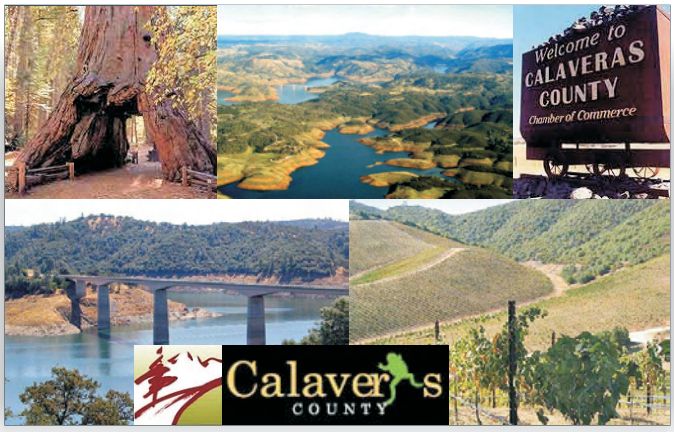
# Calaveras County 2007
# REGIONAL TRANSPORTATION PLAN

*Final*




***Prepared for the***

Calaveras Council of Governments

***Prepared by***

LSC Transportation Consultants, Inc.

TRANSPORTATION
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September 25, 2007

# Executive Summary

The Calaveras County 2007 Regional Transportation Plan (RTP) provides a coordinated, 20-year vision of the regionally significant transportation improvements and policies needed to efficiently move goods and people in the region. Transportation facilities addressed in the plan include roadways, bridges, airports, bicycle/pedestrian paths as well as transportation demand management strategies. As the Regional Transportation Planning Agency (RTPA), the Calaveras County Council of Governments (CCOG) is required by California law to adopt and submit an approved RTP to the California Transportation Commission (CTC) every five years. The California Department of Transportation (Caltrans) assists with plan preparation and reviews draft documents for compliance and consistency.

This working document was developed with extensive stakeholder input through a specific process. The agency announced its intent to develop an RTP and solicited input from all stakeholders. After data were gathered and organized, the CCOG prepared a draft plan, including all required elements, and then solicited comments from stakeholders. To comply with the California Environmental Quality Act, relevant documentation was prepared and distributed with the Draft RTP.

## PUBLIC INVOLVEMENT AND CONSULTATION PROCESS

During development of this RTP, CCOG solicited input from a variety of public and private agencies and organizations including state and federal agencies, adjacent county RTPAs, Tribal Governments with sacred lands in Calaveras County, Foothill Rideshare, and truck traffic generators. A public meeting was held to collect comments from the public on the Draft RTP and the accompanying Negative Declaration. All tribal governments, adjacent county RTPAs, and local natural resource agencies were notified of the meeting. Ensuring that the RTP is consistent with local general plans, community plans, circulation studies, bikeway plans, airport master plans, airport land use compatibility plans, and air quality documents is also an important part of the RTP process.

## EXISTING CONDITIONS

Calaveras County's total 2005 Countywide population is estimated to be 44,796 persons, an increase of 10.5 percent over the 2000 population of 40,544 persons. Adjacent counties are also experiencing significant population growth, which is important when considering transportation needs resulting from inter-County commute patterns. Tourism travel plays an important role in the region's transportation system especially with respect to traffic congestion and narrow roadways. Although unemployment in Calaveras County is slightly below the statewide average, an estimated 11.8 percent of the County population is living below the poverty level as defined by the U.S. Census Bureau.

The roadway system in Calaveras County totals approximately 1,055 maintained miles (paved and unpaved roadways). In addition to private roadways, the public roadway system consists of 149 miles in the state highway system, 689 miles in the County roadway system, 29 miles in the city roadway system, 128 miles owned and operated by federal agencies such as the U.S. Forest Service and the Army Corps of Engineers, and another 60 miles operated by the State Park service. Five roadway segments in Calaveras County are County-designated Scenic Highways and the stretch of SR 4 from Arnold to Alpine County is a National Scenic Byway.

According to Caltrans data, the highest annual average daily traffic (ADT) volumes in the County occur on SR 49 in Angels Camp at Murphys Grade Road (17,000 ADT). One primary RTP project, the Angels Camp Bypass, will help to reduce traffic volumes in Angels Camp as evidenced in the Calaveras County Transportation Demand Model. It will, however, tend to concentrate traffic activity at the SR 49/SR 4 Bypass intersection. Other relatively high ADT volumes were observed by Caltrans on SR 49 in Angels Camp near the South Junction of SR 4 (15,900 ADT), in San Andreas at Main Street (13,000 ADT), near Mountain Ranch Road (12,200 ADT), and on SR 4 near White Pines Road (12,100 ADT). The Calaveras Transportation Demand Model, developed by Fehr & Peers Transportation Consultants, provides average daily traffic volumes in 2002 for a summer weekday along a majority of the minor arterial, major collectors, minor collectors, and minor streets in the County. According to the model, high volume County roadways include O'Byrnes Ferry Road (4,200 ADT) located south of Copperopolis, Murphys Grade Road (3,600 ADT) near Murphys, Parrotts Ferry Road (2,400 ADT) southwest of Angels Camp, and Mountain Ranch Road (2,200 ADT) near San Andreas. Goods movement is an important part of the regional transportation system. Trucks represent a significant proportion of traffic on SR 49 in Angels Camp (9 percent). The Level of Service (LOS) standard for intersections and roadways in the County is LOS C. The SR 4/SR 49 (southern intersection) fails to meet this standard during the PM peak hour for existing conditions.

In addition to roadway and bridge networks, other important elements of the regional transportation system include the Maury Rasmussen Airport, Calaveras Transit, bicycle and pedestrian facilities, and transportation demand management strategies.

## AIR QUALITY

Air quality should be considered in a review of the regional transportation system. In recent years, Calaveras County has exceeded the 8-hour federal ozone standard. Federal clean air laws require areas with unhealthy levels of ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and inhalable particulate matter to develop plans, known as State Implementation Plans (SIPs), describing how they will attain national ambient air quality standards (NAAQS). SIPs are not single documents, rather they are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations and federal controls. Calaveras County is part of a collaborative effort between the California Air Resources Board and local air pollution districts to develop a SIP for the region. The timeline for adoption of the SIP is unknown at this time.

## POLICY ELEMENT

The RTP identifies local and regional transportation issues along with a potential solution by the following transportation facilities: roadway system, goods movement, transit, aviation, non-motorized facilities, and air quality. Some of the major issues include:

- California's past transportation funding crisis.
- Deferred maintenance on local and County roadways due to difficulty in obtaining state or federal funds for local road rehabilitation.
- Congestion in local communities due to on-street parking and numerous private driveway intersections, and encroachments on state highways and County collectors.

- Limited emergency access roads in wildfire threatened areas, particularly in Copperopolis and Arnold.

- Difficulty providing high quality transit service in a cost-effective manner with the wide dispersion of the County population (lack of financial support for interregional service from other counties).

