Regional Transportation Plan

2014-2040

Sustainable Communities Strategy

for Merced County

Adopted September 25, 2014
Amendment 1 adopted May 19, 2016
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What is the RTP?

The Regional Transportation Plan (RTP) specifies the policies, projects, and programs necessary over a 25 year period to maintain, manage, and improve the region’s transportation systems. The RTP provides a comprehensive long-range view of transportation needs and opportunities for Merced County. It establishes goals and objectives for the future system. It identifies the actions necessary to achieve these goals. Finally, it describes a funding strategy and options for implementing the actions.

The RTP’s scope is Regional: The issues transcend the boundaries of local jurisdictions. Local, state, and federal governments work together to achieve an effective system.

The RTP concerns Transportation: The movement of people and goods, for purposes such as working, shopping, school, or recreation, and by means of autos, trucks, buses, trains, planes, bicycles, or walking.

The RTP is a Plan: It identifies problems and proposes solutions. It is long-term, looking more than twenty years into the future. It must balance priorities with expected funding.

The RTP is updated no less than once every four years; the previous update occurred in 2010 and was amended in 2011. This RTP concerns the period from 2014 to 2040. It was adopted in September 2014 and amended in ____________. The amendment:

- changes the future land use assumption to a more compact growth pattern (scenario “C”); and
- assumes revenues from Cap & Trade programs that was not previously assumed; and
- adds policies with the goal of increasing compact growth, transit, and alternative modes; and
- as a result, the RTP/SCS achieves the greenhouse gas emission reduction target set by the state.

The target is achieved through a combination of more compact land use and significantly more investment in alternative modes, funding transportation improvements:

- Increased transit frequency, fare reductions, and express transit;
- Additional ridesharing, vanpooling, and zero-emission vehicle incentives;
- Aggressive bicycle and pedestrian infrastructure improvements;
- Passenger rail improvements that shift commuters from cars to trains;
Who prepares the RTP?
The RTP is prepared by the Merced County Association of Governments. MCAG is a regional planning organization for multi-jurisdiction issues such as transportation, solid waste and housing.

MCAG member agencies are the County and the six incorporated cities of Atwater, Dos Palos, Gustine, Livingston, Los Banos and Merced. MCAG has an 11 member Governing Board comprised of the five county Supervisors, plus one representative from each City Council.

MCAG is the federally designated Metropolitan Planning Organization (MPO) and the state designated Regional Transportation Planning Agency (RTPA) for Merced County.

RTP Purpose
The RTP also has many specific functions. It must:

- Assess current modes of transportation
- Predict future needs
- Propose solutions to current and future problems
- Detail the financial resources needed to implement the plan
- Be consistent with related plans and activities
- Involve the public
- Coordinate with other government agencies
- Provide enough detail on proposed projects to assist:
  - Capital improvement programs
  - Identification of project purpose and need
  - Environmental review
  - Estimates of emissions impacts for air quality conformity
  - Decisions related to development and growth.

The RTP provides a foundation for transportation decisions by local, regional, and state officials. This foundation is based on a vision of an efficient and environmentally sound multi-modal system. The RTP also serves as the bases for the development of and inclusion of projects in the:
• Federal Transportation Improvement Program (FTIP)
• Regional Transportation Improvement Program (RTIP)
• Interregional Transportation Improvement Program (ITIP) prepared by Caltrans.

The Regional Transportation Improvement Program (RTIP) is each region’s four year program of State and Federally funded transportation projects. The RTIP also nominates projects to the California Transportation Commission (CTC) for funding in the State Transportation Improvement Program (STIP), and must be consistent with the Regional Transportation Plan.

The Federal Transportation Improvement Program (FTIP) contains all federally funded surface transportation projects at the State and regional level. Projects in the RTIP are programmed by the CTC into the STIP. The projects are finally programmed by MCAG in the FTIP. The difference between the FTIP and the RTIP is that the FTIP is financially constrained, including only those projects that are approved and funded, whereas the RTIP nominates projects for funding.

Public Involvement
The RTP is the result of a broad and sustained planning process. This process involves many government agencies as well as the public and private interests.

To develop the RTP, input is received from elected representatives, government agencies, the business sector, special interest groups and county citizens, as well as others who have an interest in or are affected by decisions made by Merced County.

MCAG staff followed the formal process outlined in MCAG’s Public Participation Plan, which included public meetings, workshops, and legally noticed public comment period and public hearings.

MCAG conducted a series of workshops and public meetings in 2013 and 2014. A list of meetings held, outreach materials, and results are available in Appendix F.

Interagency Consultation
Interagency consultation efforts are well established both for Merced County and Valley wide. MCAG has several standing committees through which RTP-related items are discussed with local cities and the county. These committees include the: Technical Planning Committee, Citizen’s Advisory Committee, Technical Review Board, MCAG Governing Board. These meetings are open to the public, and include
members of these committees represent local jurisdictions, transit, airports, goods movement, economic development, citizens, and other stakeholders.

The San Joaquin Valley MPOs hold ongoing Interagency Consultation Group meetings attended by MPO staff from across the Valley, the San Joaquin Valley Unified Air Pollution Control District, Caltrans District and Headquarters, Air Resources Board, U.S. Environmental Protection Agency, and the Federal Highway and Transit Administrations.

The San Joaquin Valley Directors also meet periodically to discuss higher level policy matters that frequently include air quality or coordinated transportation planning issues. Throughout the RTP development process, the MPO directors were regularly updated and consulted on a variety of issues.

**Regulatory Requirements**

MCAG is required by State law to prepare the RTP and transmit it to the California Transportation Commission (CTC) and the California Department of Transportation (Caltrans) every four years. The RTP is required to be developed per Government Code Section 65080 et seq. of Chapter 2.5, and Federal legislation, U.S. Code, Title 23, Sections 134 and 135, et seq. The RTP is required to contain a Policy, Action, Financial Element, Sustainable Communities Strategy (SCS), and to reference environmental and air quality documents. The RTP is to be adopted by the MCAG Board of Directors, and then submitted to Caltrans and the CTC. State regulations require the SCS be distributed to the California Air Resources Board for approval, once adopted by the MCAG Board of Directors. Federal regulations issued by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) also require the development and adoption of an RTP.

**Air Quality Requirements**

The San Joaquin Valley is currently designated as nonattainment for ozone and fine particulate matter (PM2.5), which consists of small particles less than 2.5 microns in size; and has a maintenance plan for PM-10. State Implementation Plans have been prepared to address carbon monoxide, ozone, PM-10 and PM2.5.

The San Joaquin Valley Air Pollution Control District is responsible for developing and adopting measures and methods for controlling ozone levels. The Ozone Attainment Demonstration Plan, prepared by the District, identifies all possible control measures necessary to make attainment. This plan uses a
computer model to simulate future air quality in the Valley while reflecting the effects of measures proposed to curb pollution. Within this plan are transportation emission budgets for each county.

The purpose of the air quality conformity determination is to ensure that MCAG’s plans and programs “conform” to all applicable federal air quality requirements. Transportation conformity is required under Clean Air Act section 176(c) (42 U.S.C. 7506 (c)) to ensure that federally supported highway and transit project activities are consistent with (“conform to”) the purpose of the State Implementation Plan (SIP). This ensures that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS). Conformity currently applies under EPA’s rules to areas that are designated non-attainment, and those re-designated to attainment after 1990 (“maintenance areas”).

MCAG has prepared an air quality conformity analysis as a separate document. The analysis shows that transportation projects programmed in the Merced County Federal Transportation Improvement Program (FTIP) and Regional Transportation Plan (RTP) are consistent with the applicable SIP.

**Title VI and Environmental Justice**

Title VI of the Civil Rights Act of 1964 set a standard that authoritatively outlawed discrimination in the conduct of all federal activities. It reads as follows: “No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Although considerable progress has been made during the 1990s, individuals both inside and outside government are troubled by the high and adverse environmental impacts of private or governmental actions that fall disproportionately on populations protected by laws such as the civil rights act. The term “environmental justice” was created by people concerned that everyone within the United States deserves equal protection under the country’s laws. Executive Order 12898 issued in 1994, responded to this concern by organizing and explaining in detail the federal government’s commitment to promote environmental justice. Each Federal agency was directed to review its procedures and to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on minority and low-income populations.

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) guidance on Environmental Justice (EJ) requires that Metropolitan Planning Organizations ensure that traditionally underrepresented groups are engaged in the regional transportation planning process and
demonstrate how their influence and feedback impacted development of the Regional Transportation Plan. Further, the guidance also requires an evaluation of the adopted plan to ensure that there is no disparate negative impact borne by low-income or minority communities. Moreover, environmental justice is more than a set of legal and regulatory obligations. FHWA and FTA have embraced the principles of environmental justice as a means toward improving the transportation decision-making process. Today, effective transportation decision-making requires understanding and addressing the unique needs of many different socioeconomic groups. Early, inclusive, and meaningful public involvement in transportation decision making is a proven means of designing transportation facilities that fit more harmoniously into communities. There are three fundamental principles at the core of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Environmental Justice does not end with the RTP, rather it is just one of many arenas where EJ principles apply. EJ is also applicable at the project level when project sponsors are proposing to build a new project in a local community and federal funds are involved. Unfortunately, neither Title VI nor Executive Order 12898 prescribes the specific methods and processes for ensuring environmental justice in transportation planning. States and MPOs are free to explore and devise more effective analytical techniques and public involvement approaches to ensure that transportation plans successfully integrate environmental justice into decision-making.

**Governmental Framework**

There are three levels of government that guide transportation planning and programming decisions. These are local, regional, and state agencies.

**Local Agencies**

Merced County and the cities of Atwater, Dos Palos, Gustine, Livingston, Los Banos, and Merced each make decisions about local transportation facilities through their individual planning processes. These
agencies are also responsible for the operation and maintenance of the road systems under their jurisdictions. Each of these agencies work through MCAG to program regionally allocated local funds.

**Regional Agencies**

MCAG fulfills several planning roles for Merced County. MCAG is the regional transportation planning agency which is responsible for preparing the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP). MCAG is also the Metropolitan Planning Organization and is required to prepare the Federal Transportation Improvement Program (FTIP). Finally, MCAG has been designated the Local Transportation Authority for Merced County.

The San Joaquin Valley Air Pollution Control District is responsible for preparing the State Implementation Plan for the San Joaquin Valley, a federally mandated air quality attainment plan.

**State Agencies**

The California Department of Transportation (Caltrans) is responsible for biannually preparing the Interregional Transportation Improvement Program (ITIP). The ITIP identifies Caltrans’ high priority projects for funding. Caltrans is also responsible for the operation and maintenance of the State Highway System.

The California Transportation Commission (CTC) is responsible for programming most State and Federally funded transportation projects. The CTC staff prepares the biannual Fund Estimate for each county. The CTC must approve the Regional Transportation Improvement Programs and the Interregional Transportation Improvement Program prior to projects moving forward.
Physical Setting

Merced County is part of the San Joaquin Valley located in Central California and consists of about 2,000 square miles of predominantly flat topography drained by the San Joaquin River and its tributaries. The area is bordered by the Sierra Nevada mountain range to the east and the Diablo mountain range to the west. Santa Clara and San Benito Counties are to the west, Mariposa County to the east, Stanislaus County to the northwest, and Fresno and Madera counties to the southeast.

Merced County is one of the richest agricultural regions in the United States. The combination of rich flood plains, climate, and irrigation systems creates an ideal environment for agribusiness.

