Act Amendments (1990).**
  Requires that the RTP/SCS conform to the State Implementation Plan (SIP) and that it remain consistent with state and local air quality planning efforts.

- **California Environmental Quality Act (CEQA).**
  Directs governmental agencies to consider the cumulative regional impact and analyze the environmental consequences of proposed projects.
Goals and Objectives

The development of the 2018 RTP/SCS began with the establishment of a set of goals, objectives and measures that express the aspirations and desired outcomes of the planning process. The goals and objectives from the prior plan were considered and updated to bring them in line with the California Transportation Commission’s 2017 Regional Transportation Plan Guidelines, the FAST Act and new federal rule making related to performance measurement.

Performance measures were developed for quantifying regional goals, estimating the impacts of proposed investments, and for gauging progress toward achieving the goals/objectives over time.

The goals, objectives and performance indicators for the 2018, RTP/SCS, shown below, represent a continuing evolution that builds upon earlier successes with added refinements based on input obtained through outreach with the public and key stakeholders.

GOAL 1: Mobility & Accessibility

Improve the ability of people and goods to move between desired locations; and provide a variety of modal and mobility options.

- New project trip generation (vehicle trips)
- New project Vehicle Miles Traveled (VMT)
- Percent of new households within walking distance (0.5 miles) of a transit stop
- Percent of new EJ households (income/race combined) within walking distance (0.5 miles) of a transit stop
- Percent of new EJ households (income-based only) within walking distance (0.5 miles) of a transit stop
- Percent of new EJ households (race-based only) within walking distance (0.5 miles) of a transit stop
- VMT growth by scenario (2015-2035)
- Total vehicle miles travelled (VMT)
- Average trip length – vehicle trips
- Average trip length – commuter vehicle trips
- Drive alone daily mode share percentage
- Ped/bike daily mode share percentage

GOAL 2: Social Equity

Promote equitable access to opportunities by ensuring all populations share in the benefits of transportation improvements and are provided a range of transportation and housing choices.

- Housing mix by type for new development
  » Multifamily/Townhome
  » Small-lot single family
  » Large-lot single family
- Average household income required to afford new single-family housing
- Average household income required to afford new multifamily housing
- Total households
  » Environmental Justice Representation
- Total households within 0.5 miles of transit
  » Environmental Justice Representation
- Total households within 0.5 miles of two or more buses per hour
  » Environmental Justice Representation

GOAL 3: Economic and Community Vitality

Facilitate economic development and opportunities through infrastructure investments that support goods movement within and through the region, including but not limited to the county’s strategic freight corridors.

- Housing mix by type for new development
- Overall residential density of new development
- Total households
GOAL 4: Sustainable Development Pattern
Provide a mix of land uses and compact development patterns; and direct development toward existing infrastructure, which will preserve agricultural land, open space, and natural resources.

- Total acres of new development
- Acres of farmland converted
- Overall residential density of new development

GOAL 5: Environmental Quality
Support infrastructure investments that facilitate vehicle electrification and the provision of electrification infrastructure in public and private parking facilities and structures.

- CO2 Emission per household of new development (tons/year)

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

- Percent of new households within walking distance (0.5 miles) of a park
- Percent of a new low-income EJ households within walking distance (0.5 miles) of a park
- EJ households as a percent of total households within 500 ft. of a major roadway
- Meets Federal health-based emission budgets

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.

- Total new local roadway lane miles (lane miles)

GOAL 8: Smart Infrastructure
Coordinate, monitor, and integrate planning and programming for intelligent transportation system (ITS), smart infrastructure, demand-responsive transportation, and automated vehicles.

- To be Determined

GOAL 9: Reliability & Congestion
Maintain or improve reliability of the transportation network and maintain or reduce congestion.

- Congestion Management Program roadway capacity thresholds
- Level of congestion (baseline conditions only)
- Level of travel time reliability (baseline conditions only)

GOAL 10: Project Delivery
Efficiently use available transportation funding to expedite project delivery of transportation improvements within the region for the benefit of residents of Stanislaus County and the general travelling of the public.

- To be Determined
Regional Transportation System
The regional transportation system in Stanislaus County is a multimodal network of roadways, railways, airports, and multiuse paths that all contribute to the movement of people and freight, linking Stanislaus County with other regions and connecting communities within Stanislaus County as shown in Figure 1.2.

Future Conditions
By the year 2042, the population of Stanislaus County will reach approximately 720,000 people, a 29% increase in population over 2018. This population growth is forecasted to be accompanied by 55,000 new housing units and 47,000 more jobs. The employment growth rate is not anticipated to keep pace with population growth, especially in the later years of the Plan; based on this trend, commute patterns between Stanislaus County, the Bay Area, Sacramento County, and San Joaquin County are anticipated to continue to rise in the future.

The proportion of the population aged > 60 years is projected to increase from 19% in 2018 to 24% by 2042, and more people will be reliant on alternative transportation modes, such as transit and private and public ridesharing alternatives, such as Uber and Lyft. The RTP addresses these trends through expansion of the bicycle and pedestrian system, enhancements to the Modesto City-County Airport, new and improved bus services in the cities of Modesto, Ceres, and Turlock, extension of the Altamont Commuter Express (ACE) Train into Modesto, and several roadway capacity and operational improvements. Key projects included in the RTP are shown in Figure 1.3.

By 2042, the Stanislaus County region is expected to add:

±162,500 people, a 29% increase in total population

±55,000 new housing units, and

±47,500 more jobs
FIGURE 1.2 – Regional Facility Map

Legend
- Commercial Airport
- General Aviation Airport
- Regional Roadway Network
- Railroads
- City Boundary

Approximate Scale
0.5 in = 4 miles
1 in = 8 miles
FIGURE 1.3 – Project Map

Legend

<table>
<thead>
<tr>
<th>Project Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport</td>
</tr>
<tr>
<td>Interchange</td>
</tr>
<tr>
<td>Intersection</td>
</tr>
<tr>
<td>Other*</td>
</tr>
<tr>
<td>Structures/Crossings/Seismic</td>
</tr>
<tr>
<td>Transit</td>
</tr>
<tr>
<td>Bicycle/Pedestrian Project</td>
</tr>
<tr>
<td>ACE Rail Project</td>
</tr>
<tr>
<td>Roadway Project</td>
</tr>
</tbody>
</table>

City Boundary

*Includes railroad, bridge, and parking projects, among others.

Approximate Scale:
0.5 inch = 3.7 miles
1.0 inch = 7.4 miles
Investment Plan
The RTP has created a financially constrained project list that can be implemented using known available funding. These have been identified as:

**Key funding sources include:**
- State Transportation Improvement Program (STIP) - provides state and federal gas tax money for improvements on the state highway system.
- State Highway Operation and Protection Program (SHOPP) - focused on safety and maintenance projects.
- Measure L - a half-cent sales tax approved by Stanislaus County voters in November 2016 which will provide approximately $960 million over the next 25 years.
- Road Maintenance and Rehabilitation Program (SB 1) - provides state level funding for transportation projects both as formula funds distributed to regional and local agencies and as competitive grant funds for eligible projects.
- SB 132 - provides funding for the Altamont Commuter Express (ACE) extension to Modesto, Ceres, and Merced.
- Active Transportation Program (ATP) - provides funding for bicycle and pedestrian facilities through a number of programs oriented towards improving the quality and safety of the bicycle and pedestrian network.
- Congestion Mitigation and Air Quality (CMAQ) Funds - intended to fund transportation projects or programs that will contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter (both PM10 and PM2.5).
- Cap and Trade Funds - focus significant funding into disadvantaged communities in support of greenhouse gas reducing projects.

Just over half of the revenue accounted for in this Plan will be spent on roadway improvements and nearly 40% will be for transit projects. This represents a significant increase over what was allocated in the 2014 RTP. Figure 1.4 shows the funding distribution by project type and revenue sources.

**Figure 1.4 – Project Type and Revenue**

2018 RTP/SCS Tier 1 Project List by Project Category

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway</td>
<td>53%</td>
</tr>
<tr>
<td>Bike/Ped</td>
<td>5%</td>
</tr>
<tr>
<td>Transit</td>
<td>39%</td>
</tr>
<tr>
<td>Aviation</td>
<td>1%</td>
</tr>
<tr>
<td>Operations &amp; Maintenance</td>
<td>2%</td>
</tr>
</tbody>
</table>

2018 RTP/SCS Revenue Sources

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>$2.7 Billion</td>
<td>36%</td>
</tr>
<tr>
<td>State</td>
<td>$3.9 Billion</td>
<td>53%</td>
</tr>
<tr>
<td>Federal Highway</td>
<td>$515 Million</td>
<td>7%</td>
</tr>
<tr>
<td>Federal Transit</td>
<td>$278 Million</td>
<td>4%</td>
</tr>
</tbody>
</table>

**System Preservation**
The RTP/SCS is focused not only on expanding transportation capacity and developing new infrastructure; the Plan must also provide resources and programs to maintain the existing infrastructure, and to optimize the lifecycle and performance of existing transportation assets. There are several elements that make up system preservation, including operations and maintenance, safety, reliability, and efficiency.
**Maintenance**

Local jurisdictions in Stanislaus County, Caltrans, and other agencies own and maintain roadways within the county. Each is responsible to keep their facilities in good working condition.

StanCOG administers funding that supports local jurisdictions in achieving their maintenance and transit operational needs. Roadways in Stanislaus County are periodically evaluated for their condition measured as Pavement Condition Index (PCI). PCI is used to rate the condition of the surface of a road network.

It provides a numerical rating for the condition of roadway segments within the transportation network, where 0 is the worst condition and 100 is the best. The PCI measures:

1.) The type, extent, and severity of pavement surface distresses (typically cracks and rutting), and

2.) The smoothness and ride comfort of the road.

As shown in Table 1.1, with the exception of unincorporated Stanislaus County roadways, all Stanislaus County jurisdictions had an average PCI of 60 or above, which is considered At Risk.

<table>
<thead>
<tr>
<th>Name</th>
<th>PCI</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceres</td>
<td>61</td>
<td>At Risk</td>
</tr>
<tr>
<td>Hughson</td>
<td>71</td>
<td>Good</td>
</tr>
<tr>
<td>Modesto</td>
<td>50</td>
<td>At Risk</td>
</tr>
<tr>
<td>Newman</td>
<td>61</td>
<td>At Risk</td>
</tr>
<tr>
<td>Oakdale</td>
<td>61</td>
<td>At Risk</td>
</tr>
<tr>
<td>Patterson</td>
<td>61</td>
<td>At Risk</td>
</tr>
<tr>
<td>Riverbank</td>
<td>71</td>
<td>Good</td>
</tr>
<tr>
<td>Stanislaus County</td>
<td>49*</td>
<td>Poor</td>
</tr>
<tr>
<td>Turlock</td>
<td>61</td>
<td>At Risk</td>
</tr>
<tr>
<td>Waterford</td>
<td>71</td>
<td>Good</td>
</tr>
</tbody>
</table>

Source: 2016 California Statewide Local Streets and Roads Needs Assessment, NCE

**Safety**

As shown in Table 1.2, in 2015, 4,050 people were injured or killed in vehicular crashes in Stanislaus County. When measured per capita, Stanislaus County had the 5th highest traffic injury rate of all 58 California counties. Since 2009, Stanislaus has fallen in the top 10 ranked counties in all but one year. Alcohol related crashes have been persistent throughout that period and will be a focus area for future safety improvement measures. Bicycles and pedestrians also make up a disproportionately high number of crash victims in the county and indicate that the increased emphasis on active transportation in the county is important.

<table>
<thead>
<tr>
<th>Traffic Injuries Per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,050 People in 2015</td>
</tr>
</tbody>
</table>

**Table 1.1 - Pavement Conditions Index**

<table>
<thead>
<tr>
<th>Name</th>
<th>PCI</th>
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<td>Waterford</td>
<td>71</td>
<td>Good</td>
</tr>
</tbody>
</table>

Source: 2016 California Statewide Local Streets and Roads Needs Assessment, NCE

PCI Values represent low of PCI data ranges

*PCI Value represents high of PCI data range
Table 1.2 - Stanislaus County Crashes (2015)

<table>
<thead>
<tr>
<th>Crash Type (2015)</th>
<th>Victims Killed &amp; Injured</th>
<th>Statewide Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fatal and Injury</td>
<td>4050</td>
<td>5</td>
</tr>
<tr>
<td>Alcohol Involved</td>
<td>441</td>
<td>18</td>
</tr>
<tr>
<td>Had Been Drinking*</td>
<td>145</td>
<td>9</td>
</tr>
<tr>
<td>Motorcycles</td>
<td>163</td>
<td>34</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>202</td>
<td>16</td>
</tr>
<tr>
<td>Bicyclists</td>
<td>159</td>
<td>33</td>
</tr>
<tr>
<td>Speed Related</td>
<td>659</td>
<td>27</td>
</tr>
<tr>
<td>Nighttime</td>
<td>352</td>
<td>10</td>
</tr>
<tr>
<td>Hit and Run</td>
<td>234</td>
<td>14</td>
</tr>
</tbody>
</table>

*Driver age 21 - 34

Reliability
Travel time reliability measures the consistency or dependability in travel times, and applies to both vehicular travel and transit systems, as well as freight carriers and air travelers. While travel time reliability does not directly address issues of congestion, it plays an important role in traffic management and operation activities. Knowing the reliability of a roadway or system allows travelers to make more informative decisions about the specific routes they take, or the time of day in which they make a trip.

Improvements to reliability offset the worst impacts of congestion through user frustration and emissions, extending the life of existing facilities and delaying the need for widening and other capacity increases. This RTP includes projects that address vulnerabilities in our transportation system and that aim to improve travel time reliability.

Travel Demand Management
Stanislaus County is designated by the Environmental Protection Agency (EPA) as a non-attainment area, which means that pollutants such as particulate matter and ozone in the air are frequently measured above acceptable federal limits. This status requires a demonstration of effort to reduce transportation demand before federal funding can be used to develop any roadway capacity increases. This RTP includes several projects and programs aimed to reduce single occupancy vehicle use in the county, including the ACE Train extension, additional vanpool services through CalVans, Dibs, and eTrip (Rule 9410), which is a voluntary employer travel demand management program to encourage employees to carpool or use transit services.

Equity
This 2018 RTP/SCS has been evaluated using a benefits and burdens analysis to ensure that the transportation system is developed to serve everyone in the county regardless of race and income. Most of the major construction activity associated with implementation of the Plan will occur outside of low income and minority population centers, limiting the impacts of construction on disadvantaged communities. The plan analysis shows that more low-income and minority populations will benefit from planned improvements on a per capita basis than other population groups.

Similarly, public transit investments are expected to provide more access to low-income and minority households in the future, improving mobility options for everyone.

Public Outreach
The 2018 RTP/SCS Plan represents a regional vision that aims to improve the quality of life within Stanislaus County. As part of this plan update, StanCOG implemented a comprehensive public outreach program which encourages active participation of local governments and a broad range of stakeholders. This vision was informed and shaped by input from those whom the Plan will affect – Stanislaus County residents.

To ensure inclusivity across all sectors and populations within the County, StanCOG utilized a variety of outreach strategies to inform the public about various presentations and workshops, including posting announcements on social media; distributing informational handouts, posters, and flyers throughout the county; publishing announcements in various news outlets; and maintaining an updated project website, among others. Project information was also translated into Spanish to ensure inclusion of the Spanish-speaking population.

Outreach was conducted using many forums in several locations including eNews, public workshops, attendance at community events, presentations at a wide range of public meetings, and a project website.
Combined, these activities reached thousands of Stanislaus County residents and hundreds of comments, suggestions, and questions were received as a result.

**Outreach Highlights:**
- StanCOG established a “Valley Vision Stanislaus” Steering Committee to provide input and direction throughout the planning process. The committee was comprised of representatives from 15 agencies/organizations within the Stanislaus region.
- A total of 12 eNews announcements were sent to 450+ subscribers promoting upcoming workshops.
- Workshops were promoted via Facebook events, poster boards and banners, and ad-supported placements, and yielded over 1400 impressions in our target market.
- Print ads were placed in both the Modesto Bee and Vida to promote workshops in Spanish and English.
- 1500 business card handouts, and 200 posters and flyers were created and distributed county-wide.
- English and Spanish language handouts were created and placed on the project website.
- News releases were sent to publications, radio, and online services in Stanislaus County.
- The project website was consistently updated with information, new documents, and presentations, averaging over 1000 page visits

**Conclusion**
This 2018 Plan was developed by StanCOG in accordance with state and federal requirements, including the Sustainable Communities and Climate Protection Act (SB 375) and the State’s broader climate goals. It is an expression of the collective regional goals and priorities of the Stanislaus region. Importantly, it promotes integrated regional transportation and land use planning and a performance-based approach to planning as required by the Fixing America’s Surface Transportation Act (FAST Act).

By guiding future land use to be more compact and providing a transportation system that provides alternatives to driving alone and that connects everyday destinations, the Stanislaus region can be an economically viable place to work and live while protecting its natural resources and scenic beauty. This Plan also recognizes the importance of equitable mobility and accessibility and promotes healthy transportation options including active transportation while preserving existing infrastructure. As shown in Figure 1.5, with this plan the Stanislaus region can meet and exceed the greenhouse gas targets provided under SB 375 along with making real progress against other stated goals.