- Much of the land surrounding the airport is privately owned or too steep for airport development. There is a need to protect land currently owned by the airport for future airport improvement projects.

- Lack of a consistent network of bike paths and pedestrian facilities which link communities and visitor attractions. A more fluid connection of bike paths and pedestrian facilities with limited vehicle conflict is needed to encourage the use of alternative transportation modes.

- In 2006, Calaveras County was in non-attainment for the federal hourly and 8-hour ozone standard.

- Global climate change.

The Policy Element of the RTP sets forth 13 goals that cover all types of transportation facilities as well as overall transportation-related regional goals. Objectives, policies, and performance measures are associated with each goal.

### ACTION ELEMENT

The Action Element establishes data forecasts and assumptions regarding future conditions pertaining to population, housing, employment, land use, and traffic:

- The population of Calaveras County will increase at approximately 2.5 percent per year. Adjacent county populations will continue to grow at a rate generally consistent with the State Department of Finance estimates.

- Dwelling units are expected to increase to 39,198 by the year 2025. The developed areas of the County will continue to experience increased growth in housing stock consistent with *Calaveras County Land Use Memorandum* projections.

- There will continue to be a strong commuting pattern of Calaveras County residents working in neighboring counties in the Central Valley.

- Project construction costs are anticipated to increase by 3.2 percent per year, based upon the average annual change in the Engineering News Record Construction Cost Index from December 1996 to December 2006.

- Recreation-oriented travel and second home growth will continue to affect state highways and major County roads.

- Local road maintenance will continue to be a major issue, unless new local funding sources are secured.

- Average daily traffic generation (as measured by number of trip-ends) will increase by 7.4 million from 2002 to 2025. Standard roadway and intersection LOS will be exceeded on most key state highway segments and at least nine major intersections in the County.

Three broad alternatives or "approaches" to prioritizing regional transportation improvement projects are discussed in the RTP. A balanced alternative which would seek to achieve a balance between maintenance of existing programs and expanding capacity where warranted is viewed as the logical choice for Calaveras County. Not only does this "balanced" approach allow CCOG to pursue STIP funding for new roadway projects or large capital improvements as well as pursue funding for road maintenance projects, it directs decision-makers to consider alternative transportation investments such as non-motorized, transit facilities, and transportation demand management strategies.

A series of tables list proposed transportation improvement projects throughout the region over the next 20 years. Projects are categorized by transportation element, priority levels, and estimated implementation period (short term or long term). The RTP also contains a list of financially-unconstrained projects in addition to financially-constrained projects. A financially-unconstrained project is a regionally desired unfunded project or "wish list" project that would be implemented if unanticipated funding sources were to become available.

## FINANCIAL ELEMENT

The following federal, state, and local funding sources and programs are available to fund transportation improvements in the Calaveras County region:

### Federal Sources

- Regional Surface Transportation Program
- Transportation Enhancement Activities
- Highway Bridge Replacement and Rehabilitation
- Hazard Elimination Safety Program
- Federal Lands Highway Program
- Section 130/Highway Safety Improvement Program
- Emergency Relief Program
- FTA Section 5310 Capital for Elderly and Disabled Transportation
- FTA Section 5311 Public Transportation for Rural Areas
- FTA Section 5316 Jobs Access Reverse Commute
- FTA Section 5317 New Freedom Program
- Congestion Mitigation and Air Quality Program
- Federal Airport Improvement Program

### State Sources

- State Transportation Improvement Program
- Traffic Congestion Relief Program
- State Hwy Operations and Protection Program
- Minor Programs
- California Aid to Airports Program
- California Airport Loan Program
- Environment Enhancement and Mitigation
- Safe Routes to School (SRTS)
- Bicycle Transportation Account
- Pedestrian Safety Program
- Transportation Development Act Funds
- Proposition 1B
- Community Based Transportation Planning Grants

**Local Sources**

- Highway Users Taxes
- Motor Vehicle In-Lieu Fees
- State Gas Sales Tax (AB2928/ Prop 42)
- Road Impact Mitigation Fee Program
- Copperopolis Benefit Basin Program
- Valley Springs Benefit Basin Program

Over the 20-year plan period, the total projected expenditures of all proposed financially-constrained projects (not including proposed bicycle projects) in this RTP are $662 million. Estimated costs to meet major regional transportation needs exceed projected funding available by $139 million.

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***Final***

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September 25, 2007

LSC #057220
Calaveras Final RTP 2007.doc

# Table of Contents

**CHAPTER** **PAGE**

# Table of Contents

**CHAPTER** **PAGE**

# Table of Contents

**CHAPTER** **PAGE**

# List of Tables

**TABLE** **PAGE**

# List of Figures

**FIGURE** **PAGE**

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# Chapter 1
# Introduction

As the Regional Transportation Planning Agency (RTPA) for the region, the Calaveras Council of Governments (CCOG) is required by California law to adopt and submit an approved Regional Transportation Plan (RTP) to the California Transportation Commission (CTC) every five years. The California Department of Transportation (Caltrans) assists with plan preparation and reviews Draft RTP documents for compliance and consistency with RTP Guidelines.

The Calaveras County 2007 RTP provides a coordinated 20-year vision of policies and regionally significant transportation improvements needed to efficiently move goods and people in the Calaveras County region. The purpose of the RTP is to provide a vision of transportation services and facilities, supported by appropriate goals, for 10- and 20-year planning horizons. The RTP documents the policy direction, actions, and funding strategies designed to maintain and improve the regional transportation system.

This RTP has been developed in a series of four different documents: *Technical Memorandum 1*, *Technical Memorandum 2*, *Public Draft RTP*, and *Final RTP*. *Technical Memorandum 1* identified the plan development process and described the regional characteristics and existing transportation network. *Technical Memorandum 2* presented an analysis of policy and planning issues, goals, objectives and performance measures for the RTP, as well as potential plan elements. The *Draft RTP* was a compilation of *Technical Memorandums 1 and 2* and was circulated for public review and comment. Comments on the *Draft RTP* were incorporated into the *Final RTP*. The *Final RTP* document will provide the region with a coordinated transportation system and will be a guideline for decision-makers over the RTP plan period.

All appendices in the Calaveras County 2007 Regional Transportation Plan are incorporated herein by reference. Acronyms and terms used in this RTP are listed and defined in Appendix A.

## PLAN DEVELOPMENT REQUIREMENTS AND PROCESSES

### Federal Planning Requirements

Although new SAFETEA-LU Guidelines specifically concerning the development of RTPs for RTPAs have not yet been adopted, an attempt was made to incorporate new SAFETEA-LU provisions in to this 2007 Calaveras County RTP.

### State Planning Requirements

The State of California has developed a series of planning requirements that affect the development of this RTP, as described below:

- The Transportation Development Act of 1971 (SB 325) resulted in the formation of the Calaveras County Local Transportation Commission (LTC) to administer and allocate funds provided by the Act. The Calaveras Council of Governments, which replaced the LTC in 1998 under a Joint Powers Agreement between Calaveras County and the City of Angels, now has this responsibility.