About 40,000 acres of wetlands in the center of the County support one of the most concentrated water fowl habitats in the western United States. The principal waterways in the County are the San Joaquin River and its largest tributaries, the Merced and Chowchilla Rivers, the Bear, Owens, and Mariposa Creeks in the eastern portion of the County, and the Los Banos and San Luis Creeks in the west.
Demographics

Merced County and the San Joaquin Valley have historically grown at a faster rate than the rest of California, and will likely continue to do so. MCAG prepares and maintains population and employment forecasts for use in regional planning. The population and employment forecasts reflect the growth that is anticipated to occur during the next 25 years within Merced County and its cities and communities. They are consistent with the Department of Finance county-wide projections.

In 2012 the San Joaquin Valley had a set of forecasts prepared for population, housing, and employment growth through 2040 for each county in the Valley. The complete forecast for Merced County is in Appendix A and the total population and employment are shown below.

<table>
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<tr>
<th>Population and Employment Projections</th>
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<tr>
<td>2010</td>
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<tr>
<td>Population</td>
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<td>Employment</td>
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Population - 2010 U.S. Census; 2020, 2035, 2040 The Planning Center
Employment - The Planning Center
This chapter describes the overall vision of the Plan and the goals, objectives, and policies for each of the transportation modes and strategies within the Plan.

Amendment 1 adds a new section #12 “Sustainable Communities” under Goals and Policies.

Themes

Seven “Vision Themes” provide the foundation for the plan. They are listed below along with the goals associated under each vision theme.

Provide a good system of roads that are well maintained, safe, efficient and meet the transportation demands of people and freight

- Improve mobility and reduce congestion-related delays.
- Maintain the existing road system.
- Enhance safety for the traveling public.
- Promote an efficient, linked system of interstate freeways, major streets, rail lines, public transit, bikeways and pedestrian paths that enhances accessibility and the movement of people and goods and maximizes use of technological innovations.

Provide a transit system that is a viable choice

- Provide and promote the availability of an affordable, accessible, effective, and dynamic public transit system which is responsive to current and future customer needs.
- Meet the individual needs of those who depend on public transit, such as the elderly, handicapped, youth and economically disadvantaged.
Support full-time employment with livable wages – i.e. support job creation & economic vitality

- Recognize and respond to disparities in economic circumstances, accessibility and mobility among the region’s diverse population and communities.
- Recognize and respond to the transportation needs of area employers.
- Promote transportation strategies that are innovative and market-based, encourage new technologies and support the economy.

Preserve productive agricultural land/maintain strong agricultural economy and the quality of life that goes with it

- Preserve and enhance agricultural resources by implementing transportation improvements that avoid, minimize or mitigate negative impacts to productive agricultural land

Support orderly and planned growth that enhances the integration and connectivity of various modes of transportation

- Provide a variety of transportation choices that strengthen and direct development towards existing communities, thus preserving open space, farmland, natural beauty and critical environmental areas.
- Coordinate future land use patterns and transportation systems (aviation, rail, light rail, high speed rail, transit, bike and pedestrian paths, and roads) to foster economic prosperity, environmental protection and mitigation, trip reduction and the creation of efficient, integrated mixed-use communities.
- Encourage land use and growth patterns that enhance the livability of our communities and maximizes the productivity of transportation investments.
Support clean air and water and avoid, minimize or mitigate negative impacts to the environment

- Enhance environmental stewardship through protection of natural and human resources and creation or preservation of aesthetic amenities.
- Favor transportation investments that protect the environment including improving air quality, promoting energy efficiency and enhancing the quality of life.

Funding

- Identify and allocate funding and resources for building, operating and maintaining the existing and future regional transportation system.
- Ensure that transportation investments are cost-effective.

Goals and Policies

The following are the goals, objectives, and policies that have been established for each area of concern in the Plan.

1. Highways, Streets, and Roads

Goal: A safe and efficient regional road system that accommodates the demand for movement of people and goods.

1.1. Maintain a Level of Service D on all regionally significant roads.

1.1.1. Fund and implement the projects identified on the Tier 1 priority list in the Action Element of the RTP.

1.1.2. Aggressively pursue discretionary Caltrans funding such as IIP, HBRR, HES.

1.1.3. Implement a Regional Impact Fee for Transportation to pay for congestion relief projects.

1.1.4. Aggressively pursue the passage of a 1/2 sales tax for transportation.

1.2. Identify and prioritize improvements to the regional road system.
1.2.1. Prepare and apply evaluation criteria to prioritize regional road projects identified to improve the overall transportation system of the region.

1.2.2. Evaluation criteria will evaluate how the projects achieve the following objectives: 1) an integrated and balanced road system; 2) improvement in traffic flow & safety; 3) minimum adverse environmental effects; and 4) minimum adverse impacts on agricultural land.

1.2.3. Use Regional Improvement Program funds to finance the prioritized regional improvements.

1.3. Use the existing street and road system in the most efficient possible manner to improve local circulation.

1.3.1. Maintain street and road system for vehicle travel, transit services, bicycle travel, and pedestrians.

1.3.2. Aggressively pursue the passage of a 1/2 sales tax for transportation.

1.3.3. Continue to exchange Federal STP for state dollars.

1.3.4. Aggressively pursue all available and potential fund sources to implement improvements to the present transportation system and maintain the transportation system.

1.4. Monitor the impact of development on the regional road system.

1.4.1. Prepare and maintain transportation land use databases for determining future travel demand on the regional road system.

1.4.2. Develop and maintain a regional transportation model.

1.4.3. Analyze the cumulative impact of local development for the county and cities through the RTP Updates.

2. Transit

Goal: Provide an efficient, effective, coordinated regional transit system that increases mobility for urban and rural populations, including transportation disadvantaged persons.

2.1. Meet all transit needs that are “reasonable to meet”.

2.1.1. Provide paratransit services for the elderly, handicapped, and those residents not served by a fixed route service.

2.1.2. Provide adequate fixed route transit system to serve the general public, including transit-disadvantaged persons.

2.2. Increase transit ridership at a rate that exceeds annual population growth rate.
2.2.1. Add additional routes and expand services as necessary to meet ridership demand to achieve established transit standards.
2.2.2. Provide improved transit service through the county wide Consolidated Transit System.
2.2.3. Plan for transit expansion to UC Merced.
2.2.4. Coordinate Countywide transit system with neighboring transit services and modes – Stanislaus, Madera, Amtrak, & YARTS.

2.3. Promote citizen participation and education in transit planning.
   2.3.1. Involve the Social Services Transportation Advisory Council and the Citizens Advisory Committee in the regional transit planning process.
   2.3.2. Use the MCAG newsletter for transit education.

2.4. Promote transit ridership to and from Mariposa County and Yosemite National Park.
   2.4.1. Participate in the Joint Powers Authority for the Yosemite Area Regional Transportation System.

3. Passenger Rail
   Goal: A rail system that provides safe and reliable service for passengers.

   3.1. Maintain adequate passenger service on Amtrak San Joaquin route.
       3.1.1. Monitor the activities of Amtrak to assure passenger rail services in Merced County.
   3.2. Establish a High Speed Rail system connecting Merced and Los Banos to Sacramento and the Bay Area.
       3.2.1. Support the High Speed Rail planning process and actively provide comments and input.

4. Goods Movement
   Goal: Provide a transportation system that enables safe movement of goods in and through Merced County.

   4.1. Provide an adequate regional road system for goods movement.
       4.1.2. Work with the Freight Advisory Committee to enhance and maintain a viable transportation system for freight and goods movement.
5. Aviation

Goal: A fully functional and integrated air service and airport system complementary to the countywide transportation system.

5.1. Maintain daily commercial airline service to a major metropolitan airport.
   5.1.1. Support commercial airline service in Merced County.

5.2. Work with local agencies to ensure compatible land uses around existing airports to reduce noise conflicts
   5.2.1. Support the Merced County Airport Land Use Commission and local airports in their efforts to ensure compatible land uses around airports.
   5.2.2. Support the local airports in their attempts to acquire the land surrounding the airports.
   5.2.3. Support noise abatement procedures.

5.3. Maintain alternative modes of transportation to and from local airports.
   5.3.1. Support regularly scheduled transit service from airports to the Transportation Center.

6. Active Transportation (Bicycle & Pedestrian)

Goal: A regional transportation system for bicyclists and pedestrians.

6.1. Develop and construct bike and walkway facilities in urban areas and other communities where non-motorized systems do not currently exist.
   6.1.1. Construct class I, II and III bike routes as designated in the local and regional plans.
   6.1.2. Actively pursue bicycle and pedestrian related funding sources to implement local and regional plans.

6.2. Prepare and/or update a regional active transportation / non-motorized plan every five years.
   6.2.1. Create an Advisory Committee or use existing groups for bike planning and project implementation recommendations.
   6.2.2. Implement the projects and programs in the plan.

6.3. Develop and construct walkway facilities in urban areas and other communities where pedestrian systems do not currently exist.
   6.3.1. Actively pursue pedestrian related funding sources to implement local and regional plans.
7. Energy
Goal: Reduce usage of nonrenewable energy resources for transportation purposes.

7.1. Increase public transit and carpooling/vanpooling and bicycling/walking to exceed population growth.
   7.1.1. Add additional transit routes and services where feasible.
   7.1.2. Support passage of ordinances that provide for vanpooling and carpooling programs.
   7.1.3. Support passage of ordinances that provide for park and ride lots.

8. Air Quality
Goal: Achieve air quality standards set by the Environmental Protection Agency (EPA), and the State Air Resources Board.

8.1. Coordinate transportation planning with air quality planning at the technical and policy level.
   8.1.1. Assist the San Joaquin Valley Air Pollution Control District to develop the transportation-related portions of the State Implementation Plan for air quality.
   8.1.2. Evaluate and assist in the implementation of appropriate transportation control measures.
   8.1.3. Support the expeditious implementation of transportation control measures identified in the State Implementation Plan for Merced region jurisdictions.
   8.1.4. As required by federal regulation, give funding priority to transportation control measures.

9. Land Use Strategies
Goal: Provide economical, long-term solutions to transportation problems by encouraging community designs which encourage walking, transit, and bicycling.

9.1. Innovative land use and transportation planning.
   9.1.1. Assist cities and County in assessing their existing road network system to find the problem areas and to identify necessary improvements that would improve traffic movement.
   9.1.2. Evaluate land use strategies for member jurisdictions.

9.2. Plan future roads to accommodate land uses at a regional level.
   9.2.1. Assist member jurisdictions in taking a regional approach in land use and developing a road network that serves the entire region.
9.2.2. Encourage all jurisdictions to actively participate in the Regional Transportation Plan Update process.

9.3. Roads that are pedestrian friendly, encourage bicycle trips and the use of mass transportation.

9.3.1. Assist member jurisdictions in developing and implementing strategies and design criteria that make new commercial and residential developments friendly to pedestrians and bicyclists.

9.4. Preserve productive farmland and land that provides habitat for rare, endangered or threatened species.

9.4.1. Consider impacts on prime farmland and areas that support protected wildlife.

9.5. Goals and Policies consistent at both the regional and local levels.

9.5.1. Assist cities and County during their General Plan updates to ensure that the Plans are consistent with the RTP.

10. Transportation Financing

Goal: Develop and support financing strategies that provide for a continuous implementation of the Regional Transportation Plan projects and strategies.

10.1. Develop and adopt policies that will provide adequate funding resources for all transportation modes and strategies.

10.1.1. Seek voter approval of ballot measure for a 1 percent or ½ percent per dollar increase in the sales tax, for transportation system maintenance and improvements.

10.1.2. Implement and manage a regional transportation development fee program for priority road and transit improvement projects.

10.1.3. Provide technical assistance to local jurisdictions in the development of transportation financing mechanisms.

10.1.4. Consider cost efficiency in project evaluation criteria.

11. Outreach and Coordination

Goal: Provide a forum for participation and cooperation in transportation planning and facilitate relationships for transportation issues that transcend jurisdictional boundaries.