**Figure 1.5 - Comparison of SB 375 Emission Reduction Targets and Plan Reductions**

![Bar chart showing comparison of SB 375 targets and plan reductions](chart.png)
Introduction
INTRODUCTION

The Stanislaus Council of Government's 2018 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS or ‘Plan’) specifies the policies, projects, and programs necessary over a 25-year period to improve, manage, and maintain the region’s transportation system.

As the federally designated Metropolitan Planning Organization (MPO) and state designated Regional Transportation Planning Agency (RTPA) for the Stanislaus region, StanCOG has developed the 2018 RTP/SCS update through an integrated and formal planning process, referred to as Valley Vision Stanislaus. This process was executed in collaboration with the nine cities in the Stanislaus region and the County of Stanislaus through coordination with our local, state, and federal planning partners and outreach to our key stakeholders and the public.

The Plan serves as a guide for transportation investment and land use across Stanislaus County through 2042. It presents a roadmap for accommodating anticipated growth and development and identifies a transportation investment strategy for achieving regional goals that link air quality, land use, and transportation.

RTP/SCS Preferred Scenario

The 2018 RTP/SCS is based on a preferred land use and transportation scenario, referred to as Scenario 2 (Preferred Scenario/Infill Redevelopment), which defines a pattern of future growth and transportation system investment for the region emphasizing a more transit-oriented development and a compact infill approach to land use and housing as compared to Scenario 1 (General Plan Trend/Business As Usual). The 2018 RTP/SCS scenarios are discussed in further detail in Chapters 8 and 9.

This chapter first describes the regulatory setting and planning initiatives that govern the development of the 2018 RTP/SCS. Second, it outlines StanCOG’s goals and objectives used to evaluate different transportation investment and land use scenarios, and presents the performance framework used to quantify and describe the performance of the RTP/SCS. Third, it summarizes the steps StanCOG followed, including public outreach and involvement, for the 2018 RTP/SCS planning process. Lastly, it presents a summary of forecasting efforts that informed this plan.

Regulatory Setting & Planning Initiatives

This 2018 RTP/SCS sets the foundation for transportation investment and land use priorities for years 2018 through 2042. A number of federal and state statutes and regulations direct the content of the Plan and the process by which it is developed. Additionally, regional planning initiatives also affect the priorities of the Plan. A few of the key statutes, regulations, and initiatives are listed below.

Moving Ahead for Progress in the 21st Century Act (MAP-21)/Fixing America’s Surface Transportation Act (FAST Act) was enacted on December 4, 2015. The FAST Act replaces MAP-21 and continues the performance-based planning and programming stipulations enacted in MAP-21, which requires MPOs to implement a performance-based approach in the scope of the Metropolitan Transportation Planning process. The FAST Act includes requirement to:

1) Support the economic vitality of the metropolitan area by enabling global competitiveness, productivity, and efficiency;
2) Increase the safety of the transportation system for motorized and non-motorized users;
3) Increase the security of the transportation system for motorized and non-motorized users;
4) Increase accessibility and mobility of people and freight;
5) Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between (regional) transportation improvements and state and local planned growth and economic development patterns;
6) Enhance the integration and connectivity of the transportation system, across all modes, for people and freight;
7) Promote efficient system management and operation;
8) Emphasize the preservation of the existing transportation system;
9) Improve the resiliency and reliability of the transportation system
10) Reduce or mitigate stormwater impacts of surface transportation; and
11) Enhance travel and tourism.

California Environmental Quality Act (CEQA).
CEQA directs governmental agencies to consider cumulative regional impacts and analyze the environmental consequences of proposed projects. Development of the RTP/SCS requires a program-level Environmental Impact Review (EIR) of the collection of projects it contains. StanCOG is designated as the lead agency to prepare the environmental review associated with the RTP/SCS.

Title VI of the Civil Rights Act of 1964. This law prohibits discrimination on the basis of race, color or national origin by recipients of federal funds such as state and local government agencies. Additionally, Title VI imposes obligations on recipients of federal funds to take affirmative action to assure, among other things, “that no person is excluded from participation in or denied the benefits of the program or activity on the grounds of race, color, or national origin.” These prohibitions against discrimination were later supported by additional state and federal actions including Presidential Executive Order 12898 on environmental justice (EJ), which requires that federal agencies and recipients of federal funding “identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations.”

Clean Air Act Amendments (1990). Pursuant to Section 176 (c)(4) of the 1990 Federal Clean Air Act Amendments (CAAAA), MPOs such as StanCOG must demonstrate that the RTP conforms to the applicable State Implementation Plan (SIP). This process is described in the Federal Transportation Air (FTA) Quality Conformity Rule. The purpose of conformity is to ensure that regional transportation planning and programming remain consistent with state and local air quality planning efforts to expeditiously achieve and/or maintain the health-based National Ambient Air Quality Standards (NAAQS). Specifically, the following activities/tests are required to be documented when making conformity determinations of regional transportation plans in the Stanislaus region:

1) Expeditious Implementation of Transportation Control Measures Test (Conformity Regulation, Section 93.113)
2) Emission Budget Test (Conformity Regulation, Section 93.118)
3) Transportation Plan is financially constrained (Section 93.108)
4) Interagency Consultation and Public Participation Procedures (Section 93.110)

California Global Warming Solutions Act of 2006 (AB 32 and SB 32). AB 32 requires that GHG emissions within California must be at 1990 levels by the year 2020. AB 32 identifies GHGs as specific air pollutants that are responsible for global warming and climate change, and it directs the Air Resources Board (ARB) to implement the regulatory and market mechanisms necessary to achieve the specified reductions in GHG emissions. These efforts include reducing emissions through land use and transportation planning. SB 32 extends the reductions of GHG emissions required by AB 32 by specifying a GHG reduction of at least 40 percent below 1990 levels by the year 2030. SB 32 also authorizes the ARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. ARB is directed to carry out the process to achieve GHG emissions reductions in a manner that benefits the state’s most disadvantaged communities.

Sustainable Communities and Climate Protection Act of 2008 (SB 375). SB 375 requires that California’s 18 MPOs, including StanCOG, incorporate an integrated Sustainable Communities Strategy (SCS) as part of the RTP/SCS. Specifically, SB 375 requires the alignment of three major components within the regional transportation planning process – land use planning, transportation planning and funding, and State housing mandates – to reduce greenhouse gas (GHG) emissions from cars and light trucks.

The SCS is required to be based on realistic planning assumptions; consider adopted general plans and spheres of influence; and consider natural resources and farmland. It must be consistent with both the transportation and financing elements of the RTP, and the adopted Regional Housing Needs Allocation. Finally, the SCS must be able to achieve the GHG reduction targets established by the California Air Resources Board (ARB).
Federal Congestion Management Process. Federal law requires metropolitan areas with a population exceeding 200,000, known as Transportation Management Areas (TMAs), to develop a congestion management process as an ongoing process that is fully integrated into the MPO planning process. Federal law also states that “In a TMA designated as a nonattainment area for ozone or carbon monoxide pursuant to the Federal Clean Air Act, Federal funds may not be programmed for any project that will result in a significant increase in the carrying capacity for single occupant vehicles (i.e., new general purpose highway on a new location or adding general purpose lanes, with the exception of safety improvements or the elimination of bottlenecks), unless the project is addressed through a congestion management process.” The Federal congestion management process must include the following elements:

1. Develop Regional Objectives
2. Define CMP Network
3. Develop Multimodal Performance Measures
4. Collect Data/Monitor System Performance
5. Analyze Congestion Problems and Needs
6. Identify and Assess Strategies
7. Program and Implement Strategies
8. Evaluation Strategy Effectiveness

As part of performance management, recipients of Federal-aid highway funds, such as StanCOG, would make transportation investments to achieve performance targets that make progress toward the following national goals:

- **Congestion Reduction**: To achieve a significant reduction in congestion on the National Highway System (NHS).
- **System Reliability**: To improve the efficiency on the NHS.
- **Freight Movement and Economic Vitality**: To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental Sustainability**: To enhance the performance of the transportation system while protecting and enhancing the natural environment.

**Congestion Management Program.** The Congestion Management Program (CMP) is the State-mandated program (Government Code 65089) aimed at reducing congestion on highways and roads in California. The congestion management process establishes a designated roadway network of regional significance, roadway service standards, multi-modal performance standards, and a land use analysis element to identify and mitigate multi-jurisdictional transportation impacts resulting from local land use decisions. Federal, state and local transportation funding is contingent upon local agency compliance with the congestion management process. StanCOG is the designated Congestion Management Agency for Stanislaus County. StanCOG’s congestion management process has been developed to satisfy both the State and federal congestion management requirements.

**Goals and Objectives**

The California Transportation Commission (CTC) summarized Federal and State goals and objectives in its 2017 Regional Transportation Guidelines for Metropolitan Planning Organizations publication (referred to as the Guidelines), which provides guidance for preparing an RTP/SCS. In the Guidelines, “Chapter 7 – Transportation Performance Management” outlines goals and objectives that should be considered for incorporation into an RTP/SCS.

The following items are federal and state goals presented in the Guidelines. The federal goals are mandated, whereas the state goals are advisory. There is considerable overlap between the two sets of goals.

**Federal Goals:**

- **Safety**: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure Condition**: To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion Reduction**: To achieve a significant reduction in congestion on the National Highway System.
- **System Reliability**: To improve the efficiency of the surface transportation system
- **Freight Movement and Economic Vitality**: To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental Sustainability**: To enhance the performance of the transportation system while
protecting and enhancing the natural environment.

- **Reduced Project Delivery Delays:** To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies’ work practices.

**California Goals:**

- Achieve SB 375 GHG goals
- Preserve transportation infrastructure
- Improve mobility and accessibility
- Reduce GHG and improve air quality
- Improve public health
- Conserve land and natural resources
- Encourage sustainable land use patterns
- Increase supply of affordable housing
- Improve jobs and housing balance
- Improve mobility and accessibility for low-income and disadvantaged communities
- Support economic development
- Increase safety and security of the transportation system for motorized and non-motorized users

**StanCOG 2018 RTP/SCS Goals**

To assess how well the 2018 RTP/SCS meets the needs of the Stanislaus County region, StanCOG developed a set of goals, objectives, and performance measures, with stakeholder input, for evaluating the policies and strategies contained within the Plan.

The goals and objectives reflect the values and the vision of the residents of the Stanislaus region and are consistent with Federal and State requirements. The performance measures, which are tied to individual goals and objectives, provide an unbiased way of quantifying the different elements of the Plan. They are also invaluable for the implementation of the Plan.

In collaboration with the Valley Vision Stanislaus Steering Committee, StanCOG compiled the following list of goals and objectives and associated performance measures. Together, the 2018 RTP/SCS goals, objectives, and performance measures provided the necessary information to permit public and elected officials within the region to make informed decisions on the direction of the Plan based on an evaluation of the results. The performance measures were applied to compare the performance of the RTP/SCS scenarios for year 2035, and to further allow for comparisons between Scenario 2 (Preferred Scenario/Infill and Redevelopment) and Scenario 1 (General Plan Trend/Business As Usual). These performance measures showing comparisons between Scenario 2 and Scenario 1 are presented in Chapter 9 and Appendix L.

The Plan’s goals and related performance measures are described below.

**GOAL 1: Mobility & Accessibility**

Improve the ability of people and goods to move between desired locations, and provide a variety of modal and mobility options.

- New project trip generation (vehicle trips)
- New project vehicle miles traveled (VMT)
- Percentage of new households within walking distance (0.5 miles) of a transit stop
- Percentage of new EJ households (income/race combined) within walking distance (0.5 miles) of a transit stop
- Percentage of new EJ households (income-based only) within walking distance (0.5 miles) of a transit stop
- Percentage of new EJ households (race-based only) within walking distance (0.5 miles) of a transit stop
- VMT growth by scenario (2015-2035)
- Total VMT
- Average trip length of vehicle trips
- Average trip length of commuter vehicle trips
- Pedestrian/bike daily mode share percentage
**Goal 2. Social Equity**

Promote equitable access to opportunities by ensuring all populations share in the benefits of transportation improvements and are provided a range of transportation and housing choices.

- Housing mix by type for new development
- EJ representation
- Average household income required to afford new single-family housing
- Average household income required to afford new multi-family housing
- Total households
- Total households within walking distance (0.5 miles) of transit
- Total households within walking distance (0.5 miles) of two or more buses per hour

**Goal 3. Economic and Community Vitality**

Facilitate economic development and opportunities through infrastructure investments that support goods movement within and through the region, including but not limited to the County’s strategic freight corridors.

- Housing mix by type for new development
- Overall residential density of new development

**Goal 4. Sustainable Development Pattern**

Provide a mix of land uses and compact development patterns, and direct development toward existing infrastructure, which will preserve agricultural land, open space, and natural resources.

- Total acres of new development
- Acres of farmland converted
- Overall residential density of new development

**Goal 5. Environmental Quality**

Support infrastructure investments that facilitate vehicle electrification and the provision of electrification infrastructure in public and private parking facilities and structures.

- CO2 emissions per household of new development (tons/year)
- GHG reduction target compliance (Achieves 5 percent per capita)
- GHG emission reduction in 2020 and a 10 percent reduction in 2035 relative to 2005 levels

**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.

- Percentage of new households within walking distance (0.5 miles) of a park
- Percentage of new low-income EJ households within walking distance (0.5 miles) of a park
- EJ households as a percentage of total households within 500-feet of a major roadway
- Meets Federal health-based emission budgets

**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.

- Total new local roadway lane miles resulting from new development (lane miles)
Goal 8. Smart Infrastructure
Coordinate, monitor, and integrate planning and programming for intelligent transportation system (ITS), smart infrastructure, demand-responsive transportation, and automated vehicles.

- StanCOG will be examining various performance metrics as part of its implementation of the 2018 RTP/SCS. Specifically, StanCOG has included regional studies for Smart Infrastructure implementation in its 2018 RTP/SCS Tier I Project List, including the Transportation Technology Strategy for Stanislaus County, and Electric Infrastructure Implementation Study. It is anticipated that these studies will yield appropriate performance measures for future tracking of Smart Infrastructure development in Stanislaus County.

Goal 9. Reliability & Congestion
Maintain or improve reliability of the transportation network and maintain or reduce congestion.

- CMP roadway network level of service Level of Congestion (Avg. Speed < 60% of free-flow speed) for monitoring baseline conditions only.
- Level of Travel Time Reliability (LOTTR) (80th percentile travel time more than 1.5 times longer than the 50th percentile travel time) for monitoring baseline conditions only.

Goal 10. Project Delivery
Efficiently use available transportation funding to expedite project delivery of transportation improvements within the region for the benefit of residents of Stanislaus County and the traveling public in general.

- With the passage of Measure L and SB 1, greater emphasis will be placed on expedited project delivery. StanCOG, acting as the Local Transportation Authority for the administration of Measure L funds, is required to annually report on the expenditure of Measure L funds. In addition, StanCOG is the lead agency for development of the Federal Transportation Improvement Program (FTIP), which establishes the programming of state and federal transportation funds in Stanislaus County.

Planning Process
StanCOG developed the 2018 RTP/SCS through extensive public outreach and involvement across the Stanislaus region’s local jurisdictions (Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock, Waterford and Stanislaus County). The overall approach in planning for the 2018 RTP/SCS was to promote an open, transparent process that encourages the ongoing and active participation of local governments and a broad range of residents and stakeholder groups.

StanCOG implemented an approach for civic engagement in accordance with the goals and procedures identified in the StanCOG’s Public Participation Plan and the 2018 RTP/SCS Public Participation Plan presented in Appendix P. This Public Participation Plan (PPP) serves as a guide for the Stanislaus Council of Governments’ (StanCOG) public involvement process as well as the continuing, comprehensive and coordinated planning process among the stakeholders to ensure effective coordination among public officials at all levels of government and inviting the wide participation of all parties, public or private, at all stages of the transportation planning process to provide an ongoing opportunity for broad-based participation in the development and review of regional plans and programs managed and produced by StanCOG.

The four primary goals of StanCOG’s public participation process are:

Goal 1: Strive for a balanced representation of all groups of the public, including those that are typically underrepresented in the planning process, while providing ample opportunities for public review and input of all planning and programming documents.

Goal 2: Promote a culture of dialogue and partnership among residents, property owners, the business community, organizations, and public officials; while educating local officials and the public in the transportation planning process.
Goal 3: Make both technical information and meeting notices involved in the planning process available in accessible formats, and provide communications and agency reports that are understandable and timely.

Goal 4: Demonstrate explicit consideration and response to public input received during the planning and programming process while treating all interested participants fairly and respectfully.

StanCOG’s RTP/SCS PPP includes the following public outreach strategies:

- Outreach efforts to encourage the active participation of a broad range of stakeholder groups in the planning process;
- Workshops throughout the region to provide the public with the information and tools necessary to provide a clear understanding of the issues and policy choices;
- Preparation and circulation of a Draft SCS not less than 55 days before adoption of a Final RTP and SCS;
- At least three public hearings on the Draft SCS, held in different parts of the region;
- At least two informational meetings within the region for members of the Board of Supervisors and City Councils on the SCS; and
- A process for enabling members of the public to provide a single request to receive notices, information and updates.

Forecasts
The 2018 RTP/SCS relies on regional forecasts of future demographics, travel demand, and transportation funding as key components of the planning process. Land use and transportation investment decisions are based on the region’s growth forecasts. Table 2.1 presents future forecasts between 2018 and 2042 for Stanislaus County.