- Assembly Bill 69, enacted in 1972, created Caltrans and established requirements for preparation and administration of State and Regional Transportation Plans. Under this law, each RTPA is required to prepare and adopt an RTP with coordinated and balanced transportation systems, consistent with regional needs and goals.

- Assembly Bill 402, enacted in 1977, revised the guidelines for RTP development and required the Plan be updated in 1978 and biennially thereafter. It continued to be the RTPA's responsibility.

- The Transportation Funding Act of 1998 (SB 45) enacted reforms affecting many areas of planning, funding, and development. This sweeping legislation overhauled the State Transportation Improvement Program (STIP), providing a greater level of regional choice, with 75 percent of the program's funds to be divided by formula among the regions. For each two-year cycle, the RTPA selects projects to be funded from its STIP share and adopts the projects as the Regional Transportation Improvement Program (RTIP). Every RTIP adopted by a local agency must be consistent with its RTP. SB 45 modified the biennial RTP development cycle for rural RTPAs like the CCOG every four years. With new SAFETEA-LU provisions, it will be necessary for rural regions to adopt and submit an RTP once every five years.

California Government Code 14522 requires that the California Transportation Commission develop RTP Guidelines to facilitate the preparation, consistency, and utilization of RTPs throughout the State. The purpose of the *December 1999 RTP Guidelines* is to:

- *Promote an integrated, statewide, multimodal, regional transportation planning process*

- *Set forth a uniform transportation planning framework throughout California*

- *Promote a transportation planning process that facilitates decision-making*

- *Promote a continuous, comprehensive, and cooperative transportation planning process that facilitates the rapid and efficient development and implementation of projects while maintaining California's commitment to public health and environmental quality*

- *Promote a planning process that considers the views of all stakeholders in the decision-making process*

A *Supplement to the 1999 Regional Transportation Plan Guidelines* was prepared based on the *2003 RTP Evaluation Report* prepared by Caltrans for the CTC. The Supplement does not replace the 1999 Guidelines, but rather provides clarification of items not addressed in the 2001/2002 RTP process as specified in the 1999 Guidelines. Specifically, the 2003 Report indicated that, "Not one RTP from the last cycle addressed every item identified in the RTP checklist." As such, the Supplement provides a revised *Regional Transportation Plan Checklist* that has been completed and submitted to Caltrans.

### RTP Process

The CCOG is responsible for the preparation of Calaveras County's RTP, and must ensure that all of the requirements of the RTP process are met. The CCOG prepares a draft document that

includes all of the required elements, and solicits public comment from a wide variety of groups, including the general public, Technical Advisory Committee, and Caltrans. The comments solicited are responded to and/or included in the final document, as appropriate. Environmental documentation (in conformance with the California Environmental Quality Act) is also prepared and distributed by the State Clearinghouse. The CCOG then adopts the final RTP and environmental documentation in accordance with state and federal requirements.

**Public Participation Plan and Process**

This section describes efforts to consult with all users of the Calaveras County regional transportation system (public or private) during the RTP update process.

Government Participation

The planning of the County transportation system is accomplished through the coordination of various governmental agencies, advisory committees, and public input:

- The **Calaveras Council of Governments (CCOG)**, serving as the Regional Transportation Planning Agency since 1998, consists of seven Council Members, and is supported by a technical staff.

- The **Technical Advisory Committee (TAC)** consists of nine members including representatives from the following agencies: City of Angels (3), Calaveras County (3), Calaveras Council of Governments (2), and Caltrans District 10 (1).

- The **Social Service Transportation Advisory Council (SSTAC),** formed to meet the requirements of PUC Section 99238, consists of appointed agencies and citizens representing a wide range of transit dependent groups. The SSTAC represents primarily potential transit passengers including the elderly, people with disabilities, and others with limited mobility. The Council conducts periodic meetings, including the annual transit needs assessment.

- The **RTP Study Steering Committee** consists of County Supervisors, County staff, City staff, CCOG staff, and Caltrans District 10 representatives. This committee met early in the RTP update process to discuss existing conditions and the direction of the RTP.

- **California Department of Transportation (Caltrans)** is responsible for the design, construction, maintenance, and operation of the state highway system, and that portion of the interstate highway system within California. Enacted in 1972, Assembly Bill 69 established the basic framework for Caltrans. Headquartered in Sacramento, Caltrans has 12 district offices throughout the state. Calaveras County is located in Caltrans District 10, with offices in Stockton. Various District 10 staff members serve as liaisons to the CCOG, depending upon the activity or project.

- **Rural Counties Task Force (RCTF)** is an advisory committee to the CTC with no budget or staff that generally meets every other month. A member of the CTC usually acts as liaison to the RCTF and CTC, and Caltrans staff typically attend these meetings to explain and discuss changing statewide transportation issues that may be of concern to the rural counties. CCOG is a member of the RCTF.

Public Entity Participation

The CCOG plans for the regional transportation system in consultation and coordination with regional stakeholders. During the development of this RTP, among others, the entities listed below were contacted for information and solicited for input.

- Adjacent county regional transportation planning agencies
- State and federal agencies
- Tribal governments
- Central mountain air management district
- State and local resource agencies
- County departments responsible for airports

All entities were invited to review and comment on the Draft RTP. Additionally, public notices were posted in the local newspaper and on CCOG's website. For a comprehensive listing of entities and persons contacted, see Appendix B. In compliance with the 1999 Guidelines and the Supplement to the 1999 Guidelines, the following provides details of correspondence to specific agencies. Correspondence and public notices associated with this RTP are provided in Appendix C.

*Tribal Governments*

In an effort to include in the RTP process those tribal governments that have sacred lands within Calaveras County, the Native American Heritage Commission (NAHC) was contacted to obtain the "SB 18 Consultation List." The NAHC provided a copy of the list, which included the California Valley Miwok Tribe and Ione Band Miwok Indians. These tribal governments as well as the Sheep Ranch Rancheria were contacted via mail (priority mail, delivery confirmation requested) with a notification letter that defined the RTP, requested their input in the RTP process, and requested they make contact for a one-on-one meeting. Additionally, the tribal governments were provided with public notices for all public meetings and directions on how to view the Draft RTP. Appendix C presents correspondence to tribal governments. To date, only a representative of the California Miwok Valley Tribe has responded; however no specific comments were received. According to Caltrans Highway Performance Monitoring System 2006 data, there are no maintained miles in Calaveras County under Bureau of Indian Affairs jurisdiction.

*Adjacent County Regional Transportation Planning Agencies*

Correspondence was sent to each of the Regional Transportation Planning Agencies (RTPAs) in the five counties adjacent to Calaveras County. This correspondence notified the RTPAs of the Calaveras County RTP preparation and requested written responses to a series of seven questions. The following summarizes each RTPA's response. Copies of each response can be found in Appendix C.