11.1. Assist jurisdictions in local transportation planning.

11.1.1. Evaluate transportation impacts of land use and
development proposals.

11.1.2. Provide technical assistance in the preparation of transportation financing mechanisms.

11.1.3. Assist in the preparation of Circulation Elements for general plans and community plans.

11.2. Promote consistency among all levels of Transportation Planning.

11.2.1. Involve the local, state and federal agencies and elected officials in the transportation planning process.

12. Sustainable Communities

Goal: Reduce per capita greenhouse gas emissions through compact growth and alternative transportation strategies.

12.1 **Prioritize infill and growth in existing communities.**

Direct growth through infill strategies that promote increased investment in existing communities – prioritizing disadvantaged neighborhoods and communities - that provide a range of housing choices (affordable small, medium, large lot single family and multifamily housing) for existing and new residents.

Direct housing and employment growth to existing cities and unincorporated communities rather than directing growth to new town development and sprawl.

12.2 **Prioritize funding for complete street projects on existing corridors.**

Prioritize investment in active travel, including investments in necessary infrastructure (sidewalks, streetlights, curb and gutter, bike lanes, and other pedestrian safety measures) to promote increased walking and biking.

Establish and implement a complete streets policy as aggressively as possible that requires its member jurisdictions to accommodate all transportation users through the incorporation of sidewalks, streetlights, curb and gutter and bicycle infrastructure in all projects, prioritizing existing streets and roads.

12.3 **Explore funding sources to incentivize jurisdictions (including a grant program).**

Develop a sustainable planning and infrastructure grant program to help jurisdictions implement the region’s SCS. Utilize existing and new revenue sources to fund this program.

Provide funding as available for the implementation of complete streets and/or active transportation-type plans and related capital improvement programs. Funding may include
but is not limited to: Active Transportation Program (ATP) funds (including various safety, safe routes to schools, and transportation enhancement funds), Congestion Mitigation and Air Quality (CMAQ) funds, Cap and Trade funds, and others.

Encourage transit agencies to make use of all available federal, state, and local funding to sustain, expand and improve local transit services, prioritizing the transit needs of disadvantaged neighborhoods and residents, including low income and transit dependent residents, and ensure the timely and best use of those funds.

12.4 **Conduct a needs assessment and link it to the countywide health assessment.**

Conduct a needs and opportunities assessment, coordinating with other assessment efforts, that catalogues health indicators, infrastructure deficiencies, housing needs, water and wastewater capacity, resource areas and farmland, employment opportunities, and access to basic services necessary to ensure the health and safety of the residents throughout the jurisdictions.

12.5 **Re-evaluate project selection criteria.**

Update project selection policy and criteria to emphasize:

- positive effects on health outcomes,
- reducing environmental impacts,
- improving air quality,
- reducing greenhouse gas emissions, and
- avoiding disproportionately high and adverse effects, including social and economic impacts, on traditionally disadvantaged communities, especially communities of color and low-income communities.

12.6 **Prioritize vanpools and ridesharing.**

Prioritize funding for vanpool and ridesharing programs to expand them and encourage their use. Investigate creative transit options for rural communities such as informal ridesharing and subsidized ridesharing to supplement paratransit. Increase efforts to encourage employers to give or increase incentives for employees to rideshare. Investigate the feasibility of dedicating high-occupancy vehicle (HOV) lanes on highways and multi-lane roadways.

12.7 **Emphasize and explain “co-benefits” of implementing SB 375 in addition to meeting GHG reduction targets.**
Benefits include:

- better health,
- less traffic,
- preserving farmland,
- less water use,
- less energy use,
- better air quality, and
- positive economic impact.

12.8 **Public participation improvements.**

Develop and implement a strong public participation process that meaningfully responds to and incorporates community priorities. Jurisdictions will make reasonable accommodations to ensure all materials are readily accessible and available in languages reflective of the community’s need.

All workshops and hearings should be held at a time and location that is accessible to all Merced County residents. Demonstrate effectiveness in responding to comments, questions, and concerns raised during public workshops and hearings.

12.9 **Transit.**

Improve access to public transit in rural and urban areas. Re-Evaluate and update the definitions of “unmet transit needs” and “reasonable to meet” to broaden and expand service to rural areas. While continuing to invest in existing urban service, identify new funding sources for improvements to service in rural areas.
This chapter provides assumptions of the cost and revenues necessary to implement the Plan.

The RTP is financially constrained. The estimated revenues through 2040 are sufficient to fund the projects included in the financially constrained (“Tier 1”) lists. Financially unconstrained projects are listed for information purposes. 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 2006, the voters of California approved about $20 billion in bonding (Prop 1B) for the Highway Safety, Traffic Reduction, Air Quality, and Port Security Act. This funding has aided in the construction of several projects in Merced County, including the G St. underpass in Merced and freeway and interchange projects on Highway 99. However the funding from this bond is nearly all spent.

The adoption of the latest federal transportation authorization act in 2012 - Moving Ahead for Progress in the 21st Century Act (MAP-21), made changes to several funding programs. For transit, the FTA 3038, 5308, 5316, 5317, 5320, and 5339 (Alternatives Analysis) were all repealed, the FTA 5307, 5310 and 5311 programs were modified and the FTA 5324, 5329, 5337 and 5339 (Bus and Bus Facilities) were enacted. For other types of transportation, several programs were combined into the new Active Transportation Program (ATP).

In 2012, California began a “Cap and Trade” program designed to reduce the greenhouse gas emissions that cause climate change. This program is a major new funding source expected to provide billions of dollars per year for transportation funding and other programs.

Sources of Funding

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 the 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.

**Proposition 1B**

In 2006, the voters of California approved about $20 billion in bonding (Prop 1B) for the Highway Safety, Traffic Reduction, Air Quality, and Port Security Act. This funding has aided in the construction of several projects in Merced County, including the G St. underpass in Merced and freeway and interchange projects on Highway 99. However the funding from this bond is nearly all spent.
Active Transportation Program (ATP)

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 to make California a national leader in active transportation.

The ATP is a statewide competitive grant funding program. For 2014-2015 the total amount available in the program is about $120 million.

Congestion Mitigation Air Quality Funds

As a non-attainment area, Merced 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. MCAG 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.

Approximately $100 million in CMAQ funds are estimated to be available for programming over the next 25 years, based on the current $3 million per year and assuming an average 2% per year growth over the next 25 years. CMAQ projects are evaluated and selected on a countywide competitive basis.
Regional Transportation Impact Fee
The Regional Transportation Impact Fee (RTIF) program was adopted in August 2005. The RTIF contributes to the funding of 13 projects across the county. The total cost of these projects is $830 million. The RTIF contributes about 17%, or $210 million towards these projects. The fee is uniform throughout the county.

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 & Sustainable Communities, Intercity Rail, and Low Carbon Transit Programs. At least 25% of Cap and Trade expenditures must benefit disadvantaged communities, and at least 10% must be located in disadvantaged communities. Most of the Merced region is defined by the state to be a disadvantaged community. Total expenditures in the region over 25 years are estimated to be $300 million, based on the state receiving $2 billion per year in proceeds now, assuming it grows 5% per year, with about 33% going to regional transportation, and assuming Merced receives about 1% of the total which is 40% more than our current population share.

Potential New Sources of Funding
Local Transportation Measure
MCAG prepared and approved a Transportation Expenditure Plan (TEP) in 1991, for the purpose of obtaining voter approval of a Transportation Measure. Action to implement the plan was delayed due to the nationwide recession and announcement that Castle Air Force Base would be closed by 1995.

In 2006, MCAG adopted a revised TEP. Projects included in the TEP were identified through an evaluation of the county’s transportation system and interviews with key staff and elected officials representing the county and all of the cities. Projects were evaluated in a public opinion poll conducted as a part of the study.
Key elements of the TEP include:

- Projects of countywide significance.
- Funds for maintenance and operations for local streets and roads.
- Funds to improve transit.
- A requirement that jurisdictions adopt local traffic impact fees to insure that new development pays its own way.

A Transportation Measure for a period of 30 years would generate about $450 million in additional revenue. The Measure would automatically sunset after 30 years.

A Transportation Measure was placed on the November 2002 ballot. 61% of the voters supported the measure. As a 2/3 support was needed, it did not pass. A Measure was also placed on the ballot in June 2006 and November 2006. It again failed to pass (with 63% and 61% support).

**Local Motor Vehicle Fuel Tax**

SB 215 gives counties the ability to hold general elections to determine if taxing local sales of motor vehicle fuel (gasoline, diesel) is a desired local option to finance their regional transportation network. The uses, method of implementing, advantages and disadvantages are similar to that of a sales tax. One advantage of this type of charge is that it is user oriented. Fuel consumption is related to road use, thus heavier users bear a higher burden of the cost commensurate with actual use.

As a user fee, instituting a local gas tax is a relatively equitable local financing option. Motor fuel taxes are easily administered, and since they are tied to fuel prices that tend to rise with inflation.

**Public and Private Parking Fees**

This mechanism includes increasing public and private parking charges and instituting parking fees where parking is now free. Most cities in California have become more aggressive in pricing downtown parking, both at meters and in lots in the post-Proposition 13 financial environment. In some cities, extended hours of parking lot operation and substantially increased enforcement have increased revenues from parking fees. Often these funds are treated as a general fund source rather than tied to specific transportation expenditures.
If public parking fees were to be initiated, several issues would need to be addressed. For example, the fees would probably have to be implemented on a countywide or region wide basis in order to address issues of equity and consistency among the local jurisdictions. In addition to representing a potential source of revenue, parking pricing has also shown to be one of the most significant factors in reducing drive-alone trips and is used as a common transportation demand management strategy.

**Regional Transient Occupancy Tax (Hotel/Motel)**

The Transient Occupancy Tax is a tax on visitor accommodations. These visitor-based taxes can be imposed on hotel/motel establishments in two different ways. One method is to tax each lodging establishment annually on a per unit basis. Another method is a tax charged directly to the patron for each night of lodging.

An advantage is the fact that the tax does not directly affect local residents. Its major disadvantages are its susceptibility to fluctuations in the tourist economy and the need to have the fees implemented on countywide or region wide basis in order to address issues of equity and consistency among the local jurisdictions.

**Toll Facilities**

Tolls allow the financing of the construction, operation or maintenance of roadway facilities. This is a familiar source of funding for bridges, tunnels, and turnpikes primarily in the eastern portion of the United States; however, more and more toll facilities are beginning to be constructed in California. For new facilities, it provides a means of generating up-front debt funding to construct transportation facilities without disturbing existing governmental agency budgets and programs, or requiring new or additional taxes. The financing costs for bonds in terms of interest on debt can be substantial. After the toll facility is completed, tolls usually provide income to operate and maintain the facility, as well as amortize the outstanding debt.

With the new emerging electronic technologies of toll collection, toll roads may be more feasible than before. Federal Highway officials are reconsidering the merits of toll roads to supplement urban transportation facilities. Problems that may face this region are the limited number of high volume facilities which would justify toll collection, and the direct and indirect costs involved in collecting tolls.
**Vehicle Miles Traveled Fee**

This financing mechanism is a vehicle use fee based on the number of miles driven. This type of fee generates substantial revenues, implements policy goals of increased mobility and is strongly related to transportation demand and congestion. Vehicle Miles Traveled (VMT) fees would appear to be a stable and a growing source of revenue given Californians’ propensity to use their automobiles. VMT fees also would maintain an ability to capture revenues from a growing fleet of alternative fuel vehicles within the state. The state is currently studying this funding mechanism as a possible replacement for the state gas tax.