Table 2.1 - Stanislaus County Future Demographic Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Households</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>558,039</td>
<td>181,087</td>
<td>187,781</td>
</tr>
<tr>
<td>2020</td>
<td>571,139</td>
<td>187,171</td>
<td>192,931</td>
</tr>
<tr>
<td>2025</td>
<td>605,040</td>
<td>199,071</td>
<td>203,337</td>
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<tr>
<td>2030</td>
<td>639,754</td>
<td>208,407</td>
<td>212,861</td>
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<tr>
<td>2035</td>
<td>674,019</td>
<td>221,186</td>
<td>222,414</td>
</tr>
<tr>
<td>2040</td>
<td>707,554</td>
<td>231,806</td>
<td>231,718</td>
</tr>
<tr>
<td>2042</td>
<td>720,568</td>
<td>235,471</td>
<td>235,307</td>
</tr>
</tbody>
</table>

Source: Stanislaus County Forecast Summary, University of the Pacific, 2016.
*Year 2018 and 2042 estimates were interpolated.

Demographics
Growth forecasts were developed as part of a larger demographic forecast prepared for the three-county region encompassing Stanislaus, Merced, and San Joaquin counties. The forecasts were developed specifically for the preparation of the 2018 RTP/SCS in each respective county (per the Federal FAST-ACT MPO Planning Regulations and Senate Bill 375). The Stanislaus County Forecast Summary was prepared by the University of Pacific (UOP) Center for Business and Policy Research and completed in 2016. Demographic forecasts are presented in Chapter 4.

Transportation Demand
The travel demand model includes the three San Joaquin Valley MPO regions of the Merced County Association of Governments (MCAG), San Joaquin Council of Governments (SJCOG), and StanCOG. The travel demand model is maintained by SJCOG. The tri-county travel demand model allows for generation of the region’s future travel behavior, modal choices, transportation and transit network performance, and interregional travel demand.

A minor update to the MIP model known as VMIP2 was performed in 2017. VMIP2 takes advantage of the 2010 Census, the most recent American Community Survey (2016), and 2012-2013 California Household Travel Survey data, and enhances the model structure developed as part of the MIP model. Future transportation demand is presented in Chapter 4.

Financial
Revenue forecasts were developed through meetings and coordination efforts with StanCOG’s member agencies and Caltrans. These revenue projections satisfy federal requirements to achieve a financially constrained RTP whereby total project Capital Improvement Program (CIP) project costs were accounted for through available and expected funding over the life of the program.

The RTP provides projections for local, state, and federal funds, and distinguishes between formula and competitive funding sources. Formula funds were systematic and were provided by the funding agencies and projected based on previous funding cycles specific to each member agency, where the funding agency had not identified the proposed formulaic share. Competitive funding, such as grant
programs, were less certain and were based on past performance by StanCOG’s member agencies, program applicability, and an assumed capture rate based on Stanislaus County’s proportion of state maintained centerline miles of roadway. The 2018 RTP/SCS financial revenue forecast identifies several new funding sources, including: Measure L, SB 1, and SB 132. Through the passage of Measure L, Stanislaus became a Self-Help County, which will increase its ability to leverage additional federal and state discretionary funding. Future revenue projections are presented in Chapter 5.
CHAPTER 3:
Regional Transportation System
CHAPTER 3: Regional Transportation System

The regional transportation system in Stanislaus County consists of a multimodal network of vehicular, transit, bicycle, pedestrian, aviation, and freight facilities. It encompasses multiple transportation modes that contribute to the movement of people and goods through and within the county. Interstate 5 (I-5) and State Route 99 (SR 99) serve as the backbones of regional travel, connecting the cities and the unincorporated parts of the County to other areas of California. National, regional, and local transit services are available that provide safe, reliable, affordable, and environmentally friendly alternatives to driving. The County also features a network of bicycle and pedestrian facilities to encourage increased participation in active transportation options.

The 2018 RTP/SCS seeks to enhance connections between travel modes for more seamless travel throughout the region. It also identifies opportunities to improve the performance of modal elements through enhancements to infrastructure and services as well as better management of travel and transportation resources that address the future needs of the regional transportation system. For example, improvements to local roadways can be accompanied by improvements to, or additions of, bicycle facilities and sidewalks. In addition, rehabilitation of roadway pavement also improves driving conditions for individual motorists, transit vehicles, and bicyclists. As such, it is important to understand the ways in which transportation infrastructure can improve conditions for all modes of travel.

The following sections describe existing conditions of the regional transportation system for all transportation modes.

Roadway
Highways and roads are major transportation conduits in Stanislaus County. Roads serve cars, trucks, buses, cyclists, pedestrians, and provide means of access to rail stations, airports, and trails. Roadways within the County are maintained by local agencies, Caltrans, and other state and federal agencies. Each roadway’s role in the transportation network is defined by its functional classification as shown in Figure 3.1.

In addition to I-5 and SR 99, the County has several rural roadways, including signed County highways and major county roadways that are vital for inter- and intra-regional travel. These roadways move people and goods and connect the cities and unincorporated towns of the County; however, there is currently a lack of adequate east-west connectivity. As such, east-west improvements—including the North County and South County corridor projects—are critical components of the 2018 RTP/SCS project recommendations. These projects will provide east-west expressways that connect Modesto and Oakdale and connect Turlock to I-5.

Roadway Maintenance and Pavement Management
Roadway maintenance and pavement management are crucial aspects to plan for the future of the Stanislaus region’s roadway system. In 2016, the League of California Cities released the California Statewide Local Streets and Roads Needs Assessment, which surveyed all 58 counties and 480 cities in California. The study assessed the condition of local roadway systems and determined the cost to bring local facilities to a Best Management Practice (BMP) condition within 10 years. It concluded that the statewide average pavement condition index placed it in the “at risk” category. In 2016, total funding for pavement improvements was projected at $1.98 billion annually over the 10 subsequent years (2016-2026). California’s pavement needs for the next 10 years is estimated at approximately $70 billion. Stanislaus County and its cities’ pavement needs are estimated at $1.8 billion (or nearly 2.6 percent of the state’s total), which is higher than Stanislaus County’s percentage of statewide roadway miles (1.9 percent). Roadway Maintenance and Pavement Management is discussed further in Chapter 6 – System Preservation.
Figure 3.1 - Roadway Functional Classifications

Legend
Roadway Classification
- Freeway
- Expressway
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- City Boundary
Active Transportation

The availability of viable alternative and active transportation options, including bicycle and pedestrian options, is integral to achieving a successful regional transportation network in Stanislaus County. Transportation improvements that encourage biking and walking help to meet emissions reduction standards by reducing the number of motor vehicle trips and vehicle miles traveled, resulting in reduced congestion and improved air quality, health, and quality of life. In addition, Stanislaus County is classified by the Federal government as a non-attainment area. As such, the County is well-positioned for transportation funding that would help to expand alternative transportation modes, with the goal of improving air quality and human health.

Stanislaus County’s alternative transportation network consists of trails and on-street bicycle routes. Most major streets have sidewalks and local agencies have developed, or are developing, active transportation plans to identify and close gaps in the active transportation network. Due to the rural nature of Stanislaus County and its dispersed land use patterns and sparsely and widely distributed populations, however, commuting by a mode other than motor vehicle can be difficult. There are many challenges to active transportation in Stanislaus County. These include:

- Long distances between origins and destinations, especially for citizens who reside in the more remote rural areas of the county
- Travel speeds on rural roadways not conducive to safe biking
- Limited state and federal funding for bicycle and pedestrian improvements
- Damaged sidewalks
- Lack of sidewalks or paved shoulders or inadequate shoulder width to safety accommodate non-motorized traffic

Transit

Reliable and convenient public and private transit services are key considerations of the Stanislaus region’s overall transportation system. Efficient transit service can serve as a viable option for commuting throughout the region. Transit service provides general mobility options for individuals who do not own or choose not to use a vehicle, including the elderly, disabled populations, and persons of limited means. According to the most recent American Community Survey (2016), approximately 0.9 percent of Stanislaus commuters used transit.

Intraregional Transit Services

Currently, the Stanislaus region contains local, regional, and inter-county transit services provided by four local transit operators:

- The County of Stanislaus (Stanislaus County Regional Transit [StaRT and StaRT Dial-a-Ride], as shown on Figure 3.2)
- The City of Modesto (Modesto Area Express [MAX] and Modesto Area Dial-A-Ride [MADAR])
- The City of Turlock (Turlock Transit) and Turlock Transit Dial-A-Ride
- The City of Ceres (Ceres Area Transit [CAT] and Ceres Dial-A-Ride [CDAR])
Figure 3.2 – Transit Map - Stanislaus Regional Transit (StaRT) Transit

Map Effective August 20, 2017
In addition to these transit services, other mobility services are available to Stanislaus County residents, including Dibs and CalVans. Dibs is a travel service available in Stanislaus, San Joaquin, and Merced Counties that provides information about transportation options including carpooling, vanpooling, riding transit, biking, and walking. Its goal is to enhance air quality and help reduce congestion through these Transportation Demand Strategies.

CalVans is a program offered by the California Vanpool Authority that provides van-share options for qualified California residents. CalVans allows for individuals to use available vehicles for their personal or commute needs without having to own a car themselves. CalVans has grown to include more than 200 vanpools tailored to meet the needs of commuters, plus nearly 150 vans especially designed for farm workers.

**Interregional Transit Services**

Several transit operators provide interregional services to neighboring counties and regions. For example, MAX’s commuter express service provides a connection from Modesto to the Lathrop/Manteca Altamont Corridor Express (ACE) train and the Pleasanton/Dublin Bay Area Rapid Transit (BART) stations, as well as to the Modesto Amtrak station. StaRT’s Commuter route to BART provides service between Turlock, Patterson, and Dublin. Other interregional services provided by outside transit systems include the City of Escalon’s eTrans, the City of Ripon’s Blossom Express, and Merced County’s The Bus. Both Amtrak and the ACE also provide interregional rail service to the County, connecting the Stanislaus region to the Bay Area for commuter service as well as the state and national passenger rail network operated by Amtrak. The ACE currently plans to extend from its current terminus in Lathrop to Ceres (Phase I) and Merced (Phase II), with several additional stations located in Stanislaus and Merced Counties. Greyhound provides northbound and southbound daily bus trips throughout the state with stations in Modesto and Turlock.

**Transit Assistance Services**

Implemented by StanCOG in 2009, the Stanislaus region’s Consolidated Transportation Services Agency (CTSA), now referred to as MOVE, coordinates transportation programs that provide transit services for transit-dependent individuals who are unable to use public transit due to physical or cognitive disabilities. MOVE links both public transit and private social service agency services together to address service gaps that public transit may not be able to address. In particular, the MOVE’s Mobility Training and BRIDGES Volunteer Driver programs provide opportunities for elderly and disabled individuals to learn how to use the public bus system, or, if they cannot use public transit, use a volunteer driver program that can provide transportation for their daily activities (e.g., medical appointments, grocery shopping, etc.). In addition, MOVE assists with scheduling rides for the Veterans Van Volunteer Drive Program that provides transit services for homebound Veterans as well as implements the ADA eligibility determination program for all transit agencies in the Stanislaus region. The services provided by MOVE and other social service agencies are vital for ensuring that all residents have access to transportation options to meet their daily needs.

**Aviation**

Airports are classified in two broad categories, commercial airports and general aviation airports. The Stanislaus County region has one commercial and two general aviation airports. The Modesto City-County Airport is classified as a commercial airport, while both the Oakdale Municipal Airport and the Turlock Municipal Airport are classified as general aviation airports. The Oakdale and Turlock Municipal Airports are primarily used for private aviation. There are also six privately owned airports in the County: Crows Landing (Crows Landing); Flying Bull (Modesto); Mapes Ranch (Modesto); Peterson (Riverbank); Emanuel Medical Center (Turlock); and Valley Crop Dusters, Inc. (Westley). The location of each airport is shown in Figure 3.3.
CHAPTER 4: Future Conditions
Regional growth forecasts and corresponding land use patterns reflect anticipated increases in population, housing, and employment within Stanislaus County. These forecasts inform transportation system improvements necessary to accommodate varying levels of regional growth. The Stanislaus region is expected to continue to grow due to its proximity to major employment areas and its relatively inexpensive land prices and housing costs. Future traffic conditions and regional transportation improvements are developed in conjunction with demographic forecasts of population, households, and employment.

This section highlights the future of the Stanislaus region with regard to population, employment, commute patterns, mobility options, and the resulting growth in travel. As the Stanislaus region continues to grow, future improvements must also be considered within the context of a changing transportation landscape and the potential shifts towards various technology-induced mobility options, such as electric, autonomous, and shared vehicles.

Demographic Forecasts

Effective planning requires an understanding of both existing conditions and of how the region is expected to change over time. To support these planning efforts, StanCOG is responsible for forecasting the region’s demographic trends to inform and guide transportation investments and policy decisions.

These forecasts, including population, household, and employment, form the basis for developing the regional land use plan and transportation investment strategy. The remainder of this chapter explains the process used to develop the demographic forecasts and provides an overview of each of the three forecasts.

Forecasting Process

StanCOG, as part of an effort undertaken throughout the Central Valley, participated in the development of a countywide demographic forecast based on the latest federal, state, and local data.

The countywide forecast was published in the 2016 Stanislaus County Forecast Summary prepared by the Center for Business and Policy Research at the University of the Pacific. The forecast considered local conditions and trends, including the recent economic and housing downturn, and state and national trends.

StanCOG has subsequently worked with local agencies within the region to break down the countywide forecasts. In addition to the RTP/SCS component, StanCOG and local agency staff will use this forecast as a basis for other future planning efforts.

Forecasts

The countywide forecast totals were used as inputs to establish future year baselines for anticipated growth in each jurisdiction within the region. Table 4.1 presents these forecasts. These totals suggest degrees of growth, in terms of population, employment, and housing units, but not the types of growth (e.g., household density, commute patterns, etc.). While the scenarios presented in the 2018 RTP/SCS represent different growth patterns for the region, each scenario remains consistent with the future baseline totals presented in the 2016 Stanislaus County Forecast Summary.

Table 4.1 – RTP Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Households</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>558,039</td>
<td>181,087</td>
<td>187,781</td>
</tr>
<tr>
<td>2020</td>
<td>571,139</td>
<td>187,171</td>
<td>192,931</td>
</tr>
<tr>
<td>2025</td>
<td>605,040</td>
<td>199,071</td>
<td>203,337</td>
</tr>
<tr>
<td>2030</td>
<td>639,754</td>
<td>208,407</td>
<td>212,861</td>
</tr>
<tr>
<td>2035</td>
<td>674,019</td>
<td>221,186</td>
<td>222,414</td>
</tr>
<tr>
<td>2040</td>
<td>707,554</td>
<td>231,606</td>
<td>231,718</td>
</tr>
<tr>
<td>2042</td>
<td>720,568</td>
<td>235,471</td>
<td>235,307</td>
</tr>
</tbody>
</table>

Source: Stanislaus County Forecast Summary, University of the Pacific, 2016. *Year 2018 and 2042 estimates were interpolated.

Although the growth rate slowed slightly due to the recession in 2008, the Stanislaus region has continued to experience growth rates that outpace other areas in the state. By 2042, the County is projected to add approximately 162,500 people, increasing the total population from 558,039 in 2018 to 720,568 in 2042. This represents an anticipated increase of 29 percent. The total number of households is also anticipated to increase at a similar rate, growing by approximately 53,400 from 181,087 units in 2018 to 235,471 (an increase of approximately 30 percent) in 2042. The
employment growth rate is not expected to keep pace with population, especially in the later years of the Plan. The County is expected to add over 47,000 jobs by 2042, increasing the total number of jobs from 187,781 in 2018 to 235,307. This represents an increase of 25 percent, growing at a slightly slower rate than the County’s population.

**Population**

From 2010 to 2015, Stanislaus County’s population grew by approximately 26,000 (or approximately 5 percent over a period of five years) to 540,794. This growth outpaces the growth of San Joaquin County and the State of California, which both grew by approximately 3 percent from 2010 to 2015. **Table 4.2** shows the population distribution within Stanislaus County for 2015 compared to 2010.

The majority of the population in the Stanislaus region is concentrated along the major highway corridors. The three largest cities in the region—Modesto, Turlock, and Ceres—are located along SR 99 and comprise over 60 percent of the County’s population. The Cities of Patterson and Newman are located along I-5 and comprise just over 6 percent of the region’s population. The remaining unincorporated areas account for just over 21 percent of the County’s total population.

Although the City of Modesto maintains the largest population share of the County, that share is forecasted to decrease from 39 percent of the County’s population in 2015 to 37 percent by 2060. Patterson will see the largest increase in population share, rising from 4 percent of the County’s population in 2015 to 6 percent by 2060. As shown in **Table 4.2**, the population of Patterson is expected to increase almost two-fold by 2042.

**Population Age Dichotomy**

The County’s traditional small-town atmosphere, availability of affordable housing options, and lower cost of living attracts both seniors and young families, who are also brought in by the high quality of local schools.