- **Alpine County Department of Public Works** mentioned that growth in Calaveras County impacts SR 4, the only access from Calaveras County to Alpine County. Staff believes that travel to their County has been increased as a result of this growth. In an effort to better manage traffic impacts between the two counties, Alpine County entered into a Tri-County State Transportation Improvement Program (STIP) partnership with Calaveras and Amador Counties. A description of this partnership and projects undertaken are included in the

Progress Report section of Chapter 2 of this document. Alpine County believes that this is an important process and intends to continue cooperation with the other counties in order to complete Tri-County projects. In addition to existing Tri-County projects, staff indicated that improvements are needed on SR 4 from Blue Lake Springs Road to east of the Big Trees State Park entrance. The only Alpine County plans that might effect transportation in Calaveras County are the Bear Valley Master Plan and the Forest Service Plan for the Bear Valley Ski Area. Alpine County's primary concern is commercial strips such as shopping centers that are being constructed directly on SR 4. The new intersections created by these developments eliminate existing passing opportunities along that stretch of highway. The County noted that building a new passing lane is an expensive endeavor. Alpine County's traffic model is currently being updated.

- The **Amador County Transportation Commission (ACTC)** identified that significant travel occurs on SR 49 between the two counties. Road improvements are necessary from Jackson to the Calaveras County line but are un-fundable at this time. The ACTC expressed concern that the relatively low cost of housing and relatively higher quality of life in both Amador and Calaveras County will eventually transform the two counties into bedroom communities to the Central Valley. As a result, both counties could loose job and sales tax revenues important for economic growth. ACTC believes that mobility for Amador County residents can be increased by improving inter-County transit services. Amador County is one of the entities participating in the Tri-County State Transportation Improvement Program (STIP) partnership along with Calaveras County and Alpine County. Amador County's traffic model was updated in 2005.

- State Routes 4, 12, and 26 are links between San Joaquin County and Calaveras County. The **San Joaquin Council of Governments (SJCOG**) noted that many Calaveras County residents commute to jobs in the Central Valley and the East Bay, thereby causing roadways to be congested. This problem is expected to increase as job and population growth continues to occur. As the existing roadways and facilities were not designed to carry large amounts of traffic, roadway improvements will be required to keep up with this growth. SJCOG encouraged collaborative planning between Caltrans and the local jurisdictions in order to uphold the mobility and safety goals of the region. SJCOG also expressed their willingness to work jointly with Calaveras County on transportation matters. Additionally, staff mentioned that adding more inter-County transit stops within San Joaquin County would increase the mobility of residents. Currently, there are no SJCOG projects that would impact existing travel corridors from San Joaquin County to Calaveras County. SJCOG indicated that their traffic model was updated for the 2004 RTP.

- **Stanislaus Council of Governments (StanCOG)** identified that transportation conditions in Calaveras County impact both recreational users and daily commuters in Stanislaus County. At present, StanCOG believes that conditions are adequate. As housing prices continue to rise in Stanislaus County, StanCOG sees a younger generation moving to Calaveras County in search of more affordable homes. This could have an impact on air quality in Calaveras County. By accurately reflecting future traffic conditions between the two counties, mobility for residents of both counties could be increased. Transportation projects that Calaveras County should be aware of are the SR 120 Oakdale Bypass and the SR 108 Realignment. At this time, StanCOG does not see that there are any transportation-related projects that could be jointly pursed by both counties, although future traffic projections could alter the situation. StanCOG updated their traffic model in 2004, and mentioned that they would be happy to share land use and traffic projections with Calaveras County.

- SR 49 is the primary access roadway between Tuolumne County and Calaveras County. The **Tuolumne County Transportation Council (TCTC)** staff sees the growth in new homes in Calaveras County affecting Tuolumne County roadways, as the new residents of Calaveras County will be forced to drive to Tuolumne County to shop. Tuolumne County Public Works currently has no short-term transportation-related projects planned that would affect Calaveras County, but feels that the effects of home construction in their neighboring county could reduce Level of Service (LOS) on roadways in Tuolumne County to LOS F. Staff suggested coordinating traffic models between the two counties, identifying traffic impacts, and developing mutually agreeable solutions. More recent discussions with Tuolumne County Staff have indicated that this process has begun. Tuolumne County stated that there is a need to develop a list of transportation-related improvement projects that could be jointly pursed by both counties. Their traffic model was updated in 2005.

  Looking into the future, Tuolumne County has two long-term priority or "wish list" transportation projects of regional nature. The first is the proposed extension of State Route 59 from Snelling in Merced County to SR 108 in Tuolumne County. Currently County Route J-59/La Grange Road serves as the connecting roadway. Tuolumne County received a $2 million dollar federal grant earmarked for studying and improving J-59 in the 2005 federal transportation bill. If the state highway status was continued from SR 108 to SR 4, along what is now O'Byrnes Ferry Road, Calaveras County could benefit from increased traffic circulation between the two counties as well as within Calaveras County around the growing community of Copperopolis. The second project, which is more of a "wish list" project, includes a proposed SR 49 bypass of the City of Sonora from the intersection of SR 49 and Rawhide Road to SR 108. This state highway project could improve traffic flow between Angels Camp and SR 108.

*Truck Traffic Generators*

Twelve businesses that generate truck traffic on roadways within Calaveras County were contacted to seek opinions on issues relating to the Calaveras County regional transportation system. An effort was made to contact businesses representing the variety of industries generating truck movements in Calaveras County, such as solid waste, logging, grapes, and quarry materials. Each business was contacted via telephone and faxed a list of questions. Each business was told that individual responses would remain confidential. The six businesses that operate throughout the County who participated are located in Arnold, Mountain Ranch, Murphys, and Angels Camp.

Summarizing the responses of the six responding firms, the general opinion is that the Calaveras County regional transportation system is good, but could use some improvements. Depending on the season and year, the combined businesses generate anywhere from 50 to 75 truckloads per day, and use both state highways (in particular SR 4 and SR 49) and County maintained roads. Three of the businesses expect trucking activity to increase between 15 and 40 percent over the next five years, while the other three expect trucking activity to remain fairly constant. The major deficiencies of the regional transportation system are narrow, winding roads, limited shoulders, bridges with weight limits, unpaved County roads and basic maintenance issues such as pot holes, paving, and striping. These issues result in increased wear and tear on company vehicles, lengthened driving times, and created unsafe driving conditions – particularly when trucks and recreational vehicles use roadways simultaneously.

Possible solutions to these issues include: widening roads, providing additional turnouts and roadway shoulders, eliminating blind curves, increasing road maintenance, and rehabilitating or

rebuilding bridges. Specific segments mentioned include Sheep Ranch Road (Avery), Mountain Ranch Road, Pool Station Road, and SR 4 between Copperopolis and Angels Camp. One business noted that the closure of certain roadway segments on SR 49 to larger trucks, Surface Transportation Assistance Act (STAA) trucks, makes the movement of goods more difficult between Modesto and the Angels Camp/Murphys areas. Additionally, some respondents voiced that the County should reassess the General Plan and place more importance on the effect of new growth and development on the regional transportation system.