**Emissions Fee**

An emissions fee could work in a manner similar to the Vehicle Miles Traveled fee program except that user charges could be based on the levels of emissions rather than miles traveled. The measure would be recorded at the time the vehicle is smog checked and the driver would pay a fee based on a sliding scale. Revenue formulas would have to be adjusted due to the fact that the California vehicle fleet is becoming “cleaner” as older polluting vehicles are retired and replaced with vehicles that have improved emission technology.

An emissions fee program could be linked to the vehicle smog certification program. Although the mileage data is currently not collected by the Department of Motor Vehicles, the state is moving toward improved data bases and methods of collecting data while respecting privacy.

**Public-Private Partnerships**

A public-private partnership (PPP or P3) represents a broad category of financing mechanisms that are being used to harness public sector participation. PPPs have been used with mixed success in several states nationwide. The State of California has enacted legislation to permit PPP approaches for transportation infrastructure development.

**Estimated Revenues**
**Federal Funding Sources**

Federal funds are used for all modes, including highways and transit projects. These funds normally require a non-federal match of between 11.47 to 20% for road projects, and a 11.47% to 50% match for transit projects.

**Federal Funding Sources and Projected Revenue (in escalated dollars)**

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>Abbreviation</th>
<th>Primary Mode</th>
<th>Funding through 2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Transportation Program</td>
<td>STP</td>
<td>Streets (local)</td>
<td>75,000,000</td>
</tr>
<tr>
<td>Congestion Mitigation / Air Quality</td>
<td>CMAQ</td>
<td>Air quality</td>
<td>100,000,000</td>
</tr>
<tr>
<td>Federal Transit Administration Section 5307</td>
<td>FTA 5307</td>
<td>Urban transit</td>
<td>58,000,000</td>
</tr>
<tr>
<td>Federal Transit Administration Section 5311</td>
<td>FTA 5311</td>
<td>Rural transit</td>
<td>8,000,000</td>
</tr>
<tr>
<td>Federal Transit Administration Section 5309</td>
<td>FTA 5309</td>
<td>Transit</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Highway Bridge Replacement/Rehabilitation</td>
<td>HBRR</td>
<td>Bridges (local)</td>
<td>13,000,000</td>
</tr>
<tr>
<td>Hazard Elimination/Safety</td>
<td>HES</td>
<td>Streets (local)</td>
<td>8,000,000</td>
</tr>
</tbody>
</table>

**State and Regional Funding Sources**

State funds are generated by license fees, truck fees, sales and fuel taxes, and other state apportioned funds.

**State and Regional Funding Sources and Projected Revenue (in escalated dollars)**

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>Abbreviation</th>
<th>Primary Mode</th>
<th>Funding through 2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interregional Improvement Program</td>
<td>IIP</td>
<td>Highways</td>
<td>74,000,000</td>
</tr>
<tr>
<td>Regional Improvement Program</td>
<td>RIP</td>
<td>Regional Roads</td>
<td>150,000,000</td>
</tr>
<tr>
<td>Regional Transportation Impact Fee</td>
<td>RTIF</td>
<td>Regional Roads</td>
<td>48,000,000</td>
</tr>
<tr>
<td>Local Transportation Funds</td>
<td>LTF</td>
<td>Transit</td>
<td>182,000,000</td>
</tr>
<tr>
<td>State Transit Assistance Fund</td>
<td>STAF</td>
<td>Transit</td>
<td>23,000,000</td>
</tr>
<tr>
<td>Gas Tax – Proposition 111</td>
<td>Prop. 111</td>
<td>Local Roads</td>
<td>88,000,000</td>
</tr>
<tr>
<td>Active Transportation Program</td>
<td>ATP</td>
<td>Bike, Ped</td>
<td>60,000,000</td>
</tr>
<tr>
<td>Cap and Trade (Greenhouse Gas Reduction)</td>
<td>GGRF</td>
<td>Transit</td>
<td>300,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rail</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bike/Walk</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Air</td>
<td></td>
</tr>
<tr>
<td>$125,000,000 – Bus Transit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$75,000,000 – Passenger Rail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50,000,000 – Bike &amp; Ped.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50,000,000 – Ridesharing/Vanpools</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Summary of Transportation Revenue Outlook by Mode, to 2040

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Who Chooses</th>
<th>Who Does</th>
<th>$ millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Road Maintenance</td>
<td>Local</td>
<td>Local</td>
<td>163</td>
</tr>
<tr>
<td>Highways &amp; Road Expansion</td>
<td>MCAG, State</td>
<td>Caltrans, Local</td>
<td>272</td>
</tr>
<tr>
<td>Transit – Bus and Rail</td>
<td>MCAG</td>
<td>The Bus, SJJPA, ACE</td>
<td>526</td>
</tr>
<tr>
<td>Bike, Walk, Air, Ridesharing</td>
<td>MCAG, State</td>
<td>Local</td>
<td>210</td>
</tr>
</tbody>
</table>

### Percent of Funding

- Road Maintenance
- Road Expansion
- Bus & Rail Transit
- Bike/Walk/Ridesharing

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2014 RTP amendment 1 29 MCAG
This chapter identifies the transportation needs and issues of the region, and establishes improvement projects and programs needed to address them, following the goals and objectives of the Policy Element. The discussion and actions are grouped by mode or strategy:

- Highways, Streets and Roads
- Transit (Bus)
- Rail (Passenger)
- Goods Movement (Trucking and Rail)
- Aviation
- Bicycle
- Pedestrian
- Alternatives (Ridesharing, TCMs)
- Management and Operations
- Land Use Strategies

A multi-modal transportation system offers the most diversity and flexibility for a strong economy, sound environment, and a livable community. The transportation system should provide links between modes. Various modes should work in concert to meet the goals of the Plan. There is no single solution for the transportation system that will be the answer to all of the region’s transportation needs. A variety of options will provide a system that is flexible.

**Regional Road System**

The regional road system is the fundamental component of transportation in Merced County. It provides the basic network for the movement of people and goods. Regional roads are used by nearly all travel modes including automobiles, ridesharing (carpools and vanpools), transit buses, paratransit, trucks, bicycles, and pedestrians.

The regional road system consists of State and Interstate Highways as well as local routes which connect urban areas and other major activity centers. Facilities that are not included in the regional road system are considered to primarily serve local transportation needs.
Highways, Streets, and Roads

Most of the identified needs relate either directly or indirectly to the system of highways, streets, and roads. The passenger automobile is the method by which most travel occurs, however it is measured: time, cost, mileage, or trips. However, other modes – including transit, goods movement, and bicycle – are also dependent on the road system. Preserving the viability and capacity of this system is vital to the region’s economy and quality of life.

Maintenance of Existing System

There are approximately 435 miles of roadways on the Regional Road system in Merced County and approximately 330 of those miles are State Highways. Caltrans has set aside funds for maintenance of their system. The responsibility for maintenance on the remaining 105 miles of Regional Road system and the more than 2,000 miles of off-system roads rest with the seven local jurisdictions.
A typical local two-lane roadway costs approximately $770,000 per mile to construct. The expected life of that facility is around 20-30 years, if no preventative maintenance is applied during the life of that road.

Streets and roads take quite a beating under the weight of traffic and the vagaries of weather. Also, goods movement by freight trucks will significantly lower the pavement life and accelerate the need for maintenance, rehabilitation, and replacement.

Public roads allow for moving people and freight. Due to their value and importance to the national economic vitality (supportive data to be found in goods movement section of this report), preserving their condition and performance should be a priority.

Poor-quality streets and roads are costly to motorists and safety issues for cyclists and pedestrians. A “Rough Roads Ahead” report (2009), prepared jointly by the American Association of State Highway and Transportation Officials (AASHTO) and The Road Information Program (TRIP), estimated the annual costs per motorist for poor roads to be $461 for Fresno and $538 for Modesto.

To keep the streets and roads in good repair requires substantial investment in transportation infrastructure and cost-effective maintenance strategies.

A critical concept in street and road maintenance is that, while pavements deteriorate only 40 percent in quality in the first 75 percent of their life, this deterioration subsequently accelerates rapidly, resulting in another 40 percent drop in quality in the next 12 percent of life.

Pavement Life Cycle

![Pavement Life Cycle Diagram]

Source: National Center for Pavement Preservation
A pavement management system can identify pavements that are headed toward such a precipitous decline, so that preventive maintenance can be applied in a timely fashion. This makes PMP a good tool for aiding local agencies with planning short- and long-term system-wide maintenance strategies to maximize the impacts of expenditures on the system.

**Maintenance Needs**

Looking at the initial streets and roads network (minus the State Highways), 76% would be considered in fair to good condition, while 24% would require minor-major rehabilitation or reconstruction. To maintain, rehabilitate, and restore the system would require about $187 million (2009).

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Preventative</th>
<th>Rehab/Recon</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atwater</td>
<td>$2,544,208</td>
<td>$12,825,652</td>
<td>$15,369,860</td>
</tr>
<tr>
<td>Dos Palos</td>
<td>$722,345</td>
<td>$9,131,770</td>
<td>$9,854,115</td>
</tr>
<tr>
<td>Gustine</td>
<td>$221,851</td>
<td>$6,975,283</td>
<td>$7,197,134</td>
</tr>
<tr>
<td>Livingston</td>
<td>$1,042,323</td>
<td>$4,712,263</td>
<td>$5,754,586</td>
</tr>
<tr>
<td>Los Banos</td>
<td>$3,127,240</td>
<td>$17,748,468</td>
<td>$20,875,708</td>
</tr>
<tr>
<td>Merced</td>
<td>$3,989,098</td>
<td>$23,297,287</td>
<td>$27,286,384</td>
</tr>
<tr>
<td>Merced County</td>
<td>$10,915,345</td>
<td>$88,985,055</td>
<td>$99,900,400</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>$22,562,410</td>
<td>$163,675,778</td>
<td>$186,238,188</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pavement Condition</th>
<th>Good to Fair</th>
<th>Poor / Worse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>76%</td>
<td>24%</td>
</tr>
</tbody>
</table>

**Funding Shortfalls**

Currently, about $15 million a year is allocated to the local jurisdictions for local streets and road projects. The local jurisdictions decide how to use this money on their streets and roads. The cost to perform the preventative and minor rehabilitation activities is about $23 million, and the cost to conduct minor-major rehabilitation and reconstruction activities is about $164 million. If the local agencies applied all their transportation funding to road maintenance there would be a shortfall of $172 million.
This funding level has not changed much in the past decade, even though costs for maintenance have increased in recent years due to the rise in oil prices (oil is major component of pavement treatment material). These funding sources are inadequate to maintain an ever-increasing, continually-deteriorating streets and roads network.

**Future Funding Shortfall**

Future maintenance needs have been determined and compared with estimated revenues to assess the possible funding shortfall. The future need is nearly 2½ times the anticipated revenue. Given the existing annual revenue sources, the estimated future-funding shortfall is about $220 million. In order to maintain pavement infrastructure for Merced County, other revenue sources will be needed.
Transportation Demand Modeling
In 2013, the San Joaquin Valley MPOs completed travel demand model improvements funded through Proposition 84. MCAG, in cooperation with the Stanislaus Council of Governments (StanCOG) and the San Joaquin Council of Governments (SJCOG), expanded its model to cover these three counties. The updated three-county model gives the three agencies the capability to generate new technical information to understand the region’s future travel behavior, modal choices, transportation and transit network performance, and interregional travel demand.