### Table 4.2 - Stanislaus County Demographic Forecasts

<table>
<thead>
<tr>
<th>City</th>
<th>Current Trend</th>
<th>Future Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modesto</td>
<td>201,165</td>
<td>210,341</td>
</tr>
<tr>
<td>Turlock</td>
<td>68,549</td>
<td>72,229</td>
</tr>
<tr>
<td>Ceres</td>
<td>45,417</td>
<td>48,029</td>
</tr>
<tr>
<td>Riverbank</td>
<td>22,678</td>
<td>24,064</td>
</tr>
<tr>
<td>Patterson</td>
<td>20,413</td>
<td>23,067</td>
</tr>
<tr>
<td>Oakdale</td>
<td>20,675</td>
<td>21,902</td>
</tr>
<tr>
<td>Newman</td>
<td>10,224</td>
<td>10,854</td>
</tr>
<tr>
<td>Waterford</td>
<td>8,456</td>
<td>8,909</td>
</tr>
<tr>
<td>Hughson</td>
<td>6,640</td>
<td>7,080</td>
</tr>
<tr>
<td>Unincorporated</td>
<td>110,236</td>
<td>114,319</td>
</tr>
<tr>
<td>Stanislaus County Total</td>
<td>514,453</td>
<td>540,794</td>
</tr>
<tr>
<td>San Joaquin County</td>
<td>685,306</td>
<td>708,554</td>
</tr>
<tr>
<td>Merced County</td>
<td>256,800</td>
<td>272,718</td>
</tr>
<tr>
<td>California</td>
<td>37,253,956</td>
<td>38,421,464</td>
</tr>
</tbody>
</table>

*2010 Source: US Census Bureau, ACS 5-Year Estimate  
**2015-2060 Source: Stanislaus County Forecast Summary, University of the Pacific, 2016.  
***Year 2042 estimates were interpolated.
As presented in the 2016 Stanislaus County Forecast Summary, although the number of individuals in all age groups is expected to grow, the senior population is projected to increase from the smallest group in 2010 through 2025 to the third-largest group from 2030 to 2050. While the population of seniors (persons over 60 years old) represents 19 percent of the population currently, by 2042 this share will increase to 24 percent. In contrast, the population group aged 0 to 19 is expected to decrease from just over 30 percent of the total population to 26 percent by 2042. As a result, it is expected that this will cause shifts in the labor force, the types of housing required, and transportation needs.

**Shifting Racial and Ethnic Diversity**
The County’s population is projected to be 571,139 by 2020 and reach 720,568 by 2042. While the majority of the County’s population is white and below the age of 19, a significant portion of the County’s growth is projected to occur within its Asian and Hispanic populations, and within the age group of persons 60 and older. The Hispanic population is projected to become more populous than the White population by 2042.

**Natural Increases**
Stanislaus County has a high natural growth rate, defined as total births minus deaths, as the result of a relatively young population and family sizes that are higher than both the State and national average. Factors that attract young families to the area include quality of schools, nearby parks and open space, and affordable large-lot, suburban, single-family home developments.

**Employment**
As stated earlier, employment within Stanislaus County is estimated to increase by 47,500 jobs by 2042. Agriculture plays a prominent role in the Stanislaus region and San Joaquin Valley economy. While only approximately 6.9 percent (Longitudinal Employer-Household Dynamics [LEHD], 2015) of the countywide workforce is directly employed in farming operations, a much larger percentage of the workforce is directly tied to the agricultural sector (e.g., those employed in the food manufacturing, transportation, and warehousing industries). Twelve of the 25 largest employers in the region are directly related to the agricultural/manufacturing industry (Employment Development Department, 2018). Given the need to transport products from Valley farms to markets and ports in other parts of the State, agriculture-related industries depend on a transportation network that provides for the efficient movement of goods.

The role of agriculture is still a key component of employment for the region, but job diversification has been increasing as the population has also diversified. Stanislaus County’s role as a source of workers for the Bay Area who live in the region has increased the need for retail jobs to support growing housing numbers.

Other sectors are starting to make gains based on priorities developed in the region to diversify employment and develop jobs that complement the agriculture industry. Successful examples of employment diversification in Stanislaus County can be seen in the development of the City of Patterson as a key warehousing and distribution center. Continued local growth in the transportation, warehousing, and utilities sectors points to the increasing importance of the region as a distribution hub. As a result, the transportation system is expected to play a key role in maintaining the growth and viability of the Stanislaus region’s economy. Table 4.3 presents the employment change by industry between 2010 and 2015.

**Table 4.3 - Employment Change by Industry**

<table>
<thead>
<tr>
<th>Industry Title</th>
<th>Employment Change, 2010-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Total Employment</td>
<td>15,841</td>
</tr>
<tr>
<td>Total Farm</td>
<td>2,675</td>
</tr>
<tr>
<td>Total Non-Farm</td>
<td>13,166</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>545</td>
</tr>
<tr>
<td>Transportation, Warehousing, and Utilities</td>
<td>1,305</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>871</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>2,341</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>542</td>
</tr>
<tr>
<td>Government</td>
<td>1,695</td>
</tr>
</tbody>
</table>

Commuters
Located within the Sacramento and Bay Area (Alameda County, Santa Clara County, Contra Costa County, and San Francisco County) commute-shed (approximately 75 miles south of Sacramento and 80 miles east of San Francisco), the Stanislaus region tends to attract retirees, families, and commuters.

With two of the largest employment areas in California within commute distance, the region has become a “bedroom community” for those working in these employment areas.

The cost of commuting, however, has a profound impact on the region, in the form of traffic congestion, increased air pollution, and deteriorating roadways. Moreover, the commute results in increased actual and non-pecuniary costs to individual commuters, including fuel, automobile upkeep, bridge tolls, time away from family, and higher levels of stress.

Like many Valley communities, the Stanislaus region has seen single-occupancy commuting continue to increase over time. According to the 2016 American Community Survey, 80 percent of workers in Stanislaus County drove alone to their jobs. According to 2015 Longitudinal Employer-Household Dynamics (LEHD) data, 44 percent of the population commutes to jobs located outside of Stanislaus County, as shown in Table 4.4 and Figure 4.1.

Although many new jobs have been created in Stanislaus County in recent decades, the lucrative job opportunities and the high housing costs of the Bay Area continue to increase the County’s jobs-housing imbalance. While 56 percent of workers in Stanislaus County commute to jobs within the region, 18,000 workers, about 10 percent of total commuters, commute to San Joaquin, and approximately 16 percent of total commuters commute to the Bay Area and Sacramento for their primary jobs. This heavy out-commuting requires the Stanislaus region to make costly improvements to the local and regional roadway systems to meet demand.

Table 4.4 - Stanislaus Out-of-County Commuter Patterns

<table>
<thead>
<tr>
<th>County of Employment</th>
<th>Number of Stanislaus Resident Commuters</th>
<th>% of Stanislaus Resident Commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanislaus</td>
<td>102,276</td>
<td>56.2%</td>
</tr>
<tr>
<td>San Joaquin</td>
<td>18,125</td>
<td>10.0%</td>
</tr>
<tr>
<td>Alameda</td>
<td>10,099</td>
<td>5.5%</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>8,326</td>
<td>4.6%</td>
</tr>
<tr>
<td>Merced</td>
<td>7,768</td>
<td>4.3%</td>
</tr>
<tr>
<td>Sacramento</td>
<td>5,035</td>
<td>2.8%</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>4,094</td>
<td>2.2%</td>
</tr>
<tr>
<td>Fresno</td>
<td>2,935</td>
<td>1.6%</td>
</tr>
<tr>
<td>San Mateo</td>
<td>2,334</td>
<td>1.3%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>2,307</td>
<td>1.3%</td>
</tr>
<tr>
<td>Other</td>
<td>18,717</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

Figure 4.1 Stanislaus Out-of-County Commute Patterns

Legend
Percent of Commute Trips
- > 5%
- > 2%
- < 2%
Housing
The housing stock in Stanislaus County increased by nearly 2.5 percent during the past five years. There were approximately 179,500 units in 2010 (2014 RTP), which reached 184,013 units by 2015 (University of Pacific, 2016). This increase is attributed to the County’s affordable housing selection and its proximity to employment opportunities in the Sacramento and Bay Area. The number of households is expected to increase by approximately 54,000 more units by 2042.

As shown in Table 4.5, home sale prices in Stanislaus County are significantly lower than prices in other parts of California. The region also provides a different mix of housing options than the Sacramento and Bay Area. Currently, according to the American Community Survey (ACS, 2016) 79 percent of the County’s housing stock consists of single-family units, 16 percent consists of multi-family units, and 5 percent consists of mobile homes. Under Scenario 2 (Preferred Scenario/Infill Redevelopment), 38 percent of the County’s new housing stock consists of single-family units (30 percent on a small lot; 8 percent on a large lot), and 62 percent will consist of multi-family units.

Jobs-Housing Balance
The ongoing trend of commuters migrating to the Valley for housing while continuing to work in other markets has historically led to a jobs-housing imbalance in Stanislaus County. Jobs-housing balance is typically achieved when both the quality and quantity of housing opportunities match the job opportunities within an area, with a resulting ratio of 1. With increases in employment opportunities as of 2015, Stanislaus County had approximately 180,056 jobs and 171,960 households, resulting in a balanced jobs-housing ratio of 1.05 jobs per household. By 2042, Stanislaus County is forecasted to have approximately 235,307 jobs and 235,471 households, resulting in a balanced jobs-housing ratio of 1.0.

To ensure an adequate relationship between jobs and housing within the Stanislaus region, the region must go beyond attempting to simply improve commuter travel times and develop policies to encourage, attract, and retain quality, higher-wage jobs through land use and fiscal decisions that develop Stanislaus County as a desirable location for employers and employees. Strategies to attract a mix of high-tech and industrial manufacturing jobs will rely heavily on providing a higher quality transportation infrastructure and more viable transportation options to make businesses more efficient, as well as providing community amenities that attract new businesses and a highly qualified workforce. To support this, investments have started to be made in amenities such as downtown development projects, performing arts centers, and community parks. These efforts will take time to take root and produce meaningful results.

Farmland Conservation
Agriculture plays a significant role in the regional economy. As such, the preservation of agricultural land is also of key concern to the region, and balancing land conversion to accommodate growth with the preservation of farmland is particularly important.

Preserving farmland within Stanislaus County is therefore a guiding factor for regional transportation and land use planning within the 2018 RTP/SCS, and is critical to selecting an appropriate vision for the future of the region. Stanislaus County is approximately 956,600 acres in size and has more than 253,000 acres of agricultural land. As regional growth occurs, some of this land is converted to...
other agricultural purposes, including grazing land, and other, lower classifications of farmland. Some agricultural land is also converted to other uses, such as residential, commercial, industrial, office, or university land uses. Under Scenario 2, approximately 6,000 acres are converted to these other uses, which is 1,500 acres fewer than Scenario 1 (General Plan Trend/Business As Usual).

**Travel Growth**

With increases in population and employment within the region, and the potential for increased commuting between adjacent counties, the amount of vehicular travel is expected to increase. By 2042, Scenario 2 will result in an increase of approximately 2,295,111 vehicle miles traveled daily. This is lower than Scenario 1 (General Plan Trend/Business As Usual), which would result in an increase of 2,318,267 vehicle miles traveled daily by 2042.

The average trip length in 2042 under Scenario 2 is forecasted to be 12.41 miles (17.41 miles for commute trips). In addition, approximately 38.1 percent of all trips will be made in single-occupancy vehicles (i.e., individuals driving alone in their personal car). By year 2042, pedestrian and bicycle trips are forecasted to account for 2.2 percent of all trips within the County. This is an increase from the current rate of 0.5 percent, estimated by the US Census Bureau (2016), and is due, in part, to the bicycle and pedestrian improvements included in the 2018 RTP/SCS project list.

**Technology Trends**

There are several technology trends that have the potential to influence mobility options and transportation infrastructure over the coming decades, several of which are summarized in Table 4.6. Phone applications to plan and guide trips, online shopping, on-demand transportation (e.g., Uber, Lyft, etc.), and the continued roll-out of an increasing number of electric vehicles are just some of the trends influencing transportation today. In the future, more significant changes are likely to occur as self-driving cars begin to transport passengers and goods and as big data is harnessed to help manage the transportation system. Over time these transportation trends will not only

<table>
<thead>
<tr>
<th>Technology Trends</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Network Carrier (TNC)</td>
<td>Better known as Uber and Lyft, these companies are already disrupting the Taxi and Transit Industry. Among other effects, they have the potential to address the long-standing challenge of “the last transit mile service”.</td>
</tr>
<tr>
<td>Emergence of Tech Companies as Transportation Leaders</td>
<td>Tech Companies have emerged as both significant partners and competitors to public agencies. Areas that Tech Companies are emerging as leaders in include Traveler Information Systems (Google Maps, Apple Maps, etc.), routing and logistics (such as Amazon).</td>
</tr>
<tr>
<td>Sharing economy</td>
<td>Although there is debate over what the right name for this phenomenon, its primary transportation influence has been for consumers to access someone else’s goods or services. With the advent of Zipcar and the influence of Uber and Lyft, it is clear that the idea of sharing cars is one that is gaining popularity and will start to influence the number of individually owned vehicles in the future.</td>
</tr>
<tr>
<td>Internet of Things (IOT)</td>
<td>Often referred to as “connected devices”, items are embedded with technology that allows objects to exchange and collect data. With the ever-expanding range of items that join the IOT, the opportunity to collect data expands. From a traffic light bulb that notifies that it needs changing, to the multitude of roadway sensors that can count and or measure traffic, the opportunities to advance data streams are nearly boundless.</td>
</tr>
<tr>
<td>Big Data</td>
<td>While often confused to just mean “a lot of data” (which it can be), the real power behind Big Data is predictive analytics, or, simply put, better forecasts.</td>
</tr>
</tbody>
</table>
drive land use decisions and policy, have a profound economic impact, and even influence the way we socialize and interact with each other.

Although the timing, extent, and impact of emerging transportation technologies is debatable, notable change is beginning and will continue to occur. As such, Stanislaus County is beginning to think about how transportation plans and programs may be affected. The following sections include discussion on several of these transportation technologies and their potential influence on the County.

**Transportation-as-a-Service**

One of the more significant trends in transportation today is the increasing importance of mobility solutions that are not based upon personally-owned vehicles. Some of the better-known examples of these are Transportation Network Carriers (TNCs) such as Uber and Lyft, which provide transportation-as-a-service. While TNCs have primarily been operated by private firms to date, increasingly transit providers are considering how to integrate and/or provide on-demand transportation services to augment existing public systems and extend the reach of their systems to riders that might otherwise be too far from existing transportation hubs.

Transportation-as-a-Service also extends to the sharing economy. With the advent of Zipcar and several major car manufacturers openly planning to move into this market in the future (either in conjunction with autonomous car rollouts or through more conventional options), it is clear that there will be more options for using cars on an as-needed basis (i.e., renting a car by the hour or by the day for individual trips).

One of the primary benefits of Transportation-as-a-Service is the expectation that it will reduce transportation costs for most individuals while increasing the number and availability of transportation options. Depending on how appealing this is to consumers, it could ultimately influence transportation mode selection and reduce the total fleet size of personal vehicles as individual car ownership may become less desirable or essential. In turn this could have an impact on land use and parking requirements as fewer vehicles may be owned by individuals to meet their transportation needs.

**Autonomous Vehicles**

While only a few years ago Autonomous Vehicles (AV) were still largely considered to be part of a distant future, considerable effort is now being expended across the US to establish regulations for their testing and operation. There is considerable investment being made in AV technology, and, while varying levels of autonomy already exist, several major car manufacturers have indicated they will bring near fully autonomous vehicles to market in the next five years.

As adoption increases system-wide AV transportation impacts will become more significant and noticeable. While we do not have absolute certainty as to what those will be, increasingly the consensus among experts suggests that:

1. Assuming the regulatory environment does not change, automated vehicles will likely cause overall Vehicles Miles Traveled (VMT) to increase in response to (1) reducing the “cost” of driving (time can be dedicated to non-driving tasks); (2) the movement of vehicles with zero occupants between pick-ups; and (3) the ability of some populations who cannot drive to travel more easily by themselves (e.g., the elderly, young, disabled, etc.).

2. New regulations and/or incentives may be necessary to manage congestion if a significant number of new trips are induced by the introduction of AVs.

3. Curbside and right-of-way management will likely be necessary near major pick-up and drop-off locations to maintain safe and orderly traffic operations.

**Big Data**

While often thought of as simply meaning new or increased data availability, the real power behind Big Data is predictive analytics, or, simply put, the ability to provide better forecasts and information. Newly available data relating to trip origins and destinations, speeds and travel time reliability, and other operational considerations from Global Positioning Systems (GPS) or smartphone apps is changing our knowledge base regarding existing system operations. In conjunction with the availability of this data, analysis is also increasingly being automated, resulting in the ability of agencies to garner a more timely and complete understanding of their transportation systems.
At the same time as significant advances in big data for transportation are being made, the range of Internet of Things (IOT) devices (items embedded with technology that allows objects to exchange and collect data) are also expanding. From a traffic light bulb that notifies that it needs changing to the multitude of roadway sensors that can count and or measure traffic, the opportunities to use data to more efficiently manage the transportation system are significant. Big Data and IOT are expected to have a multitude of positive impacts on the ability to maintain and manage the transportation system.
Financing - Investment Plan
The 2018 StanCOG RTP/SCS financial forecasts provide revenue projections for StanCOG member agencies through 2042. Forecasts were developed through meetings and coordination efforts with StanCOG’s member agencies and Caltrans. The 2018 StanCOG RTP/SCS financial revenue forecast estimates approximately $7.436 billion in available funding through fiscal year 2042.

These revenue projections satisfy federal requirements to achieve a financially constrained RTP whereby total Capital Improvement Program (CIP) project costs are accounted for through available and expected funding across the life of the Plan. The projects in the Plan are consistent with the State Transportation Improvement Program (STIP), Interregional Transportation Improvement Program (ITIP), and Federal Transportation Improvement Program (FTIP).