One particularly important truck generator is the Solid Waste Division of the Calaveras County Department of Public Works. The department operates one landfill (Rock Creek Solid Waste Facility on Hunt Road in Milton) as well as six transfer stations dispersed throughout the County where residents and businesses who do not use curbside collection or pickup services may dispose of their garbage and recycling. These transfer stations are located on O'Byrnes Ferry Road, Paloma Road, Red Hill Road, Segale Road, Blizzard Mine Road, and SR 49. According to department records, over 5,000 vehicle trips were made in 2006 throughout the County by solid waste commercial haulers (garbage trucks) and approximately 66,000 trips were made by self-haulers (private individuals and businesses). This represents a 12.8 percent increase over 2004 data. For over a decade, solid waste has grown faster than the population, but is expected to level off. County staff estimates the Rock Creek facility and the level of trucking generated from solid waste will match the growth in population. In addition to the traffic using County solid waste facilities, recyclables flow to a variety of private companies, which is not accounted for in the traffic counts provided. Deficient roadways with respect to the transport of solid waste are Milton Road (the Stanislaus County portion), where potholes exist, and O'Byrnes Ferry Road which could benefit from additional turning lanes.

As Calaveras is a rural county, many residents have septic systems. There is no facility to dispose of liquid waste within the County, so waste must be hauled to Amador County, Sacramento, Oakdale, Modesto, or even as far as Oakland. Conversations with septic trucking companies indicate that approximately seven septic trucks travel through Calaveras County on a daily basis.

Although goods movement is important economically for the region, there is public concern that the level of logging truck activity – in particular on SR 4 in Arnold – is significant enough to affect the quality of residents' daily life, as well as result in wear and tear on the roadways. According to members of the community, logging trucks are active on SR 4 from 2:30 AM until about 7:00 PM. The communities of Dorrington, Arnold, Avery, Forest Meadows, and Murphys are impacted by logging truck traffic. Logging truck traffic flows from feeder roads such as Love Creek Road, Moran Road, Boards Crossing Road, and Blagen Road on to SR 4, and then along Parrots Ferry Road into Tuolumne County where the sawmill is located. Some logging trucks travel along Winton Road to SR 26 and SR 49. Community issues with logging truck traffic include noise from air brakes, potential impact on motorist and pedestrian safety, and congestion along SR 4, particularly on Friday afternoons.

Citizen Participation

Every person in Calaveras County is affected by the regional transportation system and, as such, is an important component of the transportation planning process. In recognition of the importance of public participation, a public involvement program is required for each RTP. The CCOG makes a concerted effort to solicit public input in many aspects of transportation

planning within the region. The following are several examples of on-going efforts in the Calaveras County region:

- Citizens are encouraged to attend and speak at CCOG meetings on any matter included for discussion at that meeting, or any other matter of public interest.

- The public is notified and encouraged to participate in the Unmet Transit Needs process and hearings are held by the CCOG.

- All studies conducted by the CCOG are either adopted or accepted following an advertised public review period and a public hearing. This process will be undertaken by the CCOG in conjunction with this RTP update.

Table 1 lists specific participation opportunities provided as part of the development of this RTP. In addition to notifying the public of the Draft RTP in the local paper, a link to the Draft RTP was also posted on Foothill Commuter Services website. Both hard copies and electronic files of the Draft RTP were available for public viewing and comment at CCOG from June 29, 2007 to August 15, 2007.

***TABLE 1: Participation Process During RTP Development***

| Participant | Activity | Date |
|---|---|---|
| Study Steering Committee Meeting | Project Kickoff Meeting | 4/20/2005 |
| Native American Heritage Commission | Sent Notification Letter Requesting Tribal Contact List | 5/3/2005 |
| Adjacent RTPAs | Sent Notification Letters Requesting Input | 5/10/2005 |
| California Valley Miwok Tribe; Ione Band of Miwok Indians; Sheep Ranch Rancheria | Sent Notification Letters Requesting Input and Meeting | 5/18/2005 |
| Truck Traffic Generators | Contacted Via Phone and Fax Requesting Input | Week of 5/16/2005 |
| Adjacent RTPAs | Followed-Up Re Input Request | Week of 5/23/2005 |
| Truck Traffic Generators | Followed-Up Re Input Request | Week of 5/23/2005 |
| Adjacent RTPAs | Followed-Up Re Input Request | Week of 6/6/2005 and 6/27/2005 |
| Truck Traffic Generators | Followed-Up Re Input Request | Week of 6/6/2005 and 6/27/2005 |
| Study Steering Committee | Review of Technical Memorandum One | 8/12/2005 |
| Study Steering Committee | Present Technical Memorandum One | 8/19/2005 |
| Staff Level Meeting | Discuss Technical Memorandum Two | 2/15/2007 |
| California Valley Miwok Tribe; Ione Band of Miwok Indians; Sheep Ranch Rancheria | Sent Copy of Public Notice Re Public Meeting and World Wide Web Link to Public Draft Document | Week of 6/25/2007 |
| Natural Resource Agencies | Sent Copy of Public Notice Re Public Meeting and World Wide Web Link to Public Draft Document | Week of 6/25/2007 |
| Public Notice | A Public Notice of the RTP/ Neg Dec Public Review Period and Public Meeting was Posted in Calaveras Enterprise and Union Democrat | 6/29/2007and 7/13/2007 |
| Public Notice and Draft RTP | Posted on CCOG website. | 6/29/2007 to 8/15/2007 |
| CCOG/Public Meeting | Present Public Draft and Negative Declaration | 7/18/2007 |
| CCOG/Public Hearing | Final RTP Adoption | 10/10/2007 |

## Transportation Programming Process

Regional Transportation Plans are long-range planning documents, which guide the organized development of all modes of transportation within the area. Federal and state requirements prescribe that, for approval, RTPs must include the following three elements:

- The **Policy Element** describes the transportation issues in the region, identifies and quantifies regional needs expressed within both a short and long-range framework, and maintains internal consistency with the Financial Element fund estimates.

- The **Action Element** identifies plans to address the needs and issues for each transportation mode, in accordance with the goals, objectives, and policies set forth in the Policy Element. It is within the Action Element that projects and programs are prioritized consistent with the identified needs and policies.

- The **Financial Element** identifies the current and anticipated revenue sources and financing techniques available to fund the planned transportation investments described in the Action Element. The intent is to define realistic financing constraints and opportunities.

## Required Documentation

Environmental Documentation

The RTP is a programmatic document containing general policies, guidelines, and lists of potential projects and programs. For many projects in the RTP, specific design details are not yet completed. Each transportation project will undergo an impact assessment on an individual basis, including cumulative impact analysis, before funds are allocated. However, the California Environmental Quality Act (CEQA) requires consideration of the type and extent of environmental impact that may result from implementation of the overall RTP. CEQA defines *significant effects* as "a substantial, or potentially substantial, adverse change in the environment." Under CEQA Guidelines, public agencies are responsible to minimize, avoid or mitigate environmental damage, where feasible. Agencies must balance a variety of objectives, including social, economic and environmental concerns, to comply with CEQA obligations.