Level of Service
MCAG and Caltrans evaluate existing and potential future deficiencies in the regional road network in terms of Level of Service (LOS). This is a concept used for expressing the traffic flow conditions of a road segment in relation to the capacity of the roadway. LOS describes in a general way what the traffic conditions are, in terms of speed and travel time, volume and capacity, traffic interruptions, and safety. Level of Service for a road may range from LOS “A” to “F” with “A” being free-flow and “F” being heavily congested. MCAG has established a LOS standard of “D” for the entire regional road network. Any segment of roadway that is worse than LOS D is considered to be a deficiency in the transportation system. Caltrans’ threshold is “C” for rural and “D” for urban interregional routes.

Capacity-Increasing Improvement Projects
A list of projects necessary to preserve the capacity of the regional road system was prepared. It was based on the Policy goal of having no worse than level of service “D” on any significant roadway. Projects were drawn from the prior Regional Transportation Plan, the Regional Transportation Improvement Fee (RTIF) Study, and local and state improvement programs. Project costs were estimated by project sponsors. Future costs were escalated at 3% per year to account for inflation.

The following projects were recently constructed and open to traffic, or are under construction, or going to construction soon (as of April 2014):

- SR 140 – Bradley Overhead replacement and widening to 4 lanes
- SR 99 – Arboleda interchange and Freeway widening to 6 lanes
- SR 99 – Plainsburg Rd. interchange and Freeway widening to 6 lanes
- SR 99 – Atwater-Merced Expressway interchange
- SR 99 – Livingston-Delhi Freeway Widening to 6 lanes
**Recommended Regional Improvement Projects**

Below are the major regionally significant projects needed to serve existing communities and planned growth. The projects listed are consistent with the state’s Interregional Transportation Improvement Program (ITIP) as well as with MCAG’s own Federal Transportation Improvement Program (FTIP).

“Tier 1” projects are financially constrained – funding is expected to be available for them by 2040. “Tier 2” projects are planned and necessary but funding is not expected for them by 2040.

The Los Banos Bypass is assumed to be funded with Regional and/or Interregional Improvement Program funds and/or Regional Impact Fee funds. Livingston-Delhi Freeway Widening is assumed to be funded entirely from Interregional improvement program funds. Campus Parkway is assumed to be funded by Local funds, Local Development Fees, Regional funds, and Federal earmark or grant funds.

<table>
<thead>
<tr>
<th>Project</th>
<th>Year</th>
<th>Cost</th>
<th>Funding Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 152, Los Banos Bypass, segment 1</td>
<td>2023</td>
<td>44</td>
<td>RTIP, RTIF, ITIP</td>
</tr>
<tr>
<td>new 4 lane expressway from Hwy. 165 to Santa Fe Grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 152, Los Banos Bypass, segment 2</td>
<td>2033</td>
<td>154</td>
<td>RTIP, RTIF, ITIP</td>
</tr>
<tr>
<td>new 4 lane expressway from west of Los Banos to Hwy. 165</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR 99, Livingston-Delhi Widening</td>
<td>2020</td>
<td>74</td>
<td>ITIP</td>
</tr>
<tr>
<td>widen freeway from 4 to 6 lanes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>southbound &amp; northbound are separate projects in STIP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>Year</th>
<th>Cost</th>
<th>Funding Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Parkway, segments 2 and 3</td>
<td>2035</td>
<td>100</td>
<td>Local, Development Fees</td>
</tr>
<tr>
<td>new 4 lane expressway from Childs Ave. to Yosemite Ave</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**“Tier 2” – Major, Regionally Significant, Unconstrained/Unfunded Projects**

<table>
<thead>
<tr>
<th>Project</th>
<th>Year</th>
<th>Cost</th>
<th>Funding Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atwater-Merced Expressway</td>
<td>-</td>
<td>180</td>
<td>-</td>
</tr>
<tr>
<td>new 4 lane expressway from Green Sands to 59/Bellevue</td>
<td></td>
<td></td>
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<tr>
<td>SR 59, Widening from 16th St. to Olive Ave.</td>
<td>-</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>SR 99, Widen from 4 to 6 lanes through Merced and Atwater</td>
<td>-</td>
<td>420</td>
<td>-</td>
</tr>
<tr>
<td>SR 165, Realignment from Hwy. 140 to Hwy. 99</td>
<td>-</td>
<td>130</td>
<td>-</td>
</tr>
<tr>
<td>widen freeway from 4 to 6 lanes</td>
<td></td>
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</tr>
</tbody>
</table>

Year: expected year project would be open for use
Cost: in millions of dollars and in “Year of Expenditure” (YOE) amounts. All amounts are estimates.
RTIP: Regional Transportation Improvement Program, recommended by MCAG, subject to approval of California Transportation Commission (CTC)
RTIF: Regional Transportation Impact Fee, controlled by MCAG
ITIP: Interregional Transportation Improvement Program, recommended by Caltrans, approved by CTC
Local, Development Fees: Locally controlled sources and/or Development Impact Fees
The map below shows the regionally significant projects:

Short and Long Range Plan

- Maintain street and road system for vehicle travel, transit services, bicycle travel, and pedestrians.
- Prepare and maintain transportation land use databases for determining future travel demand on the regional road system.
- Develop and maintain a regional transportation model.
- Analyze the cumulative impact of local development for the county and cities through the RTP Updates.
- Fund and implement the projects identified on the Tier 1 priority list in the Action Element of the RTP.
• Aggressively pursue discretionary Caltrans funding such as IIP, HBRR, HES
• Aggressively pursue the passage of a 1/2 sales tax for transportation
• Prepare and apply evaluation criteria to prioritize regional road projects identified to improve the overall transportation system of the region.
• Use Regional Improvement Program funds to finance the prioritized regional improvements
• Continue to exchange Federal TEA and STP for state dollars
• Aggressively pursue all available and potential fund sources to implement improvements to the present transportation system and maintain the transportation system.
• Evaluate transportation impacts of land use and development proposals.
• Provide technical assistance in the preparation of transportation financing mechanisms.
• Assist in the preparation of Circulation Elements for general plans and community plans.
• Involve the local, state and federal agencies and elected officials in the transportation planning process.
• Promote consistency between the Regional Transportation Plan and local and state level plans.
• Use the MCAG newsletter for transportation planning education.
• Conduct workshops and information sessions for transportation planning.

Responsibilities

The planning process requires that agencies work in concert to oversee projects. The following lists identify the responsibilities of each agency:

Federal Highway Administration

• Disseminate transportation regulations
• Fund highway, street, and road projects.
• Review and approve conformity determinations.

State of California

• Maintain highway system.
• Fund highway, street and road projects.
• Prepare project study reports (PSRs) for state highway deficiencies.
• Design and implement state highway projects.
• Enforcement of state and federal laws and speed limits.
**MCAG**

- Develop a safety education campaign.
- After the reasonable unmet transit needs are funded, allocate Local Transportation Fund (LTF) funds for street and road projects,
- Identify deficiencies and/or future congestion impacts on the regional road network.
- Prepare Regional Transportation Improvement Program (RTIP) and monitor its implementation.
- Assist cities and county with transportation planning.
- Review local developments for consistency with General Plan circulation elements and with the Regional Transportation Plan.
- Review local General Plans for consistency with the Regional Transportation Plan.
- Prepare transportation planning studies, project study reports, and major investment studies as needed.
- Continue to exchange federal Surface Transportation Program funds for state only funds.
- Continue to exchange federal Transportation Enhancement Activity funds for state only funds.
- Pursue legislation for additional transportation funding.
- Aggressively pursue all discretionary transportation funding sources for projects within Merced County.

**Local jurisdictions**

- Review local developments for consistency with General Plan circulation elements and with the Regional Transportation Plan.
- Review local General Plans for consistency with the Regional Transportation Plan.
- Maintain street and road system.
- Enforcement of local laws and speed limits.
- Prepare Project Study Reports for projects within their respective jurisdictions.
- Use Pavement Management System to maximize cost-effectiveness of preventive maintenance.
- Identify and implement operational improvements.
- Build and maintain new streets and roads to serve growth as identified in individual General Plans.
- Construct local projects identified in the Transportation Improvement Program (TIP).
- Participate in transportation planning studies.
Corridor Preservation

Corridor preservation is a strategy aimed at minimizing future expenditures related to transportation by either purchasing right-of-way or preventing or slowing development in areas that are potentially needed for future improvements. The following corridors are possible locations for future improvements:

- Los Banos Bypass: SR 152 re-routed to the north of the City of Los Banos. Environmental studies are complete and an alignment selected.
- Hilmar Bypass: Highway 165 Bypass of Hilmar
- Campus Parkway
- Merced-Atwater Expressway: the area between Merced and Atwater, roughly bounded by Highway 99, Buhach Rd., Bellevue Rd., and Highway 59
- Highway 99: potential widening from southeast Merced to northwest Atwater

Transit (BUS)

There are a variety of transit options available in Merced County including bus and rail service. The level of transit service available to Merced County residents has increased regularly since transit was introduced to the area in 1974. Historically, public transit has developed in response to the basic transportation needs of Merced’s transit dependent population and has maintained that standard of service.

Existing System

In 1996, Merced County Transit – “The Bus” – began providing a consolidated public transit service throughout Merced. Prior to that time public transit service had been provided by some of the individual jurisdictions. The Transit Services Consolidation Agreement established a Joint Powers Agreement (JPA) between Merced County and the Cities of Atwater, Dos Palos, Gustine, Livingston, Los Banos and Merced. The County of Merced, through the Department of Public Works’ Transportation Division – Merced County Transit, administered and managed the consolidated services until July 1, 2010. At that time, administration of the service was handed over to the Transit Joint Powers Authority for Merced County. The Bus serves the entire County of Merced with fixed route, demand response or Dial-A-Ride service and subscription bus service for commuters. Transit services are provided by a private operator under contract to the TJPA.
“The Bus”

Transit Joint Powers Authority for Merced County operates urban and rural bus transit services, known as The Bus. The Bus operates on 20 fixed route lines and provides paratransit service throughout the county. Paratransit is a reservation-based, complimentary curb-to-curb transit service for ADA qualified persons with disabilities who are unable to use the fixed route system. The Bus currently operates 50 buses with 35 assigned to fixed routes and the remaining 15 providing paratransit service throughout Merced County. Generally, The Bus fixed route services operate from 5:30am to 11:00pm Monday through Friday, and from 7:00 AM to 7:00 PM on weekends.

Unmet Transit Needs Process

MCAG annually monitors whether transit needs are being met for the citizens of Merced County, as is required by Section 99401.5 of the Transportation Development Act (TDA). The TDA governs the
administration of the Local Transportation Fund (LTF). The TDA requires that the Regional Transportation Planning Agency (MCAG) make a finding, after a public hearing, that there are no unmet public transportation needs within a jurisdiction that can reasonably be met before it may approve LTF claims for streets and roads.

The RTP is the guiding document for the provision of transit services; therefore, any service implementation should be consistent with the RTP. The Transportation Development Act requires that prior to claim approval, an RTP consistency finding be made.

To determine if there are any unmet transit needs within the county, MCAG has established the Social Services Transportation Advisory Council (SSTAC), in compliance with the Senate Bill 498 legislation. The SSTAC meets on a quarterly basis in various communities of Merced County, to hold noticed public meetings for interested and concerned citizens. According to Article 3.99238 of the TDA, the SSTAC shall have the following responsibilities:

Annually participate in the identification of transit needs in the jurisdiction, including unmet transit needs that may exist within the jurisdiction of the council and that may be reasonable to meet by establishing or contracting for new public transportation or specialized transportation services or by expanding existing services.

Annually review and recommend action by the transportation planning agency for the area within jurisdiction of the council which finds by resolution, one of the following: that (A) there are no unmet transit needs, (B) there are no unmet transit needs that are reasonable to meet, (C) there are unmet transit needs, including needs that are reasonable to meet.