Recent Changes
In 2015, the Fixing America’s Surface Transportation (FAST) Act was passed to provide long-term funding options for surface transportation infrastructure planning and investment. The FAST Act replaced MAP-21 as the operative federal funding bill for transportation improvements.

In 2016, the California State Assembly passed Senate Bill 132, which contains almost $1 billion in district-specific road and rail projects in Stanislaus, Merced and Riverside counties.

In 2016, Measure L was passed to provide additional funds to address a variety of transportation needs. Measure L provides a local source of funding by instituting a 25-year half-cent cent sales tax. Measure L Funds were provided for the following categories: Local Streets and Roads, Traffic Management, Bike and Pedestrian Improvements, Regional Projects, Rail Services and Transit Programs. It is estimated that $960 million will be generated for local transportation investments during the course of the measure’s 25-year lifespan.

On April 28, 2017, Governor Brown signed Senate Bill 1 (SB1) (Beall, Chapter 5, Statutes of 2017), known as the Road Repair and Accountability Act (RMRA) of 2017.

Funding Sources
Funding for the 2018 RTP/SCS include federal (highway and transit), state, and local sources, as shown in Figure 5.1.

Figure 5.1 – 2018 RTP/SCS Funding Sources

Sources of available funding include the following:

State Transportation Improvement Program (STIP)
The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded primarily from State and federal gas taxes. STIP programming occurs every two years. The programming cycle begins with the release of a proposed fund estimate, followed by California Transportation Commission (CTC) adoption of the fund estimate. The fund estimate serves to identify the amount of new funds available for the programming of transportation projects. Once the fund estimate is adopted, Caltrans and the regional planning agencies prepare transportation improvement plans for submittal. Caltrans prepares...
the Interregional Transportation Improvement Program (ITIP) using Interregional Improvement Program (IIP) funds, and regional agencies prepare Regional Transportation Improvement Programs (RTIPs) using Regional Improvement Program (RIP) funds. The STIP is then adopted by the CTC.

**State Highway Operation and Protection Program (SHOPP)**

SHOPP includes State Highway safety and rehabilitation projects, seismic retrofit projects, land projects, building projects, landscaping, operational improvements, bridge replacement, and the Minor Program. Caltrans is the owner-operator of the State Highway System and is responsible for its maintenance. Unlike STIP projects, SHOPP projects may not increase roadway capacity. SHOPP uses a four-year program of projects, adopted separately from the STIP cycle.

**Measure L**

Measure L (Local Roads First), a half-cent sales tax referendum, was passed in November 2016 by the voters of Stanislaus County to increase funding for needed transportation improvements in the county. Measure L qualified Stanislaus County as a self-help county, allowing the region to leverage these funds to receive additional funding from various other State and Federal sources. The measure will generate approximately $38 million per year for an estimated total of $960 million over the course of the measure’s 25-year lifespan, and represents 35 percent of all local funding for the Stanislaus region, as shown in **Figure 5.2**.

**Figure 5.2 - Measure L Proportion of Local Funds**

As the Local Transportation Authority (LTA) for the Stanislaus region, StanCOG apportions local Measure L funds to its member agencies on a formula basis. StanCOG also coordinates with its member agencies to implement the regional program of projects as defined in StanCOG’s Measure L Expenditure Plan.

Of the Measure L revenue, 65 percent was apportioned directly to local agencies on a formula basis for the following purposes: 50 percent Local Streets and Roads ($480,150,000); 10 percent Traffic Management ($96,030,050); and 5 percent Bike and Pedestrian ($48,015,000) improvements. The other 35 percent of Measure L was applied to regional needs, including 28 percent for 16 priority capital improvements ($268,884,000) and 7 percent for regional transit providers ($67,221,000).
**SB 1**
The California State Assembly passed Senate Bill 1 in 2017, creating the Road Maintenance and Rehabilitation Program to address deferred maintenance on the State highway system and the local street and road system. SB 1 funding provides both formula funding programs and competitive funding programs, including State Rail Assistance, Additional State Transit Assistance, Transit and Intercity Rail Capital Program, Trade Corridor Enhancement Program, Solutions for Congested Corridors, Sustainable Communities Planning Grant, and Adaptation Planning Grant.

**SB 132**
The California State Assembly passed Senate Bill 1 in 2017, creating the Road Maintenance and Rehabilitation Program to address deferred maintenance on the State highway system and the local street and road system. SB 1 funding provides both formula funding programs and competitive funding programs, including State Rail Assistance, Additional State Transit Assistance, Transit and Intercity Rail Capital Program, Trade Corridor Enhancement Program, Solutions for Congested Corridors, Sustainable Communities Planning Grant, and Adaptation Planning Grant.

SB 132 will generate $5.4 billion annually to fix roads, freeways, and bridges in communities across California and puts additional funding toward transit and safety.

The programs created under SB1 include:

1. Solution for Congested Corridors Program (SCCP)
2. Trade Corridor Enhancement Program (TCEP)
3. Local Streets and Roads Program (LSRP)
4. Local Partnership Program (LPP)

It also provided additional funding to the following existing programs:

1. Active Transportation Program (ATP) Augmentation
2. State Highway Operation and Protection Program (SHOPP) Augmentation
3. State Transportation Improvement Program (STIP)
4. Transit and Rail Programs

And provides funding for Planning Grants:

1. Climate Change Adaptation Planning Grants
2. Sustainable Communities Grants

**Active Transportation Program**
The Active Transportation Program (ATP) was created in 2013 to encourage increased use of active modes of transportation, such as biking and walking. The ATP consolidates several federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S) into a single program with a focus of making California a national leader in active transportation.

The ATP is a statewide competitive grant funding program and also includes a regional call for projects administered by MPOs, including StanCOG. For the ATP Cycle 3 (2017), the total amount available in the program is about $240 million. For the ATP Cycle 4, the total amount available in the program is about $440 million, through year 2023.

**Congestion Mitigation Air Quality Funds**
As an air quality non-attainment area, Stanislaus County receives federal Congestion Mitigation Air Quality (CMAQ) funds. These funds are to be used for projects that contribute to improving air quality in the region. StanCOG oversees the distribution of these funds. Examples of eligible CMAQ projects include the following:

- Public transit improvements
- High occupancy vehicles (HOV) lanes
- Intelligent Transportation Infrastructure (ITI)
- Traffic management, traveler information systems, and electric toll collection systems
- Employer-based transportation management plans and incentives
- Traffic flow improvement programs such as signal coordination
- Fringe parking facilities serving multiple occupancy vehicles
- Shared ride services
• Bicycle and pedestrian facilities
• Flexible work-hour programs
• Outreach activities establishing Transportation Management Associations
• Fare/fee subsidy programs

**Cap-and-Trade Funds (Greenhouse Gas Reduction Fund)**

AB 32 requires California to return to 1990 levels of greenhouse gas emissions by 2020. The Cap-and-Trade program is a key element in California’s climate plan. It sets a statewide limit on sources responsible for California’s greenhouse gas emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy.

Cap-and-Trade revenues are made up of the portion of auction proceeds that are allocated to Affordable Housing and Sustainable Communities, Intercity Rail, and Low Carbon Transit Operations Programs. At least 25 percent of Cap-and-Trade expenditures must benefit disadvantaged communities, and at least 10 percent must be located in disadvantaged communities.

Funding sources applied in the 2018 RTP/SCS include the following, that were developed in coordination with StanCOG and partner agencies:

**Local Funds**
• Development Impact Fees
• State Gas Tax
• Transit Fares
• Local Transportation Fund (LTF)
• Measure L Funds

**State Funds**
• State Highway Operations and Protection Program (SHOPP)
• State Transportation Improvement Program (STIP)
• State Transit Assistance (STA)
• Highway Maintenance (HM)
• Aviation Funding
• Systemic Safety Analysis Reporting Program (SSARP)
• Active Transportation Program (ATP)
• SB 1
• SB 132

**Federal Funds**
• Federal Transit Funding Programs
• Congestion Mitigation and Air Quality Improvement Program (CMAQ)
• Surface Transportation Block Grant Program (STBGP)
• Highway Safety Improvement Program (HSIP)
• Highway Bridge Program (HBP)
• Railway-Highway Crossings

**Financial Forecast**

The 2018 StanCOG RTP/SCS financial revenue forecast estimates approximately $7.436 billion in available funding through fiscal year 2042. Revenue per funding category is presented in Appendix I and is shown in Table 5.1. The RTP provides projections for local, state, and federal funds, and distinguishes between formula and competitive funding sources. Formula funds are systematic and were projected based on previous funding cycles specific to each member agency. Competitive funding, such as grant programs, are less certain and were based on past performance by StanCOG’s member agencies, program applicability, and an assumed capture rate based on Stanislaus County’s proportion of state maintained centerline miles of roadway. The 2018 StanCOG RTP/SCS financial revenue forecasts identify several new funding sources, including Measure L, SB 1, and SB 132. As the result of the passage of Measure L, Stanislaus became a Self-Help County, which will increase its ability to leverage additional federal and State discretionary funding.

Forecast estimates are specified for local, state, and federal funding sources. Due to the addition of SB 1, state funding sources account for approximately 54 percent of total forecasts for the 2018 StanCOG RTP/SCS. As shown, $794 million (or 11 percent) of funding comes from federal sources, $2.712 billion (or 36 percent) comes from local sources, and $3.929 billion (or 53 percent) comes from state sources.
### Table 5.1 - 2018 RTP/SCS Revenue Forecasts through Year 2042

<table>
<thead>
<tr>
<th>REVENUE SOURCES</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td><strong>LOCAL</strong></td>
<td></td>
</tr>
<tr>
<td>Local funding (Gas Tax, Prop 42, Development Impact Fees, General Fund)</td>
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<td>Transit Fares</td>
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<td>Local Transportation Funds (LTF)</td>
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<td>Local Transportation Funds (LTF Non Motorized)</td>
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<tr>
<td><strong>LOCAL TOTAL (W/TAX)</strong></td>
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<tr>
<td>State Highway Operations and Protection Program (SHOPP)</td>
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<tr>
<td>State Transportation Improvement Program (STIP)</td>
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</tr>
<tr>
<td>STIP: RIP</td>
<td>$248,760,000</td>
</tr>
<tr>
<td>STIP: IP</td>
<td>$0</td>
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<tr>
<td>Public Transportation Account (PTA)</td>
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<tr>
<td>State Transit Assistance (STA)</td>
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<td>Highway Maintenance (HM)</td>
<td>$208,500,000</td>
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<tr>
<td>State and/or Federal Aviation Funds</td>
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<tr>
<td>Federal Aviation Funds</td>
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</tr>
<tr>
<td>State Aviation Funds</td>
<td>$957,226</td>
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<tr>
<td>SB 132</td>
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<tr>
<td>SB 132: ACE Extension</td>
<td>$164,092,820</td>
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<tr>
<td>SSARP</td>
<td>$19,985,875</td>
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<td>ATP (Competitive)</td>
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<tr>
<td>Statewide Call</td>
<td>$71,499,657</td>
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<td>MPO Call</td>
<td>$22,903,861</td>
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<td>SB1</td>
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<tr>
<td>SB1 ATP Augmentation Funding (for Statewide Call)</td>
<td>$35,000,894</td>
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<td>SB1 ATP Augmentation Funding (for MPO Call)</td>
<td>$21,109,914</td>
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<td>SHOPP (SB1 funding)</td>
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<td>Local Streets and Roads</td>
<td>$308,369,490</td>
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<td>SB1 STIP Augmentation</td>
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<td>State Rail Assistance</td>
<td>$31,044,727</td>
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<tr>
<td>Additional State Transit Assistance (via SB1)</td>
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<tr>
<td>Projected allocation via new 3.5% increase to diesel fuel sales tax</td>
<td>$21,294,667</td>
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<tr>
<td>Projected allocation via new transportation improvement fee (TIF)</td>
<td>$10,489,349</td>
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<td>Transit and Intercity Rail Capital Project</td>
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<td>Trade Corridor Enhancement Program</td>
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<td>Solutions for Congested Corridors</td>
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<td>Sustainable Communities Planning Grant</td>
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<td>Adaptation Planning Grant</td>
<td>$400,000</td>
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<td><strong>STATE TOTAL without SSARP, ATP, and SB1</strong></td>
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<tr>
<td><strong>STATE TOTAL with SSARP, ATP, and SB1</strong></td>
<td>$3,929,802,701</td>
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<tr>
<td>Federal Transit Formula (5307, 5311, 5339 Combined)</td>
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</tr>
<tr>
<td>5307, 5311, 5339 Total</td>
<td>$267,071,444</td>
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<td>Federal Transit Formula 5310</td>
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<tr>
<td><strong>Federal Transit Total</strong></td>
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<tr>
<td>Congestion Mitigation and Air Quality (CMAQ)</td>
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<tr>
<td>Surface Transportation Block Grant Program (STBGP)</td>
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<tr>
<td>Highway Safety Improvement Program (HSIP)</td>
<td>$64,039,580</td>
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<td>Highway Bridge Program (HBP)</td>
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<tr>
<td>Rail/Highway Grade Crossing Protection (USC Section 130)</td>
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<tr>
<td>High Priority Projects and Demo</td>
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<tr>
<td><strong>Federal Highway Total</strong></td>
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<tr>
<td><strong>FEDERAL (Highway and Transit) TOTAL</strong></td>
<td>$794,070,818</td>
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<tr>
<td>Measure L</td>
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<tr>
<td>Local Streets and Roads (50%)</td>
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<tr>
<td>Traffic Management (10%)</td>
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<tr>
<td>Bike and Ped Improvements (5%)</td>
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<tr>
<td>Regional Projects (28%)</td>
<td>$268,884,000</td>
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<tr>
<td>Transit Providers (7%)</td>
<td>$67,221,000</td>
</tr>
<tr>
<td><strong>Total Measure L</strong></td>
<td>$960,300,050</td>
</tr>
<tr>
<td>Total with SB1, ATP, SSARP, and Measure L (w/ Tax)</td>
<td>$7,436,181,409</td>
</tr>
<tr>
<td>Total without SB1, ATP, SSARP, and Measure L (w/ Tax)</td>
<td>$4,282,088,165</td>
</tr>
</tbody>
</table>
Maintaining a transportation system in a state of good repair is a key component in determining regional transportation investments given that the condition of a transportation facility or service directly impacts its relative usefulness. In addition, maintaining transportation facilities and services helps to reduce the overall lifecycle costs associated with these facilities. A transportation system in a state of good repair positively affects travel by all modes, including automobile, bicycle, bus, rail, and even walking.

A city or county cannot be sustainable over the long term without a well-maintained transportation system that supports local and regional travel.

**State of Good Repair**

This section highlights key components of system preservation for Stanislaus County, including roadway pavement conditions, transit operations and cost, safety, reliability, intelligent transportation, and travel demand management.

**Roadway Pavement Conditions**

Pavement quality, or Pavement Condition Index (PCI), is a measure of roadway pavement condition. As roadway pavement conditions worsen, the cost of repair increases exponentially. Therefore, StanCOG administers funding that supports local jurisdictions in achieving their maintenance and transit operational needs. Roadways in Stanislaus County are periodically evaluated for their PCI.

As shown in Figure 6.1, PCI provides a numerical rating for the condition of roadway segments within the transportation network, where 0 is the worst condition and 100 is the best. The PCI measures:

1.) The type, extent and severity of pavement surface distresses (typically cracks and rutting), and
2.) The smoothness and ride comfort of the road.

As shown in Table 6.1, with the exception of unincorporated Stanislaus County roadways, all Stanislaus County jurisdictions had an average PCI of 60 or above, which is considered At Risk.

**Table 6.1 - Pavement Conditions Index (PCI) Data**
Transit Operations and Cost
The efficiency and effectiveness of transit services are determinants of the transit system’s state of good repair. Reviews of the transit system help to identify areas where unmet transit needs may exist and areas with inefficient transit service. Farebox recovery ratio for a passenger transportation system is the proportion of the amount of revenue generated through fares by its paying customers as a fraction of the cost of its total operating expenses (or more simply stated - it is the ratio of fares received to total operating cost). Farebox recovery ratio is used by transit agencies for monitoring progress toward policy goals and objectives. In order to receive the annual allocation of LTF and STA funds, jurisdictions must submit a claim. The ultimate significance of the farebox ratio is that a claimant’s maximum eligibility for these funds is determined in large part by its required ratios.

Generally speaking if an operator fails to maintain its required farebox ratio for two fiscal years (not necessarily consecutively), that operator’s TDA allocation will be reduced during a subsequent penalty year by the amount of the difference between the required fare revenues and the actual fare revenues received in the second year of non-compliance. So, in addition to not being eligible for these funds, an agency’s allocation can be reduced in a subsequent year. According to the Triennial Performance Audit (2016), StanCOG aims to address various needs with regards to transit services, including the following:

- Increasing public participation to determine unmet transit needs
- Gaining consistency regarding transit fare box recovery ratios
- Following standard assurances checklists
- Managing the apportionment of Local Transportation Fund revenues to transit

Safety
According to the California Office of Traffic Safety, traffic collisions in the Stanislaus County region resulted in approximately 4,050 injuries or fatalities in 2015, ranking 5th out of 58 counties in California for the highest number of injuries and/or deaths per capita. According to Statewide Integrated Traffic Records System (SWITRS, 2015), approximately 2.3 percent of collisions in Stanislaus County result in fatalities. Of the total number of collisions resulting in injury or death in 2015, 441 (or 11 percent) resulted from an alcohol related collision, 159 (or 4 percent) involved a bicyclist, and 202 (or 5 percent) involved a pedestrian.