For the *Calaveras County 2001 Regional Transportation Plan* (adopted October, 2001), a negative declaration was adopted, based on findings of no significant effect on the environment. The Calaveras County Council of Governments has preliminarily determined that the Calaveras County 2007 RTP will not have significant effects on the environment, and therefore expects to adopt a negative declaration, based on the Environmental Initial Study which found no significant effect on the environment.

Air Quality

All RTPAs within non-attainment areas must coordinate their RTP development with the California Air Resources Board (CARB) to ensure conformity with the State Implementation Plan (SIP). According to the 2006 National Air Quality Area Designations and the proposed 2006 State Area Designations, Calaveras County was in non-attainment of the federal 8-hour ozone standard and in non-attainment of the state ozone standards. These standards are discussed further in Chapter 2. The Northern California 8-Hour Ozone SIP Working Group, which includes the CARB and Northern California local air pollution districts of non-attainment regions, is in the

process of establishing a 2007 Ozone SIP. The Calaveras County Air Pollution Control District is integral to this process. After completion of the SIP, this RTP will be updated as necessary to reflect conformity with the air quality document.

Global climate change or "global warming" is a major environmental issue which needs to be acknowledged in planning and environmental documents. Climate change is caused by the release of greenhouse gases (GHG's) such as carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride into the atmosphere which traps heat and increases temperatures near the earth's surface. Forecasted, long-term consequences of climate change range from a rise in the sea-level to a significant loss of the Sierra snow pack. As a direct result of Assembly Bill (AB) 32, CARB has been charged with developing rules and regulations that will reduce GHG emissions in the State of California to 1990 levels by 2020. Once GHG standards have been established, CCOG will work with the necessary state agencies to accomplish GHG reductions in the region.

**Coordination with Other Plans and Studies**

The RTP Guidelines, prepared by Caltrans, recommend that the circulation/transportation elements of the general/community plans within a region are consistent with the RTP for the region. The general/community plans of the region include the following.

- *Arnold Community Plan*, December 1998
- *Avery-Hathaway Pines Community Plan*, March 1998
- *Calaveras County General Plan,* December 1996
- *City of Angels Draft General 2020 Plan*, 2007
- *Copperopolis Community Plan Working Draft,* May 2005
- *Ebbetts Pass Highway Special Plan,* June 1988
- *Mokelumne Hill Community Plan*, June 1988
- *Murphys and Douglas Flat Community Plan*, June 1988
- *San Andreas Community Plan*, June 1988
- *Valley Springs Community Area General Plan*, 1974 to 1994

The RTPs should also be consistent with regional transportation plans in adjacent regions, including Alpine, Amador, San Joaquin, Stanislaus, and Tuolumne Counties. Other important documents that the RTP considered include the following:

- *Administrative Draft Environmental Impact Report for the Oak Canyon Ranch Specific Plan,* Pacific Municipal Consultants, February 2002
- *Angels Camp Bypass Final Project Report,* Caltrans Metric, July 2002
- *Calaveras County Bikeway Plan Supplement*, Calaveras County Council of Governments, 2005
- *Calaveras County Bikeway Plan Update,* Fehr & Peers, March 1998
- *Calaveras County Draft Bicycle Master Plan*, Calaveras Council of Governments, July 2007
- *Calaveras County Draft Pedestrian Master Plan*, Calaveras Council of Governments, April 2007
- *Calaveras County Travel Demand Forecasting Model Document Report,* Fehr & Peers, August 2003
- *Calaveras Countywide Traffic Circulation Study Working Paper 2*, LSC Transportation Consultants, Inc., February 2007
- *Copper Mill ADEIR*, Calaveras County, May 2005

- *Copperopolis Benefit Basin Traffic Analysis*, LSC Transportation Consultants, Inc., September 2006
- *Corridor Management Plan – Ebbetts Pass National Scenic Byway,* Calaveras Council of Governments, August 2004
- *Final Project Report on Route 49, Construct 49 Bypass from Junction Route 104 (Ridge Road) to 0.3 Kilometers (0.2 miles) South of Rancheria Creek Bridge in Amador County,* Robert Effinger, March 2002
- *Murphys Circulation, Pedestrian, Bicycling, and Parking Study*, LSC Transportation Consultants, Inc., February 2002
- *Project Study Report on Route 4 in Calaveras County from East of Copperopolis to West of Altaville (Angels Camp)*, Robert Effinger, June 2001
- *Road Impact Mitigation Fee Nexus Study*, Economic and Planning Systems, Inc., April 2004
- *State Route 4 Angels Camp By Pass Project Traffic Study,* Caltrans District 10, October 1999
- *SR 4 Pool Station Intersection Major Safety Project* – PSR, Alex Menor, November 1996
- *SR 88 Cooks and Hams Passing Lanes – Environmental Re-evaluation of Findings of No Significant Impact*, Lance Brangham, November 2003
- *State Route 12 Valley Springs Connector Project Study Report,* Caltrans Metric, March 2003
- *Traffic Impact Analysis for Calaveras Oaks*, kdAnderson, August 2004
- *Tuscany Hills Draft Environmental Impact Report*, Pacific Municipal Consultants, June 2004
- *Vista Del Lago Traffic Study,* Dowling Associates, September 2004

# Chapter 2
# Existing Conditions

## REGIONAL CHARACTERISTICS

Calaveras County is located in the north-central portion of California and is bordered by Amador County to the north, Alpine County to the east, Tuolumne County to the south, and Stanislaus and San Joaquin Counties to the west (see Figure 1). The County seat is located in San Andreas. Calaveras County is located within the foothills of the Sierra Nevada mountain range approximately 133 miles east of San Francisco and 85 miles southeast of Sacramento. The County encompasses approximately 1,100 square miles in area. The topography of the County varies as the land elevation is near sea level in the west and reaches 8,000 feet in the east. The only incorporated city in the County is the City of Angels, also known as Angels Camp. Other communities in the County include the following:

- Arnold
- Avery
- Copperopolis
- Dorrington
- Mokelumne Hill
- Murphys
- Tamarack
- Vallecito
- Valley Springs
- West Point

### Land Use

Calaveras County encompasses approximately 1,100 square miles of land (roughly 664,650 acres) as identified in Table 2. According to the U.S. Census, the number of housing units in Calaveras County in 2000 totaled 22,946, which included 19,398 single-family dwelling units, 1,312 multi-family dwelling units, 2,055 mobile homes, and 181 boats, RVs and vans (2000 U.S. Census data). Based on permit information from the Calaveras County Building Department, there were 2,736 building permits issued for new housing units (including manufactured homes) between 2001 and 2004, increasing the number of housing units to 25,682 (or roughly 3 percent per year).