Advise the transportation planning agency on any other major transit issues, including the coordination and consolidation of specialized transportation services.

The Unmet Transit Needs Process has been a useful tool in identifying transit service deficiencies. The introduction of Saturday bus service resulted from this process as have other alterations to the existing system.

**Coordinated Transit Service Plan**

The Public Transit – Human Services Coordinated Plan was adopted by MCAG in July 2009 in response to requirements established by SAFETEA-LU. This document outlines existing public and private social
service transportation systems within Merced County and offers strategies for improvement of transportation service through increased coordination and consolidation.

**Other Transit Providers**

**Yosemite Area Regional Transportation System (YARTS)**

Each year, the already substantial number of visitors to Yosemite National Park increases. Travel demand to and from the Park is tremendous during peak periods. In order to plan better public transportation, several of the counties that serve as access points to the park have individually studied transit systems. However, recognizing the importance of working together and pooling resources, these counties have formed a means by which they can more closely coordinate transit activities.

In 1999, a Joint Powers Agreement (JPA) for the provision of transit service in the greater Yosemite Region was formed by Mariposa County, Merced County, and Mono County. The YARTS JPA is governed by a three member Board of Commissioners. A county supervisor is appointed to the board of commissioners from each of the member counties. This board determines transit service plans, operating and capital budgets, transit fare structure and capital improvement programs. In May of 2000 YARTS began providing transit service throughout the Yosemite Region.

The YARTS JPA has adopted the following mission:

YARTS will provide a positive alternative method of access to Yosemite National Park, carrying visitors, employees and residents. YARTS service is not intended to replace auto access or trans-Sierra travel, but is intended to provide a viable alternative that offers a positive experience, emphasizing comfort and convenience for riders while guaranteeing access to the Park.

YARTS contracts with MCAG for staffing to administer and manage the transit service. MCAG performs all accounting and billing functions for the JPA, administers construction contracts for bus stops, and prepares outreach materials including schedules, route maps, and pamphlets.
**VIA Charter Lines**

VIA Charter Lines provides charter services to private groups as well as limited regional fixed route service from Merced to Yosemite National Park. VIA maintains a fleet of approximately 20 coaches and 5 large vans.

**Greyhound Bus Lines**

The Greyhound Trailways bus lines are a combined national bus carrier providing service in and through the county. Bus depots are located in Merced and Los Banos. Some of the scheduled buses leaving these two depots will make drop-offs at other cities within the county.

**Social Service Transportation Providers**

Various social service providers throughout Merced County offer specialized transportation service for their clients. These services tend to address the needs that public transit cannot reasonably meet, including evening service, non-emergency medical transport, and job training transport, to name a few. MCAG regularly inventories the various area transit providers to prevent duplication of services and thereby the waste of resources.

**Merced County Area Agency on Aging**

The Senior Transportation Program provides transportation funding subsidy to disabled and older adults, 60 years of age or older. Monthly bus passes are available for purchase at a discounted price. Limited number of free bus passes also available.

Average daily attendance is 8 of which approximately 2 require transportation services.

Transportation budget - $50,000 for bus passes. Funding sources are derived from local general funds, minimal donations, and the California Department of Aging.

**Short Range Plan**

- Provide adequate fixed route transit system to serve the general public, including transit-disadvantaged persons.
- Add additional routes and expand services as necessary to meet ridership demand to achieve established transit standards.
- Provide improved transit service through the county wide Consolidated Transit System.
- Provide 30 minute service on the urban routes and 60 minute service on the intercity routes.
- Provide expanded transit to serve UC Merced.
• Coordinate countywide transit system with neighboring transit services and modes in Stanislaus, Madera, Amtrak, & YARTS.
• Involve the Social Services Transportation Advisory Council and the Citizens Advisory Committee in the regional transit planning process.
• Use the MCAG newsletter for transit education.
• Continue to be a member and active participant of the YARTS JPA.
• Support alternative transportation choices to Yosemite National Park.
• Provide staffing, administration and management services for the Yosemite Area Regional Transportation System (YARTS) per contracts with the YARTS JPA.

Responsibilities

Transit Operators

• Monitor existing transit services and make adjustments to routes and schedules as necessary.
• Provide effective, efficient public transportation which meets the needs of Merced County residents.
• Provide cost effective transit service.

MCAG

• Assist transit operators with transit planning and funding.
• Develop tools to accurately assess future transit needs.
• Coordinate transit system development with community planning and development efforts and land use policy.
• Oversee the annual Unmet Transit Needs determination process.
• Aggressively pursue all discretionary transit funding to accomplish our transit goals.
• Address unmet transit needs that are reasonable to meets prior to allocating Local Transportation Funds for street and road purposes.

Social Service Agencies

• Continue to provide specialized transit service, which cannot be reasonably provided by public transit.
• Apply for funds available through FTA
• Continue to support and coordinate with general transit operators.
Long-Range Plan

- Develop a Long Range Transit Plan
- Continue to meet the transit needs of Merced County residents by closely monitoring changes in transit use and need.
- Make use of technological advances that will enhance transit service and improve efficiency.
- Continue to coordinate with area transit providers to prevent duplication of services.
- Continue to follow planning direction as identified in the Short Range Transit Plan.

Passenger Rail

The San Joaquin Corridor (Bakersfield to Oakland and Sacramento) is a major transportation resource between Southern and Northern California and boasts the fifth highest ridership of any Amtrak service in the country. It serves a vital function in providing intercity service within and between cities in California’s Central Valley.

The 363-miles of the San Joaquin Corridor carry intercity passenger rail and freight service, with connections to commuter rail services in Stockton. The current operating schedule includes six daily round trip trains: four between Oakland and Bakersfield and two between Sacramento and Bakersfield. All trains run between Stockton and Bakersfield. In order to provide the six-frequency service between all points on the route, connecting buses are provided between Stockton and Sacramento for trains serving Oakland - Bakersfield; and for trains serving Sacramento - Bakersfield, connecting buses are provided between Stockton, Oakland and San Francisco. See Figure x for a San Joaquin route map including the connecting bus service.

The average run time between Oakland and Bakersfield is 6 hours and 13 minutes with an overall average speed, including station dwell time, of 50 miles per hour. Between Sacramento and Bakersfield, the average run time is approximately 5 hours and 19 minutes with an overall average speed of 53 miles per hour. The maximum track speed on the San Joaquin Corridor is 79 miles per hour.

Amtrak operates the San Joaquin line under provisions of its contracts with the BNSF and UPRR. Predominant right-of-way ownership is by the BNSF which owns the 276 miles of track from Port Chicago to Bakersfield. The UPRR owns 39 miles at the north end of the route between Oakland and Port Chicago and 49 miles in the segment between Stockton and Sacramento.

State Rail and Bus Routes
Merced County’s economic vitality relies heavily upon the efficiency of freight transportation, also known as “Goods Movement”. Movement of goods throughout the region is accomplished by trucking, railroads, air freight, and pipelines.
The overwhelming majority of the tonnage, 94%, is moved by trucks. Rail accounts for about 6% of the total, while air is less than 0.1%.

**Freight Commodities and Distribution by Mode for Merced County**

![Pie charts showing freight distribution by mode for Merced County.](image)

As shown in the pie charts, most of the freight transport for Merced County involves agricultural & forestry goods being moved by trucks.

In 2008, Merced County’s farm commodities generated $2.6 billion. Using conversion factors from the University of California Davis research study, this $2.6 billion agricultural production creates 47,000 jobs (29,000 in the farm sector and 18,000 in other industries).

Freight is transported from, to and within the San Joaquin Valley predominantly by the following modes: trucks, rail, and air.

**Trucks**

Trucking is the most commonly used mode for transporting freight. Trucks are used for being the most economical and for having the widest network for transloading (at docks or to/from distribution centers or to other modes) and for regional deliveries. Commodity movement by this mode is a major cause of street and highway surface failures (necessitating a high level of street and highway network maintenance), poor air quality, and worsening congestion.
Heavy trucks damage roads much faster than do automobiles. Because of the high level of truck travel, streets and highways are subject to rapid deterioration and failure. A fully loaded truck (80,000 pounds) has a significant impact on a roadway. The American Association of Highway officials conducted road tests that establish that the passage of approximately 9,600 cars equal the effect of one fully loaded truck on the roadway.

In addition to the deterioration of streets and highways throughout the Valley, emissions from trucks have an adverse effect on air quality. Many trucks use diesel fuel, which releases more emissions than regular unleaded gasoline. By their very size and slower speeds, trucks lead to congestion and reduced Levels of Service. Major highway corridors in Merced County experience relatively high truck traffic, between 20-30 percent of the Annual Average Daily Traffic. While current legislation focuses on implementing Traffic Control Measures (TCMs) for passenger vehicles, TCMs do not specifically address truck usage.

Travel along the major corridors in Merced County is mostly in a north-south direction. State Route 99 and Interstate 5 are the primary north/south interregional routes used by trucks. State Route 99 is a significant interregional route of state-wide importance and carries most of the truck-transported agricultural goods. Other state highways and county roads play major roles in distribution as well. State Routes 152, 140, 33, 59 and 165 provide the major east-west connections between Interstate 5 and Route 99.

Presently, there are over 30 trucking companies located throughout the county. There is also an undetermined amount of businesses that provide their own trucking, including retail outlets such as department stores and grocery stores.

Merced County has both agricultural and light industrial demands for trucking. The needs of individual growers and manufacturers to get their goods to major terminals, market places, and processing centers are met by trucks. In addition, trucks are used as feeder lines to distribute goods from major rail, water, and air centers. Because many Valley agricultural products are destined for world markets, efficient freight access at California export points must be ensured.

**Future Issues for Trucks**

The movement of goods by trucks is essential for the economy of Merced County. Trucking will continue to be the most flexible form of goods movement and will continue to add to highway congestion. Trucks, like cars, have an adverse effect on air quality, and the presence of trucks carrying hazardous materials
increases the probability of dangerous spills. Air and rail services are under-utilized for the movement of goods.

Cooperative efforts are needed between the trucking industry, the driving public and local officials to assess the impacts that trucks have on local streets, and to create regulatory guidelines for trucks in urban areas. Alternative transportation modes for the movement of goods should be explored and used when possible – although agricultural products need to be collected from throughout the rural area and trucks on local roadways will continue to be the best way to deliver these products. These include improved inter-modal freight transfer facilities and access at major airports and rail terminals, and the inter-modal linkage of trucks on rail as a technique for reducing truck traffic on selected highway corridors.

As the Valley develops to support a more mobile and service-oriented population, the need for east-west travel corridors will become crucial. Special attention must be given to the regional routes to keep them in a serviceable condition and to avoid major reconstruction costs.

Investing in the means to limit future congestion will be economically and environmentally beneficial to the county. With freight tonnages and values projected to significantly expand by 2035 (FHWA Freight Ops and Management), planning for this future growth will be instrumental to regional, state, and national vitality.

The movement of goods for the new University of California Campus is also an issue. The UC Campus itself opened in the year 2005. The movement of goods and supplies will increase incrementally as the population of the campus increases. The first segment of the new Campus Parkway facility is currently being constructed, and the remaining segments connecting to the UC Campus will hopefully be funded for construction.

**Rail**

Trains are considered the most feasible for longer-haul, out-of-region (transcontinental) transport.

There are two railroads that operate through Merced County: the Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF). These two rail lines provide for the transportation of freight, while the BNSF also provides Amtrak passenger service in and through Merced County.
**Union Pacific Transportation Company**

The Union Pacific (UP) Railroad currently operates 84 miles of track within Merced County. UP tracks are located both east and west of the San Joaquin River. They move freight in and through the county.