Injuries or Deaths

Traffic Injuries Per Capita

Between the years of 2012 to 2015, Stanislaus County has consistently been ranked high as compared to other California Counties in terms of total number of injuries and/or fatal collisions, ranging from 5th to 12th out of 58 counties on a per capita basis. However, its relative position in California for the number of injuries and/or collisions resulting from an alcohol related collision has fluctuated, ranging from 9th out of 58 counties in 2015, to 40th out of 58 counties in 2012.

2018 Ranking of Number of Injuries/Deaths for Neighboring Counties

- Sacramento County 3rd Highest
- Stanislas County 5th Highest
- San Joaquin County 10th Highest
- Calaveras County 14th Highest
- Merced County 26th Highest
- Alameda County 28th Highest
- Santa Clara County 41st Highest

Reliability
Increasing travel time reliability of the transportation system is an important component of system preservation. Travel time reliability measures consistency or dependability in travel times, and applies to both vehicular travel and transit systems, as well as freight carriers and air travelers. While travel time reliability does not directly address issues of congestion, it plays an important role in traffic management and operational activities. Knowing the travel time reliability of a roadway or system allows
travelers to make more informed decisions about the specific routes they take, or the time of day in which they make a trip.

**Improvements to travel time reliability offset the worst impacts of congestion through reductions in user frustration and emissions, extending the life of existing facilities and delaying the need for widening and other capacity increases.**

### Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) utilize technology to increase the efficiency and safety of a transportation network. ITS manages traffic flow and helps to increase reliability by reducing the impacts and duration of incidents, as well as smoothing traffic flows to slightly increase roadway capacity without adding pavement.

Traditional components of ITS include advanced communications technologies that allow for information to be shared between vehicles and infrastructure. This technology includes automated speed enforcement systems, digital travel time signs, and vehicle sensors at signalized intersections, among other features. As vehicle automation becomes more advanced, communication between vehicles and infrastructure, and amongst vehicles themselves, will increase the ways in which ITS can be used to improve the transportation system.

### Travel Demand Management

In order to request funding for capacity enhancing transportation improvement projects, the region must couple these requests with efforts to reduce overall travel demand. The goal of a Travel Demand Management (TDM) program is to develop alternatives to single-occupancy vehicle travel, with the ultimate goal of reducing vehicle miles travel (VMT). Table 6.2 presents the anticipated reduction in VMT resulting from various TDM efforts. Some alternatives to single-occupancy vehicles are described below.

#### Altamont Corridor Express

The StanCOG 2018 RTP/SCS includes an extension of the Altamont Commuter Express (ACE) through Stanislaus and Merced Counties with stops in Modesto, Ceres, and Turlock. The service would then continue to the City of Merced. ACE service would include one train per day in each direction between Stanislaus County and San Jose, and three trains per day between Stanislaus County and Sacramento. This could displace as many as 1,960 single occupant vehicles each day, primarily from commuters. The three Sacramento-bound trains would offer a transfer at Lathrop for those traveling to Alameda County or San Jose.

#### Cal-Start Vanpool

CalVans is a California Vanpool Authority program that provides van-share options for qualified California residents, with service in Stanislaus County. It is anticipated that single occupant vehicle drivers will opt to use the new vanpool capacity, thereby reducing VMT within the County. Most vanpools serve inter-county commutes, so the service will have much greater VMT benefit than what is shown for just Stanislaus County.

#### Dibs

Dibs is a informational travel service provided throughout Stanislaus, San Joaquin, and Merced counties. By linking people with information on transportation options, including carpooling, vanpooling, transit, and alternative modes, Dibs aims to reduce single-occupancy trips and congestion.

#### SJVAPCD Rule 9410 (Voluntary Employer Travel Demand Management Program)

The goal of this program is to require larger employers to establish an Employer Trip Reduction Implementation Plan (eTRIP) to encourage employees to carpool or use transit services to reduce single-occupant vehicle trips. By year 2035, this TDM program could result in an approximate reduction of 152,099 vehicle miles traveled.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cal-Start</th>
<th>ACE Forward</th>
<th>Active Transportation</th>
<th>TDM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2035</td>
<td>5,471</td>
<td>30,755</td>
<td>25,609</td>
<td>152,099</td>
<td>213,934</td>
</tr>
</tbody>
</table>

**Table 6.2 - 2035 Vehicle Miles Traveled (VMT) Reductions**
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CHAPTER 7: Environmental Justice

Environmental Justice and Equity

An important requirement in preparing the 2018 RTP/SCS is ensuring that Environmental Justice (EJ), as defined by various federal and state laws, is addressed and adhered to in Scenario 2 (Preferred Scenario/Infill and Redevelopment). The emphasis on EJ is intended to protect low-income and minority individuals across the Stanislaus region by identifying and addressing any disproportionately high and adverse effects that could result from the implementation of the 2018 RTP/SCS.

A number of federal and state laws and regulations govern how EJ is incorporated into the 2018 RTP/SCS. These include:

- **Title VI of the Civil Rights Act of 1964**, which prohibits discrimination by recipients of federal funds on the basis of race, color or national origin, so that no person is excluded from participation in, or denied the benefits of, federally funded programs.

- **Section 11135 of the California Government Code**, which expands Title VI protections to prevent discrimination in state activities on the basis of sex, religion, ancestry, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, or sexual orientation.

- **Presidential Executive Order 12898**, which requires that recipients of federal funding identify and address disproportionately high and adverse human health or environmental effects of their activities on minority or low-income populations.

- **U.S. Department of Transportation EJ Order 5610.2(A)**, which specifies that transportation programs must identify and evaluate environmental, public health, and interrelated social and economic effects; propose measures or consider alternatives to avoid or reduce disproportionately high and adverse effects; and obtain public input including from affected minority and low-income populations when considering alternatives.

Based on federal and State requirements, StanCOG has two primary responsibilities in addressing EJ while developing Scenario 2 (Infill and Redevelopment/Preferred Scenario). First, StanCOG must ensure there is equity in the distribution of potential benefits and burdens resulting from the proposed transportation investments identified in Scenario 2. Second, StanCOG’s planning process itself must provide an equal opportunity for all segments of the population to provide input into the transportation planning process.

This chapter details StanCOG’s efforts to address EJ in the 2018 RTP/SCS Plan and presents six performance measures and the results of a financial benefits and burdens analysis evaluating the equity of the Plan’s decision-making and investment strategy. This chapter also provides an overview of the outreach efforts specific to Environmental Justice. Additional data and analysis is provided in Appendix R.

Assessing Equity and Burdens

**Performance Measures**

To determine if EJ Communities in Stanislaus County have an equitable share in the 2018 RTP/SCS’s transportation investments and are not disproportionately impacted by such investments, StanCOG analyzed demographic and travel data from the transportation demand model. This analysis evaluated how EJ Communities are considered in the transportation investment strategies compared to non-EJ Communities. This analysis involved three steps:

1) Collecting socio-economic data on target populations.

2) Identifying and locating low-income and minority populations (i.e., EJ communities or EJ areas).

3) Quantitatively assessing the benefits and burdens of the transportation plan with respect to EJ communities.

Basic socioeconomic information was collected from the Census Bureau about the people who live in the Stanislaus region. Specifically, data from the 2015 American Community Survey (ACS) was gathered to establish racial, ethnic, and income-distribution patterns in the region. Census data offers the advantage of providing a diverse demographic profile at the census block level that roughly corresponds to the Traffic Analysis Zones (TAZs) used in StanCOG’s travel-demand forecasting model.
The Census Block Group, which is the smallest level of geography for which both racial/ethnic and income data are available, was chosen as the geographic unit of analysis. Census Bureau definitions of racial and ethnic populations were used to identify minority status among persons living in Stanislaus County. Minority persons are those who identify as Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, Hispanic/Latino of any race, or a combination of these or other races. The ACS estimates of median household income were used to define “low-income” populations for the Stanislaus County region.

For the 2018 RTP/SCS, EJ areas are defined as those Census Block Groups that contained 60% or more minority populations or had a median household income of $40,100 or less. These are Census Block Groups with slightly higher minority concentrations than the countywide average (55%) or with households making 80 percent or less of the median household income for the county ($50,125). For the sake of accuracy, Census Block Groups with populations of less than one person per acre were eliminated from the analysis. EJ and non-EJ Census Block Groups were then translated into the traffic analysis zones (TAZs), which represent the basic geographical unit of StanCOG’s travel demand model. All TAZs that were more than 50 percent covered by an identified EJ Census Block Group were included as EJ TAZs.

To determine if regional investments unduly benefit or burden any one population under Scenario 2, the following six performance measures were developed to compare the social equity impacts expected by 2035 within EJ areas and non-EJ areas.

**Percentage of Low-Income Housing/Minority Population Within a Half-Mile of Transit**

For populations with limited financial, physical, or other means, having convenient access to transit is critical. To analyze the benefits and burdens of Scenario 2’s transit investments, a comparison of households with walking access (i.e., within one half-mile) to a transit stop in EJ areas versus non-EJ areas was prepared. Under Scenario 2, in 2035 an estimated 128,961 total households in the Stanislaus region will be located within a half-mile of transit. Of these households, 51.8% will be located in EJ areas compared with 48.2% located in non-EJ areas, resulting in slightly greater EJ access. Under Scenario 1 (General Plan Trend/Business As Usual), EJ communities would fare well, but not as well as under Scenario 2. In this case, fewer total households (125,823) would be located within a half-mile of transit, and only 50.9% of the total would be located in EJ areas compared with 49.1% located in non-EJ areas. One reason why Scenario 2 achieves better access to transit than Scenario 1 is because of the emphasis on more compact, mixed-use, and infill development, especially in downtowns, which means that more new housing under Scenario 2 is located near transit.

**Percentage of Low-Income/Minority Population Benefiting from Roadway Expenditures**

To measure the extent that EJ areas benefit from roadway investments compared to non-EJ areas, a benefits and burdens analysis of the relative benefit received from roadway improvement expenditures was performed. This analysis focused on the Tier I (financially constrained) regionally significant roadway projects identified in the Scenario 2 that are forecasted to have at least 20,000 average daily trips by 2035. Based on this analysis, EJ populations were responsible for slightly more trips than non-EJ populations on the selected roadways in 2035: EJ population trips accounted for 50.2% of all trips on the selected project model links, while non-EJ populations accounted for 49.8% of all trips. Consequently, there does not appear to be a disproportionate benefit or burden from roadway projects to any one population in the Stanislaus region.
Percentage of Housing Within 500 Feet of a Major Transportation Corridor
Proximity to major transportation facilities can increase a population’s exposure to health-based air contaminants emitted from motor vehicles, as well as from road dust. To determine the proportion of EJ communities that may be subject to these conditions, an analysis was performed to compare the percentage of the EJ households relative to non-EJ households located within 500 feet of a major transportation facility, defined as any interstate or state-owned highway or arterial. Under Scenario 2, 8.1% of EJ households will be located near major transportation corridors in 2035 while only 4.4% of non-EJ households will be. EJ households will therefore be nearly twice as likely to be within 500 feet of a major transportation corridor under Scenario 2, which is an improvement over the Business-as-Usual scenario. Under that scenario, 8.7% of EJ households would be located near major transportation corridors in 2035 while only 4.6% of non-EJ households would be. This is because Scenario 2 reduces the percentage of total households near major transportation corridors from 6.5% to 6.2% relative to Scenario 1. Consequently, it can be inferred that EJ communities are likely to experience reductions in health-based impacts resulting from proximity to major transportation facilities under Scenario 2.

Disparity in Countywide Housing-Type Stock
Scenario 2 was developed using the scenario planning software Envision Tomorrow, which provides a suite of comparative measures to develop indicators for a range of factors, including housing-type distribution. A greater mix of housing types provides households greater ability to match their housing choice to their needs. These built-in indicators were used to evaluate the disparity in housing-types of Scenario 2 relative to Scenario 1. Scenario 2 provides a good mix of housing types, with over 60% of new housing dedicated to multifamily housing and townhomes and with less than 40% dedicated to single-family homes. This compares with 44% of new housing dedicated to multifamily housing and townhomes and 56% dedicated to single-family homes under the Business-as-Usual scenario. Further, Scenario 2 will have half as many large lot and conventional lot single-family homes than the Business-as-Usual scenario, resulting in more affordable housing types. This wider range of housing choices combined with smaller lot sizes will likely generate more housing choice for EJ communities and increase their ability to meet their housing needs.

Availability and Variety of Housing at All Economic Levels
In addition to evaluating the distribution of housing types, Envision Tomorrow was also used to analyze the availability of new housing for the region by income level. It is important to provide not only a greater mix of housing, but affordable options for all populations as well. Scenario 2 provides greater access to housing for lower income households. The average household income required to afford new multi-family housing will decrease from $51,799 under the Business-as-Usual scenario to $46,659 under Scenario 2, a reduction of over $5,000 a year. Similarly, the average household income required to afford new single-family housing will decrease from $80,813 under the Business-as-Usual scenario to $77,721 under Scenario 2, a difference of more than $3,000. It should be emphasized that lower income households will benefit in many ways other than just more affordable housing. Under Scenario 2, 10.4% of new households in low-income EJ areas will be within walking distance (0.5 miles) of a park compared with only 5.9% under the Business-as-Usual scenario. And 8.6% of new households in low-income EJ areas will be within walking distance of a transit stop compared with only 4.1% under the Business-as-Usual scenario.

Benefits and Burdens Analysis
Table 7.1 shows the impact and benefit profiles of key capacity increasing projects included in this RTP. Out of the 33 evaluated projects, eight were entirely within environmental justice areas, ten were not, and the remaining 15 traverse both environmental justice and non-environmental justice areas (identified in the following table as “EJ Location: Both”).
### Table 7.1

<table>
<thead>
<tr>
<th>Project</th>
<th>EJ Locations</th>
<th>Daily Trips</th>
<th>Low Income</th>
<th>Minority</th>
<th>EJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 132 Expressway SR 99 to Dakota Ave</td>
<td>Both</td>
<td>185,461</td>
<td>22.8%</td>
<td>18.4%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Whitmore Ave Widening Mitchell Rd to Faith Home Rd</td>
<td>Both</td>
<td>122,112</td>
<td>26.4%</td>
<td>33.3%</td>
<td>40.5%</td>
</tr>
<tr>
<td>Whitmore Ave Widening Ustick Rd to Blaker Rd</td>
<td>Both</td>
<td>142,930</td>
<td>30.4%</td>
<td>55.5%</td>
<td>62.2%</td>
</tr>
<tr>
<td>Central Ave Widening Hatch Rd to Grayson Rd</td>
<td>Both</td>
<td>98,214</td>
<td>35.4%</td>
<td>46.7%</td>
<td>65.6%</td>
</tr>
<tr>
<td>Mitchell Rd Widening River Rd to Service Rd</td>
<td>Both</td>
<td>592,621</td>
<td>32.8%</td>
<td>38.0%</td>
<td>54.7%</td>
</tr>
<tr>
<td>Crows Landing Rd Widening Service Rd to Grayson Rd</td>
<td>Both</td>
<td>212,650</td>
<td>33.6%</td>
<td>28.4%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Grayson Rd Widening Ustick Rd to Central Ave</td>
<td>Both</td>
<td>73,713</td>
<td>28.2%</td>
<td>26.0%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Dale Rd Widening Pelandale Ave to Kiernan Ave</td>
<td>Both</td>
<td>123,853</td>
<td>9.2%</td>
<td>25.4%</td>
<td>30.7%</td>
</tr>
<tr>
<td>Dale Rd Widening Pelandale Ave to Standiford Ave</td>
<td>Both</td>
<td>160,261</td>
<td>16.8%</td>
<td>30.0%</td>
<td>39.7%</td>
</tr>
<tr>
<td>Clause Rd Widening Briggsmore Ave to Sylvan Ave</td>
<td>Both</td>
<td>398,346</td>
<td>24.9%</td>
<td>30.1%</td>
<td>42.0%</td>
</tr>
<tr>
<td>Oakdale Rd Widening Sylvan Ave to Claratina Ave</td>
<td>Both</td>
<td>469,226</td>
<td>15.7%</td>
<td>30.2%</td>
<td>41.7%</td>
</tr>
<tr>
<td>SR 33 Improvements Yolo St to Sherman Pkwy</td>
<td>Both</td>
<td>178,640</td>
<td>38.9%</td>
<td>53.3%</td>
<td>63.8%</td>
</tr>
<tr>
<td>SR 33 Improvements Sherman Pkwy to Stuhr Rd</td>
<td>Both</td>
<td>201,326</td>
<td>38.9%</td>
<td>52.7%</td>
<td>63.0%</td>
</tr>
<tr>
<td>Hickman Rd Bike Lane East Ave to City Limit</td>
<td>Both</td>
<td>39,916</td>
<td>16.7%</td>
<td>4.9%</td>
<td>20.2%</td>
</tr>
<tr>
<td>South County Corridor</td>
<td>Both</td>
<td>80,831</td>
<td>7.2%</td>
<td>28.2%</td>
<td>31.2%</td>
</tr>
<tr>
<td>SR 99 Auxiliary Lanes - Keyes Rd to Taylor Rd</td>
<td>No</td>
<td>246,762</td>
<td>40.5%</td>
<td>41.1%</td>
<td>57.6%</td>
</tr>
<tr>
<td>SR 132 Extension Dakota Ave to Gates Ave</td>
<td>No</td>
<td>267,246</td>
<td>18.2%</td>
<td>17.7%</td>
<td>27.1%</td>
</tr>
<tr>
<td>McHenry Widening Ladd Rd to Hogue Rd</td>
<td>No</td>
<td>364,945</td>
<td>13.5%</td>
<td>15.2%</td>
<td>25.5%</td>
</tr>
<tr>
<td>F St Widening Willowood St to Oak ST</td>
<td>No</td>
<td>186,523</td>
<td>13.6%</td>
<td>21.6%</td>
<td>30.4%</td>
</tr>
<tr>
<td>Claratina Ave Widening McHenry Ave to Coffee Rd</td>
<td>No</td>
<td>496,549</td>
<td>8.2%</td>
<td>38.3%</td>
<td>44.8%</td>
</tr>
<tr>
<td>Claratina Ave WideningCoffee Rd to Oakdale Rd</td>
<td>No</td>
<td>552,292</td>
<td>10.0%</td>
<td>40.6%</td>
<td>47.8%</td>
</tr>
<tr>
<td>SR 33 Improvements Yolo St to Inyo Ave</td>
<td>No</td>
<td>172,156</td>
<td>38.5%</td>
<td>53.7%</td>
<td>64.1%</td>
</tr>
<tr>
<td>Taylor Rd Widening Tegner Rd to Golden State Blvd</td>
<td>No</td>
<td>151,855</td>
<td>39.6%</td>
<td>20.7%</td>
<td>48.7%</td>
</tr>
<tr>
<td>Taylor Rd Widening Golden State Blvd to SR 99</td>
<td>No</td>
<td>243,513</td>
<td>34.0%</td>
<td>26.1%</td>
<td>43.7%</td>
</tr>
<tr>
<td>Golden State Blvd &amp; Taylor Rd Intersection Expansion</td>
<td>No</td>
<td>140,155</td>
<td>27.7%</td>
<td>17.7%</td>
<td>34.9%</td>
</tr>
<tr>
<td>SR 99 Auxiliary Lanes - Hatch Rd to S 9th St</td>
<td>Yes</td>
<td>189,695</td>
<td>31.3%</td>
<td>18.2%</td>
<td>40.8%</td>
</tr>
<tr>
<td>SR 99 Auxiliary Lanes - Fulketh Rd to W Main St</td>
<td>Yes</td>
<td>286,773</td>
<td>37.3%</td>
<td>32.4%</td>
<td>52.4%</td>
</tr>
<tr>
<td>SR 99 Auxiliary Lanes - Crows Landing Rd to Tuolumne Blvd NB</td>
<td>Yes</td>
<td>279,815</td>
<td>34.8%</td>
<td>28.5%</td>
<td>50.6%</td>
</tr>
<tr>
<td>SR 99 Auxiliary Lanes - Crows Landing Rd to Tuolumne Blvd SB</td>
<td>Yes</td>
<td>409,627</td>
<td>43.8%</td>
<td>35.6%</td>
<td>54.6%</td>
</tr>
<tr>
<td>Morgan Rd Widening 7th St to Grayson Rd</td>
<td>Yes</td>
<td>54,878</td>
<td>41.5%</td>
<td>59.9%</td>
<td>76.3%</td>
</tr>
<tr>
<td>Rogers Rd Widening Delta Mendota to Keytone Pacific Pkwy</td>
<td>Yes</td>
<td>54,142</td>
<td>8.7%</td>
<td>81.2%</td>
<td>83.0%</td>
</tr>
<tr>
<td>Roselle Ave Widening Sylvan Ave to Claratina Ave</td>
<td>Yes</td>
<td>174,619</td>
<td>6.7%</td>
<td>56.4%</td>
<td>59.9%</td>
</tr>
<tr>
<td>SR 33 Improvements Inyo Ave to South City Limits</td>
<td>Yes</td>
<td>106,351</td>
<td>39.7%</td>
<td>55.3%</td>
<td>66.4%</td>
</tr>
</tbody>
</table>