A more recent and accurate analysis of existing and future dwelling units and employment projections can be found in *Calaveras County Land Use Assumptions Memorandum* (Pacific Municipal Consultants, September 2006). This document is the foundation for the Calaveras County Travel Demand Model and land use assumptions made in this RTP. The Calaveras County Land Use Assumptions Memorandum developed baseline dwelling unit estimates for 2006 in the following manner:

- All parcels in the County were divided into the Assessor's land use categories such as single-family residential, multi-family residential, vacant, etc.

- The 2006 Secured Tax Roll and refuse billing for all parcels were reviewed to further clarify the number of dwelling units on each parcel.

- Vacant parcels were classified as vacant where the Assessor's land use codes indicated no development, no trash rate was assigned and the parcel had a structural value of less than $5,000.

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FIGURE 1

## CALAVERAS COUNTY SITE LOCATION

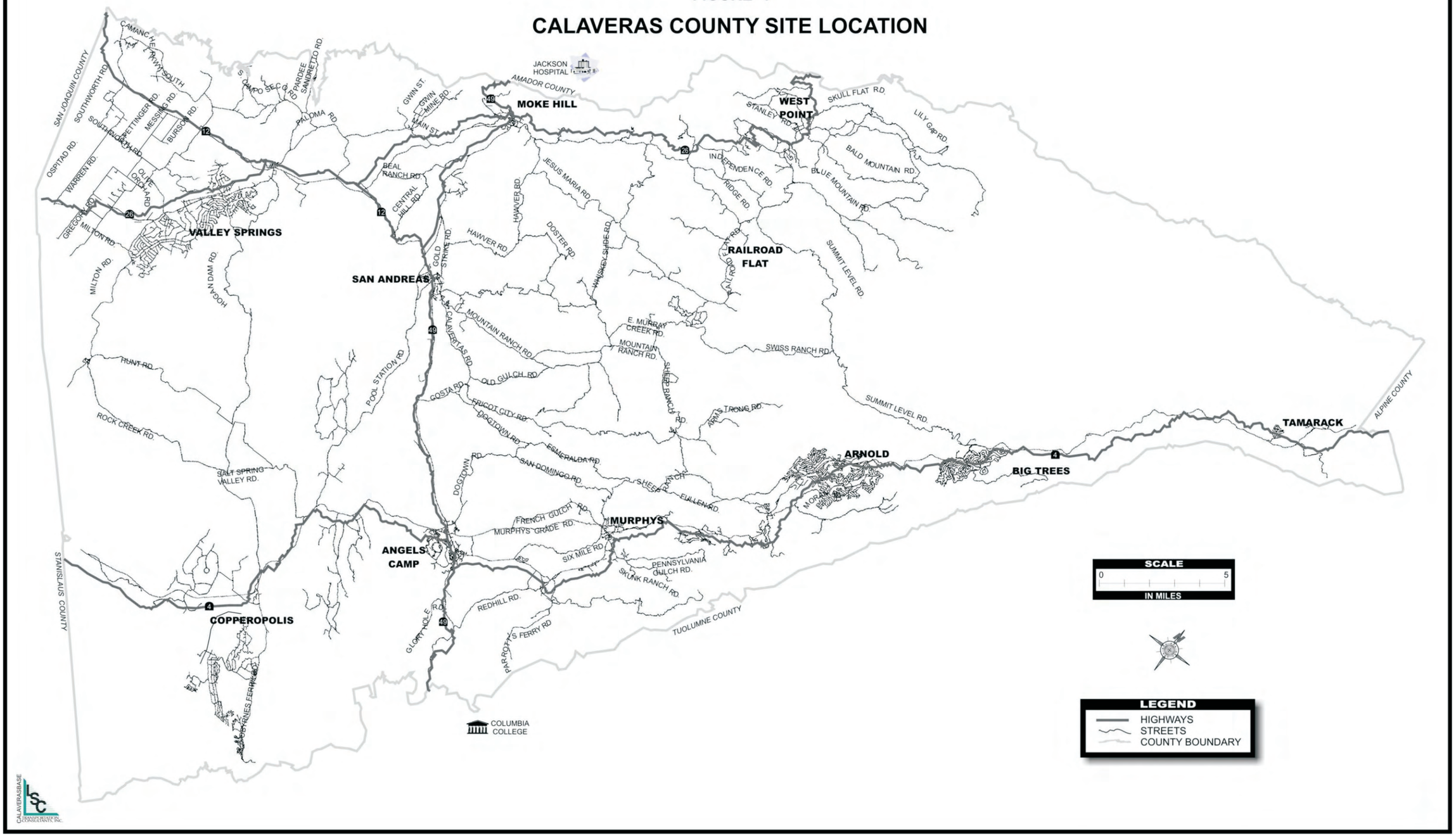

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***TABLE 2: Calaveras County General Plan Land Use***

| Land Use Type | Acres | % of Subtotal | % of Total Acreage |
|---|---|---|---|
| Natural Resource Land | | | |
| Wildlife, Botanical | 72,540 | 20.1% | 10.9% |
| Timber, Dam Area, MRA-2A | 143,630 | 39.7% | 21.6% |
| Agricultural Preserve, MRA-2B | 122,450 | 33.9% | 18.4% |
| Other | 23,110 | 6.4% | 3.5% |
| *Subtotal* | *361,730* | *100.0%* | *54.4%* |
| Community Development Land | | | |
| Future Single Family | 184,120 | 63.3% | 27.7% |
| Community Centers | 3,600 | 1.2% | 0.5% |
| Residential Centers | 31,140 | 10.7% | 4.7% |
| Industrial | | | |
| Existing Zoning | 8,200 | 2.8% | 1.2% |
| Prime Industrial | 9,480 | 3.3% | 1.4% |
| Adopted Community Plans | 28,340 | 9.7% | 4.3% |
| Adopted Special Plans | 25,000 | 8.6% | 3.8% |
| Adopted Specific Plans | 1,090 | 0.4% | 0.2% |
| *Subtotal* | *290,970* | *100.0%* | *43.8%* |
| City of Angels and its Sphere | 11,950 | *100.0%* | *1.8%* |
| ***Total*** | ***664,650*** | **--** | ***100.0%*** |

Source: 1996 Calaveras County General Plan Land Use Element.

The Calaveras County Land Use Assumptions Memorandum estimated a total of 26,226 dwelling units and 12,163 vacant parcels in 2006.

**Population**

Both the California Department of Finance (DOF) data and Calaveras County Land Use Assumptions Memorandum estimates were reviewed in this section. Calaveras County's total 2005 countywide population is estimated by the DOF to be 44,796, an increase of 10.5 percent over the 2000 population of 40,544, as shown in Table 3. During this same period, the population of Angels Camp grew by 17.7 percent, while the unincorporated portions of the County's population increased by 9.9 percent. Over the past ten years, the County's population increased by 18 percent or nearly 2 percent per year. According to Census 2000 data, approximately 87.5 percent of the Calaveras County population is "White Alone," 6.8 percent is "Latino or Hispanic," 1.5 percent is "American Indian/Alaska Native," and the remaining 4.2 percent is other or a mixture of races.