**Burlington Northern Railway Company**

The Burlington Northern Santa Fe (BNSF) Railroad maintains 43 miles of track within Merced County. Freight trains and Amtrak share these rail lines. Amtrak has one station located in the City of Merced on the Burlington Northern tracks. BNSF has a rail spur on the Castle Airport business park through which businesses on Castle are receiving deliveries.

**Freight Service**

The BNSF and UP Railroads provide freight movement in and through Merced County on a daily basis. Freight is moved by rail cars of several types, these include: flatbed cars, piggy-back cars, refrigerated produce cars, fuel tanker cars and regular stock box cars.

Several industrial/manufacturing and agricultural companies within the county use rail freight service. The largest of these rail freight service users are located in the Cities of Merced, Atwater, and Los Banos.

**Future Issues for Rail**

Rail freight service within Merced County is expected to increase due to higher costs associated with trucking. Merced will also have more industry in the future that should require more rail freight service. Consideration of increased rail transport should include grade-separations (approximately $15 million per) so that increased rail-haul frequencies don’t lead to worse congestion in other modes.

**Air Freight**

Air transport is utilized for most costly, long-range, fastest delivery of higher-cost merchandise.

Goods movement by air is an emerging element of freight movement in Merced County. Currently, Merced Municipal Airport and Castle Airport provide air cargo services.
Aviation

Current Conditions
The Merced region has five publicly owned, public-use airports: Gustine Airport, Castle Airport, Los Banos Municipal Airport, and Merced Regional Airport. Turlock Municipal Airport is located within the county but is owned by the City of Turlock, which is in Stanislaus County. In addition to the public use airports, there are eight privately-owned airfields located within Merced County, some of which allow public use.

Merced Regional Airport (Regional-Business/Corporate)
Merced Regional Airport is the only airport in Merced County that provides scheduled commercial airline, freight air cargo, and general aviation services. It is one of only three California airports where passenger service is supported by the Federal Essential Air Service (EAS) program. The airport is included in the National Plan of Integrated Airport Systems (NPIAS) and is classified as a Commercial Service - Non-Primary airport which means it receives scheduled commercial air service and enplanes 2,500 or more, but less than 10,000 enplaned passengers a year. The airport is also contained in the California Aviation System Plan (CASP) and is classified as a Commercial/Primary Non-hub Airport.

Gustine Airport (Community-Agriculture)
The Gustine Airport is classified as a basic utility airport, and is primarily used by private aircraft. Runway length at Gustine Airport is 3,200 feet, capable of handling multi-engine aircraft. Available hangar space is 11,500 square feet.

Los Banos Municipal Airport (Community-Agriculture)
The Los Banos Municipal Airport is a basic utility airport used primarily by private aircraft. Runway length at the Los Banos Airport is 3,801 feet, capable of handling multi-engine aircraft. The Los Banos Airport has 32,000 square feet of hangar space.

Castle Airport (Community)
For approximately 50 years, Castle Air Force Base, near the City of Atwater was operated as a military airfield. The facility’s primary mission was a base for long-range bombers. The facility also served as a training facility for bombers and air refueling aircraft crew training. Upon closure of Castle as a military base in 1995, the majority of the
facility’s property was transferred to Castle Joint Powers Authority (CJPA) for the purposes of transforming the facility to a civilian airport. The CJPA members consisted of the cities of Merced, Atwater and the County of Merced. In December 2006, all of the property was sold by the Air Force to the County of Merced. The size of the property is approximately 1,900 acres with 1,300 acres designated as airport property. The airfield, apron, and hanger areas cover approximately 1,100 acres and 500 acres is for revenue-producing airport support.

The capability of the 11,800-foot runway and heavy-duty taxiways at the Castle Airport makes the facility a regionally significant airport. In August 2006, Castle Airport was inspected by the FAA and certified as meeting all physical requirements of a Commercial Service Airport. In January 2007, the Castle Airport Control Tower was reopened. In addition to the existing buildings that have been leased for variety of uses, there is still a vast acreage of vacant land available that is being developed into a business park for light industrial and commercial uses. This will benefit the economy of the surrounding communities.

**Future Issues**

Currently, each of the airport facilities in the county are meeting the basic aviation needs of the public. Based on forecasts for airport operations, none of the airports within the county will exceed operations capacity over the RTP implementation period.

**Active Transportation (Bicycle & Pedestrian)**

**Existing**

Among non-motorized forms of transportation, bicycling and walking have traditionally been predominate modes of choice. For this reason, these forms of transportation are considered the most in the planning, design, and construction of non-motorized facilities.

With federal transportation legislation “Moving Ahead for Progress in the 21st Century Act” (MAP-21) enacted in 2012, non-motorized facilities have continued to be an important and necessary component of the overall transportation system. While the term “non-motorized” includes both, pedestrian and equestrian modes, we will primarily focus on the development of bicycle facilities in Merced County. Pedestrian facilities are most often the responsibility of local government and are implemented during
the normal land use development process. Equestrian trails are generally considered in passive recreational areas.

Bicycle facilities are classified by three types:

- **Class I Bike Paths** provide a completely separate right-of-way designated for the exclusive use of cyclists or pedestrians.
- **Class II Bike Lanes** provide restricted right-of-way bike lanes on the street.
- **Class III Bike Routes** provide a right-of-way generally designated by signs and shared with pedestrians or motorists. Pedestrian walkways are most often made up of a city sidewalk systems and the bike paths.

Merced County maintains existing bike paths along portions of Bear Creek, McKee Avenue, Yosemite Avenue, Bellevue Road and Lake Road.

The City of Merced has the most extensive bike path system in the county. Merced's bikeway system consists of class I paths and class II bike lanes. Most of the class II bike lanes run within the urban area of Merced, while the class I bike paths run along portions of Black Rascal and Bear Creeks.
Merced's pedestrian networks include the popular bike paths along Black Rascal and Bear Creeks and the city sidewalk system. Bicycles are allowed on all rural highways.
**Regional Bicycle Plan**

MCAG adopted a Regional Bikeway Plan in 2008. The intent of the plan is to connect to major destinations throughout the County as well as bikeway systems in the local communities. Additionally, the Plan calls for safety in all aspects, development and maintenance, as well as ongoing bicycle education.

**Local Bicycle Plans**

The City of Atwater adopted a Bicycle Plan in 2004, which identifies the need to create a balanced, safe, and efficient circulation system. Policies included in the plan range from developing programs to reduce over-dependence of the automobile to creating incentives for developers to provide pedestrian/bicycle transportation systems.

The City of Dos Palos adopted a Bicycle Plan in 2008. The Plan documents that the City recognizes the need to encourage bicycle travel for both transportation and recreation. The goal of the City is to create and maintain, through the Plan, an integrated system of bikeways.

The City of Gustine adopted a Bicycle Plan in 2008. Both the Bicycle Plan and Gustine’s General Plan identify the need to provide a safe system of bikeways as an alternative to motor vehicle travel and establish and maintain routes that are designed to ensure safety while being aesthetically pleasing.

The City of Livingston adopted a Bicycle Plan in November 2005. Both the Bicycle Plan and Livingston’s General Plan identify the need to establish a safe and efficient transportation system that provides adequate access throughout the City as well as routes that provide alternatives to motor vehicle travel.

The City of Los Banos adopted a Bicycle Plan in 2006. It is the goal of the Plan to create and maintain an integrated system of bikeways, provide safe and convenient travel for bicyclist throughout the city, and to encourage travel for both transportation and recreation. Additionally, the City’s General Plan documents that development of bikeways will be given equal priority to vehicle traffic as part of the multi-modal transportation system.

The City of Merced adopted a Bicycle Plan in 2013. It is the goal of the City of Merced to create and maintain an integrated system of bikeways, which provide safe and convenient travel for bicyclists throughout the plan area. Additionally, the City’s General Plan documents that it will encourage area employers to promote bicycle use through incentive programs or other means and will continue to support, whenever, feasible, local efforts to promote cycling. The City of Merced created a Bicycle...
Advisory Commission in 2009 to involve bicycle users in bicycle planning efforts and transportation-related bicycle activities.

Future
In recent years non-motorized travel has become more popular due to several factors: energy savings, health advantages, and environmental improvement. It should continue to increase in popularity due to public awareness of health and environmental benefits.

Short Range Plan

MCAG

- Update the Regional Bicycle Plan and/or prepare a new Regional Active Transportation Plan
- Develop safety education campaign to promote safety in walking and bicycling
- Work with local agencies to include bicycle and pedestrian facilities with maintenance and improvement projects as they occur.
- Aggressively pursue funding to implement regional and local active transportation projects.
- Use Congestion Mitigation Air Quality Funds to implement priority bicycle/pedestrian projects
- Promote walking and cycling as viable commute alternatives
- Support the cities and the County in designing, updating, and implementing bicycle and pedestrian plans
- Create an Active Transportation Advisory Committee or use existing groups

Local Jurisdictions

- Aggressively pursue “Active Transportation Program” funding to improve pedestrian safety
- Promote pedestrian friendly development.
- Incorporate sound bicycle and pedestrian planning in General Plans
- Seek funding to construct bicycle and pedestrian facilities
- Work with MCAG to design, update and implement local bicycle and pedestrian plans.
- Coordinate with neighboring jurisdictions to implement the Regional Bicycle Plan.
- Maintain existing bicycle facilities.

Long Range Plan

- Work towards a regional bikeway network that enables safe bicycle commuting opportunities.
• Coordinate with neighboring counties and the state to connect regional bikeways to create a statewide system of bicycle facilities.

**Intelligent transportation systems**

Intelligent Transportation Systems represent a means of applying new technological breakthroughs in detection, communications, computing and control technologies to improve the safety and performance of the surface transportation system. This could be accomplished by using the technologies to manage the transportation system to respond to changing operating conditions, congestion or accidents. ITS technology can be applied to arterials, freeways, transit, trucks and private vehicles. ITS includes Advanced Traffic Management Systems (ATMS), Advanced Traveler Information Systems (ATIS), Advanced Public Transportation Systems (APTS), Advanced Vehicle Control Systems (AVCS) and Commercial Vehicle Operations (CVO).

Merced County belongs to an eight-county collaborative ITS group of the San Joaquin Valley (SJV). The SJV ITS group adopted the SJV ITS Deployment Plan in 2001 and developed the SJV ITS Maintenance Plan in 2005. Since then, the SJV ITS group has worked collaboratively with the ITS Maintenance Manager (Kern COG) to coordinate, update and maintain the SJV ITS projects database.

Today, applications of ITS technologies allow the monitoring of traffic conditions and the dynamic adjustment of traffic signals to reduce unnecessary delay, the automated collection of transit fares and advanced detection and television cameras to detect, assess and respond to traffic accidents and incidents. In the future, ITS technologies will automate transit fare collection and parking payments, use vehicle location systems to track trains and buses to give users “real time” arrival and departure information, as well as use onboard systems to detect and avoid collisions.

For Merced County, employment of ITS includes:

• Implementation of ITS traveler information and traffic management in support of the University of California facility, red-light running enforcement and train warning and information system applications in Merced.

• Consideration of further ITS traffic signal applications in support of Merced’s major interchange improvements.

• Consideration of ITS traffic signal applications in Los Banos, and possibly in other jurisdictions.
- Implementation of ITS bicycle signalizations at intersections and bicycle system inventories.
- Development of traveler information and other transit management strategies to improve coordination of the regional bus service (“The Bus”) with the intermodal transportation center in downtown Merced.
- Investigation of options for supplemental railroad crossing warning and information systems at high-volume train crossings where delays are frequent and long.