Total: 7,457,996 | 25.5% | 33.9% | 46.9%
Overall, nearly 47% of project benefit serves environmental justice areas. 25.5% is to lower income areas, while just under 34% is for Hispanic or non-White population centers. The RTP projects provide benefit to environmental justice areas by 7.7% more than would be needed to provide equal benefit to the 39.2% of county residents living in environmental justice areas.

**Distribution of Project Benefits**

Figure 7.1 shows the relative distribution of project benefits as compared with the location of environmental justice areas within the County. Project benefits align well with the environmental justice population centers within the County.

**Conclusion**

The region-wide EJ analysis, based on six identified performance measures, indicates that Scenario 2 will not have a disparate impact on the identified EJ communities. The amount of benefit within low-income and minority populations is proportional to non-EJ communities, if not higher, with better access to high frequency transit service, and fewer households within 500 feet of major transportation facilities in Scenario 2 compared with Scenario 1. Additionally, Scenario 2 will result in a greater mix of housing and more affordable housing (both single-family and multi-family) than Scenario 1.

The financial benefits and burdens analysis, including a focus on State and Federal Transit funding, also shows that nearly 47% of project use benefits EJ areas.

Scenario 2 reduces congested lane miles and vehicle hours of delay for all users of the transportation system while increasing the amount of funding available for alternative modes of transportation, including transit, bicycling and walking – which benefit low-income and minority populations to a greater degree. A financial analysis of expenditures by mode share for low-income populations and transit expenditures by minority populations revealed that while roadway expenditures slightly favor non-low-income populations, transit and bicycle/pedestrian expenditures generate an overall benefit for low-income and minority populations in the Stanislaus region.
Figure 7.1: Distribution of Project Benefits With Respect to the Location of Environmental Justice Areas
Scenario planning is a method by which several scenarios are developed, studied for future impacts, and then evaluated against each other. In the context of the StanCOG 2018 RTP/SCS, scenario planning was used to study four different land use scenarios. Each scenario represented a different set of land use patterns and transportation investments. The scenario evaluations showed how the different sets of investments and land uses could create different future outcomes, under 2035 conditions.

Chapter 9 - Scenarios Evaluation, presents the results of the scenario evaluations based on the 2018 RTP/SCS performance measures.

**Linking Land Use and Transportation Planning**

The integration of transportation investments with land use decisions, in terms of growth and housing, comes explicitly from SB 375. The intent behind SB 375 is clear: Regions such as Stanislaus County should achieve specified regional targets for reducing GHG for cars and light trucks, and identify specific areas in the region to accommodate the entire region’s projected population growth during the timeframe of the Plan.

Developing possible scenarios of land use and transportation investments starts with demographic growth forecasts. The 2018 RTP/SCS relies on a regional forecast of future demographics that was prepared as part of a larger demographic forecast prepared for the three-county region encompassing Merced, Stanislaus and San Joaquin counties. The forecasts were developed specifically for the preparation of the 2018 RTP/SCS in each respective county (per the Federal FAST-ACT MPO Planning Regulations and SB 375). The forecasts were developed by the UOP Eberhart Center for Business and Policy Research and completed in 2016, and are presented in Chapter 4 - Future Conditions.

Based on the demographic projections, four scenarios of land use and transportation investments were developed to accommodate region-wide growth. Each scenario was developed according to a theme to help ensure that choices regarding land use and transportation investments were consistent with one another. Land use choices in each scenario included development patterns, such as where to locate new housing, new job centers, and new mixed-use areas relative to existing communities (e.g., infill vs. converted farmland or open space). They also considered the density of new development, which dictates the relative proportion of large-lot-single-family housing to small-lot-single-family housing and multifamily housing, and complementary uses, such as locating new housing near services and employment centers. Transportation investment choices in a scenario included decisions about spending levels on new roadway capacity, roadway maintenance, transit, and alternative modes of travel (e.g., bike and pedestrian).

**2018 RTP/SCS Scenarios:**

- **Scenario 1:** General Plan Trend/Business as Usual
- **Scenario 2:** Preferred Scenario/Infill and Redevelopment
- **Scenario 3:** Intensified Infill and Alternative Mode Investment
- **Scenario 4:** Corridor Centric

The 2018 RTP/SCS Scenarios are discussed in the following sections.
Scenario Development
Scenario 1. General Plan Trend/ Business as Usual
Scenario 1 reflects current general plan land use patterns for the region’s jurisdictions, which includes slightly more compact development and more infill development than historical trends. This pattern of development provides a mix of suburban and compact neighborhoods, where some newer housing is located within or near existing neighborhoods or employment centers.

Under Scenario 1, the average residential density for new development is 12 dwelling units per acre, which is generally within the ranges defined in the local agency general plans. The housing types for future growth are somewhat limited, with an emphasis on large-lot single-family homes and smaller-lot single-family homes over multi-family housing.

Transportation investments in Scenario 1 prioritize roadway spending, reflecting a historical pattern of auto-oriented development. One important difference from historical norms, however, is that this scenario emphasizes spending on roadway maintenance over new capacity. Nevertheless, most of the transportation investment in Scenario 1 is dedicated to roadways, with limited funding for alternative transportation improvements such as transit and bicycle/pedestrian improvements.

As such, it is also considered to most closely match Business as Usual conditions.
**Scenario 2. Preferred Scenario/Infill and Redevelopment**

Scenario 2 emphasizes more compact, mixed-use and infill development than Scenario 1. This scenario sees higher density residential and employment uses, in addition to mixed-use designations, at a city’s core and along major transportation corridors. Development patterns under Scenario 2 essentially limit the growth outside of city boundaries. Additionally, Scenario 2 has greater investment in multi-family versus single-family residential development, especially in downtown areas.

The increased focus on multi-family housing in Scenario 2, as well as a relative emphasis on smaller lot single-family homes over large-lot single-family homes, means that the residential densities associated with new development are generally greater than those listed in the local agency general plans. In this scenario, residential densities average 15.9 dwelling units per acre.

Consistent with having more infill development for housing and jobs in downtown areas and along major transportation corridors, Scenario 2 increases spending on bicycle/pedestrian improvements over Scenario 1. At the same time, it reduces the amount of relative spending on new roadway capacity.
Scenario 3: Intensified Infill and Alternative Mode Investment

Scenario 3, show more compact development and infill development than Scenarios 1 and 2. Under this scenario, there is a greater emphasis on placing new growth in downtowns and mixed-use centers, with infill development occurring within downtowns and mixed-use neighborhoods. Additionally, development patterns limit the growth outside of city boundaries.

Scenario 3 involves a greater percentage of new multifamily, mixed-use housing and duplex/townhomes within and near downtowns and employment centers than Scenarios 1 and 2. It also provides a mix of small-lot single-family and multifamily housing in new neighborhoods, with higher percentages of multifamily housing and more limited large-lot single-family development. The average residential density is even higher at 16.6 dwelling units per acre.

Accordingly, transportation investments for this scenario are more focused on transit and bike/pedestrian improvements. The relative amount of transit investment increases in this scenario compared to Scenarios 1 and 2, and the relative amount of investment in new roadway capacity decreases.
Scenario 4. Corridor Centric

Scenario 4 emphasizes infill and redevelopment to achieve compact development, more so than Scenarios 1, 2, and 3. This scenario places population growth and new retail jobs along major corridors and high-priority transit corridors in local jurisdictions throughout Stanislaus County. Consequently, it has a greater focus on growth in downtowns and mixed-use centers, a greater focus on infill within downtowns and mixed-use neighborhoods, and a minimal expansion of existing community boundaries as compared with the other three scenarios.

Scenario 4 has a greater mix of housing-type options than Scenarios 1, 2 and 3. As such, it has a greater percentage of new multifamily, mixed-use housing, and duplex/townhomes within and near downtowns and employment centers than the other three scenarios. It also provides a mix of small-lot single-family and multifamily housing in new neighborhoods, with higher percentages of multifamily housing and more limited large-lot single-family development. This scenario achieves the highest residential densities among the four scenarios at an average of 17.2 dwelling units per acre.

Scenario 4 has a high investment in transit, particularly because new housing and employment is distributed along major corridors and high-priority transit corridors. It also has significant investment in bicycle/pedestrian improvements.

While Scenario 1 most emulates existing land use plans prepared by local jurisdictions, Scenarios 2, 3 and 4 are meant to represent progressively more compact development patterns, which can contribute to lower GHG emissions from on-road mobile sources. Scenarios 2, 3 and 4 reflect what growth could look like “if” the established development themes of each scenario were to occur.
Figure 8.1 presents the relationship between the 2014 and 2018 RTP/SCS scenarios. As shown, growth trends have changed in Stanislaus County, as the 2014 Scenario 2 (New Trends) is now considered Scenario 1 (General Plan Trend/Business As Usual). In addition, changes to the StanCOG goals and policies results relate to increased prioritization on improving quality of life for everyone in the region.

Figure 8.1 - Relationship Between the 2014 Scenarios and the 2018 Conceptual Scenario Themes
Scenario Testing

The four scenarios discussed in the previous chapter were compared across several performance measures. As described in Chapter 2, StanCOG developed an extensive list of goals, objectives, and performance measures to help quantify and evaluate the tangible results of the 2018 RTP/SCS. These performance measures, which were presented to the VVS Steering Committee, the public, and the StanCOG Policy Board, provide a comparison of how the general plan and the preferred scenarios performed in achieving 2018 RTP/SCS goals. Table 9.1 summarizes the 2018 RTP/SCS goals/objectives.

### Table 9.1 - 2018 RTP/SCS Goals

<table>
<thead>
<tr>
<th>Goal 1. Mobility &amp; Accessibility</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve the ability of people and goods to move between desired locations, and provide a variety of mobility options.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 2. Social Equity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure all populations share in the benefits of transportation improvements and are provided a range of transportation and housing choices.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 3. Economic and Community Vitality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate economic development and opportunities through infrastructure investments that support goods movement within and through the region.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 4. Sustainable Development Pattern</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a mix of land uses and compact development patterns, and direct development toward existing infrastructure, to preserve agricultural land, open space, and natural resources.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 5. Environmental Quality</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Support infrastructure investments that facilitate vehicle electrification and the provision of electrification infrastructure in public and private parking facilities and structures.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 6. Health &amp; Safety</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operate and maintain the transportation system to ensure public safety, and improve the health of residents by improving air quality and providing more transportation options.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 7. System Preservation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain the transportation system in a state of good repair, and protect the region’s transportation investments by maximizing the use of existing facilities.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 8. Smart Infrastructure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinate, monitor, and integrate planning and programming for intelligent transportation system (ITS), smart infrastructure, demand-responsive transportation, and automated vehicles.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 9. Reliability &amp; Congestion</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain or improve reliability of the transportation network and maintain or reduce congestion.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal 10. Project Delivery</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiently use available transportation funding to expedite project delivery of transportation improvements for the benefit of residents of Stanislaus County and the traveling public.</td>
<td></td>
</tr>
</tbody>
</table>

### Performance Measures

Using performance measures is not only good practice, but also critically important in helping decision-makers and the public evaluate the expected results of a plan before it is implemented in order to make informed decisions. Additionally, performance measures can provide useful ongoing information as projects are developed to ensure that they continue to meet regional needs.

The 2018 RTP/SCS evaluated the long-range outlook of several performance measures for each of the four planning scenarios in order to understand how each scenario contributed to the stated goals and objectives under year 2035. Comparing the four scenarios on their merits resulted in a determination of which one would provide the mix of future conditions to best meet the goals of the Plan and address the needs of the region.

Scenario 2 (Infill and Redevelopment) was chosen as the Preferred Scenario for the 2018 RTP/SCS.

Scenario 2 (Infill and Redevelopment) was chosen as the Preferred Scenario for the 2018 RTP/SCS Plan. Once the Plan scenario was chosen, its performance was compared against the Scenario 1 (General Plan/Business As Usual), which captured “Business as Usual” land use planning and transportation investments. Detailed information about the performance measures and their results can be found in Appendix N.

The following infographics highlight the various performance measure outcomes for Scenario 1 and Scenario 2 of the 2018 RTP/SCS. Comparisons between these two scenarios reveal the implications of transportation and land use planning assumptions and investments associated with the Scenario 2, which prioritizes infill and redevelopment and increases spending on bicycle and pedestrian improvements.
**Sustainable Development Pattern**

Provide a mix of land uses and compact development patterns and direct development towards existing infrastructure, which will preserve agricultural land, open space, and natural resources.

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Plan Trend/ Business As Usual</td>
<td>Preferred Scenario/ Infill and Redevelopment</td>
</tr>
<tr>
<td>Total acres of new development</td>
<td>9,312</td>
</tr>
<tr>
<td>Acres of farmland converted</td>
<td>8,500</td>
</tr>
<tr>
<td>Overall residential density of new development</td>
<td>12</td>
</tr>
</tbody>
</table>

**Scenario 2 results in fewer acres of new development, less farmland converted, and a higher residential density than Scenario 1.**

**System Preservation**

Maintain the transportation system in a state of good repair, and protect the region’s transportation investments by maximizing usefulness of existing facilities.

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Plan Trend/ Business As Usual</td>
<td>Preferred Scenario/ Infill and Redevelopment</td>
</tr>
<tr>
<td>Total new local roadway lane miles (lane miles)</td>
<td>530</td>
</tr>
</tbody>
</table>

**Scenario 2 results in fewer new local roadway lane miles than Scenario 1.**

Environmental Quality

Consider the environmental impacts when making transportation investments, and minimize direct and indirect impacts on clean air and natural resources.
**Environmental Quality**

Consider the environmental impacts when making transportation investments, and minimize direct and indirect impacts on clean air and natural resources.

<table>
<thead>
<tr>
<th>General Plan Trend/ Business As Usual</th>
<th>Preferred Scenario/ Infill and Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CO₂ Emissions per household of new development (tons/year)</strong></td>
<td><strong>Scenario 1</strong></td>
</tr>
<tr>
<td>Building energy use in tons of CO₂ per year. This figure does not include transportation emissions.</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Scenario 2 results in lower CO₂ Emissions per household of new development than Scenario 1.

**Mobility and Accessibility**

Improve the ability of people and goods to move between desired locations, and provide a variety of transportation choices.

<table>
<thead>
<tr>
<th>General Plan Trend/ Business As Usual</th>
<th>Preferred Scenario/ Infill and Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New project trip generation (vehicle trips)</strong></td>
<td><strong>Scenario 1</strong></td>
</tr>
<tr>
<td>Residential trips</td>
<td>375,134</td>
</tr>
<tr>
<td>Retail trips</td>
<td>276,167</td>
</tr>
<tr>
<td>Office trips</td>
<td>67,713</td>
</tr>
<tr>
<td>Other trips</td>
<td>92,320</td>
</tr>
</tbody>
</table>

New project trip generation (vehicle trips) Does not reflect trip reductions that would result from transit ridership. Scenarios with a greater investment in transit would be expected to show more vehicle trip reductions once transit is factored in.

<table>
<thead>
<tr>
<th>General Plan Trend/ Business As Usual</th>
<th>Preferred Scenario/ Infill and Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New project Vehicle Miles Traveled (VMT)</strong></td>
<td><strong>Scenario 1</strong></td>
</tr>
<tr>
<td>Residential trips</td>
<td>1,064,771</td>
</tr>
<tr>
<td>Retail trips</td>
<td>699,503</td>
</tr>
<tr>
<td>Office trips</td>
<td>209,981</td>
</tr>
<tr>
<td>Other trips</td>
<td>344,012</td>
</tr>
</tbody>
</table>
### Mobility and Accessibility Continued...

<table>
<thead>
<tr>
<th>Scenario</th>
<th>General Plan Trend/ Business As Usual</th>
<th>Preferred Scenario/ Infill and Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of new households within walking distance (0.5 miles) of a transit stop (Does not reflect rail)</td>
<td>25.2%</td>
<td>32.4%</td>
</tr>
<tr>
<td>Percent of new EJ households (income/race combined) within walking distance (0.5 miles) of a transit stop (Does not reflect rail)</td>
<td>9.9%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Percent of new EJ households (income-based only) within walking distance (0.5 miles) of a transit stop (Does not reflect rail)</td>
<td>4.1%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Percent of new EJ households (race-based only) within walking distance (0.5 miles) of a transit stop (Does not reflect rail)</td>
<td>8.6%</td>
<td>11.9%</td>
</tr>
</tbody>
</table>

**Scenario 2 results in fewer overall vehicle trips and vehicle miles traveled, and a higher percentage of households within walking distance of a transit stop, compared to Scenario 1.**
Mobility and Accessibility Continued...

Improve the ability of people and goods to move between desired locations, and provide a variety of transportation choices.

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMT Growth by Scenario (2015-2035)</td>
<td>2,274,286</td>
</tr>
<tr>
<td>Total Vehicle Miles Travelled (VMT)</td>
<td>13,648,156</td>
</tr>
<tr>
<td>Average Trip Length – Vehicle Trips</td>
<td>12.44</td>
</tr>
<tr>
<td>Distance in miles</td>
<td></td>
</tr>
<tr>
<td>Average Trip Length – Commuter Vehicle Trips</td>
<td>17.71</td>
</tr>
<tr>
<td>Distance in miles</td>
<td></td>
</tr>
<tr>
<td>Drive Alone Daily Mode Share Percentage</td>
<td>38.34%</td>
</tr>
<tr>
<td>Ped/Bike Daily Mode Share Percentage</td>
<td>+2.04%</td>
</tr>
</tbody>
</table>

Scenario 1 results in a decrease in vehicle trip lengths, a decrease in the proportion of individuals who drive alone, and an increase in the number of bicyclists and pedestrians compared to Scenario 2.
Health and 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.

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Plan Trend/ Business As Usual</td>
<td>Preferred Scenario/ Infill and Redevelopment</td>
</tr>
</tbody>
</table>

Percent of new households within walking distance (0.5 miles) of a park

- Scenario 1: 15.6%
- Scenario 2: 20.8%

Percent of new low-income EJ households within walking distance (0.5 miles) of a park

- Scenario 1: 5.9%
- Scenario 2: 10.4%

EJ Households as a Percent of Total Households within 500 ft of a Major Roadway

- Scenario 1: 58.1%
- Scenario 2: 59.0%

Scenario 2 results in a higher percentage of total households within walking distance of a park than Scenario 1. Both scenarios meet federal health-based emission budgets.
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, as well as provide a range of transportation and housing choices.

**Scenario 2 results in a higher proportion of multi-family/townhome development, and more affordable housing for single-family and multi-family options, than Scenario 1.**
Environmental Justice

Environmental Justice seeks to ensure that no one population or community receives an unfair burden or benefit from local policies, decisions, and investments, and that all are given the opportunity to be involved in the transportation planning and decision-making process (Executive Order 12898, 1994).

### Total Households

<table>
<thead>
<tr>
<th>Scenario</th>
<th>General Plan Trend/ Business As Usual</th>
<th>Preferred Scenario/ Infill and Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>217,477</td>
<td>217,469</td>
</tr>
</tbody>
</table>

#### Environmental Justice Households

- **46.1%** of total households within 0.5 miles of transit

#### Total Households within 0.5 Miles of Transit

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Non-environmental justice households as a percent of total households within 0.5 miles of transit</th>
<th>Environmental justice households as a percent of total households within 0.5 miles of transit</th>
<th>Percent of EJ Households within 0.5 miles of transit, as a proportion of total EJ households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>49.1%</td>
<td>50.9%</td>
<td>64.0%</td>
</tr>
</tbody>
</table>

#### Environmental Justice Representation

- **+4.8%**

### Total Households Within 0.5 Miles of Two or More Buses Per Hour

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Non-environmental justice households as a percent of total households within 0.5 miles of two or more buses per hour</th>
<th>Environmental justice households as a percent of total households within 0.5 miles of two or more buses per hour</th>
<th>Percent of EJ households within 0.5 miles of two or more buses per hour as a proportion of total EJ households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>51.7%</td>
<td>48.3%</td>
<td>45.6%</td>
</tr>
</tbody>
</table>

#### Environmental Justice Representation

- **+2.2%**

**Scenario 2 results in a higher proportion of EJ and non-EJ households that are within walking distance of transit services than Scenario 1.**
Conclusion
The following summarizes the differences between Scenario 1 (General Plan Trent/Business As Usual) and Scenario 2 (Preferred Scenario/Infill and Redevelopment):

- Scenario 2 results in fewer acres of new development, less farmland converted, and a higher residential density than Scenario 1.
- Scenario 2 results in fewer new local roadway lane miles than Scenario 1.
- Scenario 2 results in lower CO2 Emissions per household of new development than Scenario 1.
- Scenario 2 results in fewer overall vehicle trips and vehicle miles traveled as well as a higher percentage of households within walking distance of a transit stop, than Scenario 1.
- Scenario 2 results in a decrease in vehicle trip lengths, a decrease in the proportion of individuals who drive alone, and an increase in the number of bicyclists and pedestrians compared to Scenario 1.
- Scenario 2 results in a higher percentage of total households within walking distance of a park than Scenario 1. Both scenarios meet federal health-based emission budgets.
- Scenario 2 results in a higher proportion of multi-family/townhome development, and more affordable housing for single-family and multi-family options, than Scenario 1.
- Scenario 2 results in a higher proportion of EJ and non-EJ households that are within walking distance of transit services than Scenario 1.
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Action Plan
This section summarizes the 2018 RTP/SCS transportation projects to be included in the Capital Improvement Program (CIP), consistent with financial revenue forecasts through 2042. The project list reflects Scenario 2 (Preferred Scenario/Infill and Redevelopment), transportation improvement priorities as selected by the StanCOG Policy Board, and was developed through meetings and coordination efforts with StanCOG’s member agencies and Caltrans. The project list is organized by lead agency (responsible jurisdiction), project type, and project purpose. Lead agencies include the Stanislaus Council of Governments, StanCOG’s member jurisdictions, Caltrans, and the Altamont Corridor Express (ACE). Project types include roadway, bicycle and pedestrian, transit, aviation, and operations and maintenance (O&M) projects. Project purposes include system preservation, capacity enhancement, safety improvement, operational improvement, and increasing alternative mode share.

The 2018 StanCOG RTP/SCS project list includes approximately $7.206 billion in project costs. Given that the 2018 StanCOG RTP/SCS financial revenue forecast is approximately $7.436 billion in available funding through fiscal year 2042, the project list can be considered financially constrained per federal requirements (i.e., Tier I). The 2018 RTP/SCS Investment Plan is discussed in Chapter 5. Funding for the Plan includes local, state, and federal funds for a variety of transportation improvement projects.

### Project Selection Criteria
Transportation projects included in the Tier I Project List were selected in coordination with Stanislaus County, its nine major cities, transit agencies, Caltrans, and StanCOG. Table 10.1 provides a list of key projects included in the 2018 RTP/SCS.

The projects were nominated by local jurisdictions and StanCOG, and evaluated against regional performance measures to determine the projects that had the highest compatibility with the region’s goals and objectives. Projects were added to the Tier I Project List—which represents financially constrained, priority projects—for inclusion in the 2018 RTP/SCS.

### Investment Plan – Tier I Project List
The Tier I Project List, presented in Appendix K, provides a list of transportation projects that have been identified as priorities for Stanislaus County and its member jurisdictions. Figure 10.1 and Table 10.2 on the following page presents the investments by project type (i.e., roadway, bicycle and pedestrian, transit, aviation, operations and maintenance, and studies).

Project types are discussed in the following section.

### Table 10.1 - 2018 RTP/SCS Key Projects

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>North County Corridor</td>
<td>Ultimate 4 lane expressway from Tully Road to SR 120.</td>
</tr>
<tr>
<td>South County Corridor</td>
<td>Ultimate 2-6 lane expressway from Turlock City limits to Interstate 5.</td>
</tr>
<tr>
<td>Hwy 132</td>
<td>Realign SR 132 to ultimate 4 lane expressway from SR 99 to Gates Road.</td>
</tr>
<tr>
<td>Rail and Transit</td>
<td>Project Description</td>
</tr>
<tr>
<td>Bus Rapid Transit</td>
<td>Install bus rapid transit improvements and increase transit services and frequencies.</td>
</tr>
<tr>
<td>Rail</td>
<td>Extend ACE rail services from Ceres to Modesto with new stations.</td>
</tr>
<tr>
<td>Alternative Transportation</td>
<td>Project Description</td>
</tr>
<tr>
<td>Bicycle and Pedestrian Facilities, Complete Streets, and Recreational Trails</td>
<td>Emphasis on bicycle/pedestrian improvements along central corridors, Class I multi-use trails, and complete street improvements.</td>
</tr>
</tbody>
</table>
Figure 10.1 - Transportation Investment by Project Type

<table>
<thead>
<tr>
<th>Project Type</th>
<th>2018 Total</th>
<th>2014 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway</td>
<td>$3,818,145,653</td>
<td>$2,713,501,300</td>
</tr>
<tr>
<td>Bike/Ped</td>
<td>$342,903,950</td>
<td>$224,618,300</td>
</tr>
<tr>
<td>Transit</td>
<td>$2,828,286,442</td>
<td>$1,464,834,119</td>
</tr>
<tr>
<td>Aviation</td>
<td>$97,543,574</td>
<td>$53,512,800</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>$118,511,692</td>
<td>n/a</td>
</tr>
<tr>
<td>Study</td>
<td>$900,000</td>
<td></td>
</tr>
<tr>
<td>Total by Type</td>
<td>$7,206,291,311</td>
<td>$4,456,466,519</td>
</tr>
</tbody>
</table>

Conclusion

It is StanCOG’s intent that limited funds are dedicated to the greatest needs that align with the priorities of Scenario 2 (Preferred Scenario/Infill and Redevelopment). With the passage of Measure L in 2016 and SB 1 in 2017, the Stanislaus region is well positioned to meet its growing and changing needs. This Action Plan represents a balanced approach to transportation funding, emphasizing a variety of travel modes to meet the daily needs of Stanislaus County residents through 2042.
CONSULTATION AND COOPERATION

The 2018 RTP/SCS Public Participation Plan was developed at the outset of the planning effort to establish an approach for public engagement to gather information about the diverse regional transportation needs. The Stanislaus Council of Governments (StanCOG) implemented a robust public outreach and engagement plan to ensure that the public was provided with ample opportunities to participate in the 2018 RTP/SCS update.

Outreach activities included, but were not limited to:

- Public workshops
- Advisory committee presentations
- Community-based outreach events
- Online surveys
- Public scoping meeting (for the EIR)
- Public hearings

This section highlights the public outreach component of the Plan and the efforts taken to engage stakeholders and members of the public. The 2018 RTP/SCS Public Participation Plan is provided in Appendix Q.

Public Outreach Goals

Key goals regarding engagement and public participation in the development of the 2018 RTP/SCS include the following:

**Goal 1:**
To engage the broadest cross section of Stanislaus County residents, businesses, and transportation providers in planning for our future transportation needs.

**Goal 2:**
To make the planning process accessible, interactive, and engaging.

To achieve these goals, StanCOG hosted public presentations and workshops throughout the Plan development process. To ensure inclusivity across all sectors and populations within the County, StanCOG utilized a variety of outreach strategies to inform the public about presentations and workshops, including:

- Posting announcements on social media
- Distributing informational handouts, posters, and flyers throughout the County
- Publishing announcements in news outlets
- Maintaining an updated project website

Project information was also translated into Spanish to ensure inclusion of the Spanish-speaking population.

**Outreach Highlights:**

- A total of 12 eNews announcements were sent to 450+ subscribers promoting upcoming workshops.
- Workshops were further promoted via Facebook events, board posts, and ad-supported placements, which yielded over 1,400 views.
- Print ads were placed in both The Modesto Bee and Vida en el Valle to promote workshops in Spanish and English.
- Two pull-up banners, 1,500 business card handouts, and 200 posters and flyers were created and distributed County-wide.
- English and Spanish language handouts were created and placed on our project website with the following information:
  » Overview of Scenarios
  » RTP/SCS Scenario Development and Concepts
  » Project FAQ
  » Project Overview
- News releases were sent to all publications, radio, and online services in Stanislaus County.
- The project website was consistently updated with information, new documents, and presentations.
- The website averaged over 1,000 page visits per week.
- Translation of project materials into Spanish and translation services provided at public meetings.
- Electronic surveys were conducted at public meetings to enliven events and to promote meaningful interaction.

To reach as many people in the most effective manner, StanCOG provided convenient ways for the public to participate in the transportation planning process. Understanding that many individuals do not have the time or means to attend public meetings in person, staff used electronic outreach methods to permit their participation remotely, providing them with opportunities to view presentations, complete surveys, and submit comments at their convenience.
StanCOG also partnered with key stakeholders representing various community interests to solicit input. Outreach was also conducted to solicit input from the tribal governments and organizations.

**Community Events**

During the course of the Plan’s development, over 1,000 people were provided information about the project throughout the County. This included individuals and/or groups representing interests of seniors, veterans, people with disabilities, and Hispanic residents and service providers. Community events and presentations included the following:

- Festivals
- Rotary Clubs
- Lincoln Clubs
- Farmers Markets
- Advisory Committees
- Professional Organizations
- Community/Faith-Based Organizations

**Community Workshops**

Community workshops were specifically geared toward addressing elements of the Plan development process. Members of the public were informed about the date and location of these events through the outreach sources mentioned above.

Community workshops were held in three series, or rounds, throughout the County in order to gather public input on key elements of the Plan. Round One, or “kick-off,” was held during the Summer of 2017 with the intent of informing residents about the Plan and describing StanCOG’s approach to developing a coordinated land use and transportation section. Round Two, held during the Fall of 2017, allowed for the collection of public input on the Plan’s vision as well as on the development of the Plan’s land use and transportation scenarios. Round Three was held in the Spring of 2018 to present final results associated with Scenario 2 (Preferred Scenario/Infill and Redevelopment).

Overall, 11 workshops were held between July 2017 and May 2018, including in the following locations on the following dates:

- Ceres (1 workshop): 11/14/17
- Modesto (4 workshops): 8/3/17; 11/6/17; 1/10/18; and 5/22/18
- Newman (1 workshop): 11/13/17
- Oakdale (1 workshop): 8/2/17
- Patterson (2 workshops): 6/31/17 and 5/21/18
- Riverbank (1 workshop): 11/20/17
- Turlock (1 workshop): 5/14/18

**Community Presentations and Stakeholder Meetings**

Community presentations and stakeholder meetings were held at each of the 10 member agencies to present the scenario alternatives on the following dates:

- Ceres: 9/11/17
- Hughson: 10/9/17
- Modesto: 9/12/17
- Newman: 10/24/17
- Oakdale: 9/18/17
- Patterson: 9/19/17
- Riverbank: 10/10/17
- Turlock: 10/10/17
- Waterford: 9/21/17
- Stanislaus County: 10/17/17

**Project Website**

The website provided a 2018 RTP/SCS, overview, and information on the background and purpose of the Plan; presentations on scenario development and performance; and notices about upcoming meetings and presentations. Agendas and presentation materials were provided for reference through the StanCOG website via a link to [www.ValleyVisionStanislaus.org](http://www.ValleyVisionStanislaus.org).