**Transportation Control Measures (TCM)**

The term "transportation control measure" (TCM) encompasses elements of both "transportation system management" (TSM) and "transportation demand management" (TDM). Transportation system management generally refers to the use of low capital improvements to increase the efficiency of facilities and services. These can include carpool and vanpool programs, parking management, traffic flow improvements, high occupancy vehicle lanes, and park-and-ride lots. Transportation demand management generally refers to policies, programs, and actions that are directed towards decreasing the use of single occupant vehicles. TDM also can include activities to encourage shifting or spreading peak travel periods. In practice, there is considerable overlap among these concepts and TCM, TSM and TDM are often used interchangeably. The following TCMs are included in Section 108(f)(1)(A) of the Clean Air Act Amendments of 1990:

- Programs for improved public transit.
- Restriction of certain roads or lanes to, or construction of such roads or lanes for use by passenger buses or high occupancy vehicles.
- Employer-based transportation management plans, including incentives.
- Trip-reduction ordinances.
- Traffic flow improvement programs that achieve emission reductions.
- Fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service.
- Programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use.
- Programs for the provision of all forms of high-occupancy, shared-ride services.
• Programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place.
• Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas.
• Programs to control extended idling of vehicles.
• Programs to reduce vehicle emissions from extreme cold-start conditions.
• Employer-sponsored programs to permit flexible work schedules.
• Programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity.
• Programs for new construction and major reconstruction of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior.

Transportation System Management (TSM)

Transportation System Management (TSM) projects and programs are low cost actions that maximize the efficiency of existing transportation facilities and systems. Typical projects include signing and striping modifications, high occupancy vehicle lanes, ramp metering, parking restrictions, paving and re-striping, signal preemption, speed modifications, and traffic calming. In urbanized areas, strategies using various combinations of techniques can be implemented. However, in relatively rural areas, many measures that would benefit urbanized areas are not practical.

In 2009, MCAG approved the Northern San Joaquin Valley Regional Ramp Metering and High Occupancy Vehicle (HOV) Master Plan, a plan that allows and/or encourages the region to continue planning for these types of facilities. This plan will help guide improvements to the region’s major corridors such as SR-99. Ramp metering projects will be part of the short-range development plans for SR-99 that will ultimately potentially include adding a fourth lane in each direction. When this is complete, an HOV lane will be considered to help relieve congestion and improve commute and travel speeds.
Transportation Demand Management

Transportation Demand Management (TDM) projects and programs involve strategies or actions that focus on changing travel behavior and choices. TDM strategies include ridesharing, carpooling/vanpooling, telework options, guaranteed ride home programs, improved transit access, bicycle and transit integration, parking management, and smart growth land use development projects/programs designed to improve access to the transportation system. TDM Programs should generally be ongoing to provide continual support for and encourage more participating users, while respond to future opportunities and changes in individual’s travel needs and preferences. TDM programs in Merced County include the following:

Commute Connection

Commute Connection is a free, one-stop, transportation information and referral service program. The program provides information and user databases for carpooling, vanpooling, transit and rail, bicycling, walking, and park and ride lots throughout San Joaquin, Stanislaus, and Merced Counties. Some of the primary services provided in the program include, but are not limited to, providing maps that identify locations of bike paths, park and ride lots and available bike parking, ride matching database services, guaranteed ride home services, vanpool placement and voucher reimbursement, and assistance with identifying the location/schedule of local public transit systems. Commute Connection further works directly with major employers and other advocacy groups to promote alternatives to single-occupancy travel through various presentations and annual events such as Rideshare Week and Bike to Work Week.
Senate Bill 375

With the passage of SB 375 in 2008, metropolitan planning organizations are required to develop a Sustainable Communities Strategy (SCS). An SCS must demonstrate an ambitious, yet achievable, approach to how land use development and transportation can work together to meet greenhouse gas emission reduction targets for cars and light trucks. The target for Merced County, set by the California Air Resources Board in 2010, calls for the region to reduce per capita emissions 5 percent by 2020 and 10 percent by 2035. If a metropolitan planning organization is unable to meet the targets through the SCS, then an alternative planning strategy (APS) must be developed which demonstrates how targets could be achieved.

Under SB 375, an SCS must:

- Identify future land use patterns;
- Identify areas to accommodate long-term housing needs as well as 8-year housing needs;
- Consider resource areas and farmland;
- Identify transportation needs and the planned transportation network;
- Set forth a future land use pattern to meet GHG emission reduction targets

SCS requirements do not mean that the SCS creates a mandate for certain land use policies at the local level. SB 375 specifically states, “Neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor, except as provided by subparagraph (J), shall either one be subject to any state approval. Nothing in a sustainable communities strategy shall be interpreted as superseding the exercise of land use authority of cities and counties within the region.” (Government Code Section 65080(b)(2)(K)). Rather, the SCS provides a regional policy foundation that local governments may build upon as they choose.

Because local land use agencies have land use authority, there is no requirement in the SB 375 legislation for cities and counties to change or amend their general plans to be consistent with the SCS.
SCS Scenario Development Process

Development of the SCS involved the study of three separate land use scenarios, each analyzing different combinations of land use and transportation variables. All scenarios applied the same region-wide population, employment and housing projections. Transportation and air quality emissions methodologies for scenario comparisons are described in Appendix H.

In the fall of 2012 MCAG began the process of updating the RTP by developing an outreach plan, which called for three rounds of outreach. MCAG also began enhancing the traffic modeling and land use modeling tools to be able to do the necessary scenario analysis. This was done in close coordination with San Joaquin COG and Stanislaus COG, since the three agencies share a three-county traffic model delivered in 2012.
In March and April 2013 the first round of workshops was held: “Setting the Stage” by telling people what the RTP is, the schedule and process, the overall funding situation, and to get preliminary feedback on what sorts of land use and transportation scenarios they would like to examine.

All outreach emphasized the following key elements of the approach taken:

- MCAG, and the RTP/SCS, do not set land use policy (the Cities and County do)
- the land use scenarios are examples of futures that might occur; they are not dictating what will or must occur

In general, MCAG was asked to examine a range of scenarios from a historical trend to a Blueprint-like plan to something even more compact with more focus on transit and alternative modes. Over the summer these concepts were translated into the land use and traffic models as three scenarios.

In the Fall of 2013 the second round of workshops was held, on the Scenarios and their relative performance in meeting RTP goals. Based on the modeling and the assumptions it included, all of the scenarios met the 2020 GHG target, but none of the scenarios met the 2035 target. A preferred scenario (“A”) was chosen by the Board, upon which to base the draft RTP.

The draft RTP was released in April 2014. Four open houses were held as well as an informational session with elected officials, and two public hearings. For the final plan, scenario “B” was chosen instead of scenario “A”. Since the GHG target was not met, MCAG began developing an Alternative Planning Strategy with guidance from a steering committee. In 2015 the committee determined that by assuming scenario “C”, additional funding from the state’s “cap and trade” program, and additional transportation policies and measures, the 2035 GHG target could be met. The RTP was amended in ____ , and meets both 2020 and 2035 GHG targets.

Steering Committee meeting materials are included in Appendix N.
Scenario Description

Scenario A reflects the historical pattern that was occurring before the recession that began in the 2000’s. Scenario B assumes new growth is about 35% more dense than the historical pattern, and Scenario C assumes growth is about 67% more dense. The characteristics of the land use scenarios are as follows:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
<th>% SF</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Trend</td>
<td>90</td>
<td>5.4</td>
</tr>
<tr>
<td>B</td>
<td>Blueprint</td>
<td>73</td>
<td>7.4</td>
</tr>
<tr>
<td>C</td>
<td>Compact</td>
<td>56</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Where:

- “% SF” is the percent of new residential that is single-family detached, with medium or large lot sizes (5,000 sq. ft. per lot or more). Other residential types include small-lot single-family, townhomes, and multi-family apartments and condominiums
- “Density” is the average density of new residential, in housing units per acre

Scenarios A and B assume a medium-high level of investment in alternative modes, corresponding with a suburban land use pattern. Scenario C assumes a higher level of investment in alternative modes that complements higher average density and mix of uses and overall more compact land use pattern. As detailed in the “Funding” chapter, the assumed investments through 2040 by transportation type are:

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Examples</th>
<th>$ millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance</td>
<td>Repairing local roads</td>
<td>163</td>
</tr>
<tr>
<td>Highway</td>
<td>Widening highways and major roads</td>
<td>272</td>
</tr>
<tr>
<td>Transit (Bus &amp; Rail)</td>
<td>More coverage, more frequent service, new service</td>
<td>526</td>
</tr>
<tr>
<td>Bike/Walk/Air</td>
<td>Bikeways, sidewalks, ridesharing</td>
<td>210</td>
</tr>
</tbody>
</table>
The performance of the three scenarios was measured in key goal areas. These measurements were made using computer simulations: a traffic model, a land use model (“Envision Tomorrow”), and the state-designated air quality model (“EMFAC”). Additional transportation measures in Scenario C were also estimated. The performance results are shown in the following table:

<table>
<thead>
<tr>
<th>Goal Area</th>
<th>Measure</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestion</td>
<td>% of time delayed</td>
<td>18.5%</td>
<td>18.2%</td>
<td>17.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2% better</td>
<td>6% better</td>
</tr>
<tr>
<td>Transit</td>
<td>daily bus riders</td>
<td>5200</td>
<td>5400</td>
<td>5800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4% better</td>
<td>12% better</td>
</tr>
<tr>
<td>Air Quality</td>
<td>tons per day of pollutants</td>
<td>20.6</td>
<td>20.6</td>
<td>20.7</td>
</tr>
<tr>
<td>Climate Change</td>
<td>reduction in GHG</td>
<td>2020: -9.2%</td>
<td>2020: -9.6%</td>
<td>2020: -10.1%</td>
</tr>
<tr>
<td></td>
<td>from 2005 to…</td>
<td>2035: -4.5%</td>
<td>2035: -5.9%</td>
<td>2035: -12.7%</td>
</tr>
<tr>
<td>Farmland</td>
<td>farm acres developed</td>
<td>18,100</td>
<td>14,900</td>
<td>9,900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18% better</td>
<td>45% better</td>
</tr>
</tbody>
</table>

% reduction in per capita GHG emissions

- Target
- SCS
Scenario C achieves additional reductions in 2035 compared with Scenario B through a combination of more compact land use and significantly more investment in alternative modes, funding transportation improvements:

- Increased transit frequency, fare reductions, and express transit;
- Additional ridesharing, vanpooling, and zero-emission vehicle incentives;
- Aggressive bicycle and pedestrian infrastructure improvements;
- Passenger rail improvements that shift commuters from cars to trains;

**Scenario “C”, the “Compact” scenario, has been chosen for the Sustainable Communities Strategy.** The SCS meets both of the Air Resources Board’s 2020 and 2035 targets for greenhouse gas emissions reductions for Merced County.

**Funding, Policies, Actions**

See the “Funding” chapter for revenue assumptions from the state’s Cap and Trade programs that will fund MCAG and other agency programs and incentives that will help achieve the target.

See the “Vision” chapter, under #12 “Sustainable Communities”, for policies and goal statements added in Amendment 1, to help the region meet its GHG reduction targets.

**Specific MCAG Actions:**

1. Establish and implement a complete streets policy by December 2016.
2. Develop a sustainable planning and infrastructure grant program to help jurisdictions implement the SCS by December 2017. Use existing and new revenue sources to fund this program.
3. Conduct a needs and opportunities assessment by December 2017.
4. Re-evaluate project selection policy and criteria by December 2016, for use in developing the next full update of the RTP.
5. Update the Public Participation Plan by December 2016.
6. Re-evaluate and update the definitions of “unmet transit needs” and “reasonable to meet” by March 2017.