***TABLE 3: Population in Calaveras County***

| | Total Population | | | Total Change 1995-2000 | | Total Change 2000-2005 | | Total Change |
|---|---|---|---|---|---|---|---|---|
| | 1995 | 2000 | 2005 | # | % | # | % | 1995-2005 |
| City of Angels | 2,820 | 3,004 | 3,537 | 184 | 6.5% | 533 | 17.7% | 25.4% |
| Unicorporated Area | 35,150 | 37,540 | 41,259 | 2,390 | 6.8% | 3,719 | 9.9% | 17.4% |
| *Total Countywide* | *37,970* | *40,544* | *44,796* | *2,574* | *6.8%* | *4,252* | *10.5%* | *18.0%* |

Source: California Department of Finance, Demographic Research Unit; U.S. Census Bureau, Census 2000.

Table 4 reflects population growth between 2000 and 2005 in adjacent counties. As shown, the population of San Joaquin County (which also has the greatest population) increased 15.9 percent (or 3 percent annually) over the five-year period, followed by a 12.9 percent increase (or 2.4 percent per year) in Stanislaus County. The populations for the remainder of the adjacent counties increased by less than 2 percent per year over the five-year period.

Table 3 demonstrated that Calaveras County has undergone significant population growth over the last five years. DOF population projections may not account for recent changes in population or have access to local information. The Calaveras County Land Use Assumptions Memorandum, developed different population estimates using building permit activity from the County between January 2000 and August 2006. The memorandum's 2006 population estimate of 49,910 is higher than the state's 2005 estimate.

***TABLE 4: Population of Adjacent Counties***

| | Total Population | | Total |
|---|---|---|---|
| | 2000 | 2005 | Change |
| Alpine | 1,208 | 1,262 | 4.5% |
| Amador | 35,100 | 37,574 | 7.0% |
| San Joaquin | 563,598 | 653,333 | 15.9% |
| Stanislaus | 446,997 | 504,482 | 12.9% |
| Tuolumne | 54,501 | 58,504 | 7.3% |
| *Total Adjacent Counties* | *1,101,404* | *1,255,155* | *14.0%* |

Source: California Department of Finance, Demographic Research Unit; U.S. Census Bureau, Census 2000.

## Commute Patterns

The 2000 U.S. Census Bureau provides Journey-to-Work data, which reports the number of persons commuting on a county-by-county basis. Approximately 58.8 percent of the residents of Calaveras County live and work locally, as shown in Table 5. An estimated 15.4 percent of

County residents work in San Joaquin County. This commute pattern puts a strain on the roadway capacity of state highways. In particular, SR 12 and the SR 12/26 intersection will receive increased traffic in the future as this is the most direct route from proposed Valley Springs subdivisions to Stockton, Lodi, Galt and Sacramento. The RTP addresses this problem in Chapter 4 of the document. Of all persons employed in Calaveras County, 86 percent also live in Calaveras County. Of those persons commuting to Calaveras County for work, 5.5 percent reside in Tuolumne County, followed by 3 percent from Amador County.

***TABLE 5: Calaveras County Inter-County Commute Pattern Data***

| **County of Employment for Calaveras County Residents** | # Persons | % of Total |
|---|---|---|
| Alameda | 316 | 2.0% |
| Alpine | 172 | 1.1% |
| Amador | 1,211 | 7.6% |
| Calaveras | 9,331 | 58.8% |
| Contra Costa | 187 | 1.2% |
| Sacramento | 353 | 2.2% |
| San Joaquin | 2,435 | 15.4% |
| San Mateo | 109 | 0.7% |
| Santa Clara | 351 | 2.2% |
| Stanislaus | 305 | 1.9% |
| Tuolumne | 679 | 4.3% |
| Other (Within California) | 330 | 2.1% |
| Other (Outside of State) | 84 | 0.5% |
| *Total Number of Persons* | *15,863* | *100.0%* |

| **County of Residence for Calaveras County Workers** | # Persons | % of Total |
|---|---|---|
| Alpine | 2 | 0.0% |
| Amador | 331 | 3.0% |
| Calaveras | 9,331 | 86.0% |
| San Joaquin | 160 | 1.5% |
| Stanislaus | 108 | 1.0% |
| Tuolumne | 599 | 5.5% |
| Other (Within California) | 292 | 2.7% |
| Other (Outside of State) | 30 | 0.3% |
| *Total Number of Persons* | *10,853* | *100.0%* |

Source: U.S. Census Bureau, Census 2000, Journey-To-Work Data.

## Tourism Travel Patterns

Calaveras County attracts many tourists throughout the year for a number of recreational activities, such as golfing, boating, hiking, camping, rafting, kayaking, road/mountain biking, fishing, and snowshoeing. In addition, tourists may travel to Calaveras County to visit the many wineries and caverns. The County hosts a multitude of special events such as the Frog Jump Jubilee, Grape Stomp, Irish Days, farmers' markets, and music festivals.

On top of a significant number of visitor vehicle-trips, tourists are often unfamiliar with the narrow, winding roads and highways required to access Calaveras County attractions.

Unfamiliar motorists and large recreational vehicles slow down the general traffic flow. These factors make tourist travel an important issue to consider in the evaluation of the regional transportation system.

Identifying where the greatest amount of tourist traffic occurs is relevant. The majority of wineries are located in the Murphys area. In addition to private vehicle traffic, tour buses from Modesto, Sacramento, Concord, and Stockton frequent the vineyards. Much like the truck traffic generators, safe tour bus travel can be negatively affected by narrow roadways or poor pavement conditions in the regional transportation system. Other attractions include Calaveras Big Trees State Park located on SR 4 east of Arnold, Moaning Cavern on Parrots Ferry Road, California Cavern at Cave City-State Historic Landmark off of Mountain Ranch Road, Mercer Caverns off Sheep Ranch Road, and Calaveras County Fairgrounds on SR 49 in Angels Camp. Although Bear Valley Ski Resort is not located geographically in Calaveras County, most tourists access the resort in Alpine County by traversing Calaveras County on SR 4. Several reservoirs located in the western portion of the County offer summer boating opportunities. New Melones Reservoir which stretches into Tuolumne County near SR 49 is the largest and attracts nearly 800,000 visitors each year. New Hogan Reservoir is also a large reservoir and is located near the growing community of Valley Springs.

Most Calaveras County tourist attractions are concentrated along SR 49 and SR 4. Although no official tallies have been taken, it is agreed among businesses and the tourist bureau that the majority of tourists originate from the Bay Area (South Bay and East Bay in particular), Modesto and Sacramento, with the Los Angeles Basin becoming a growing market. Conversations with one tourist business indicated that internet driving direction sites direct Bay Area tourists to use SR 4 to access Calaveras County, even though SR 12 is a better, faster roadway. Tourists from Modesto access the County via SR 108 to SR 49.

Peak tourist time periods vary for each attraction. Weekends are peak days for all attractions. Peak months for wineries are May through December, and peak months for the caverns and reservoirs are during the summer.

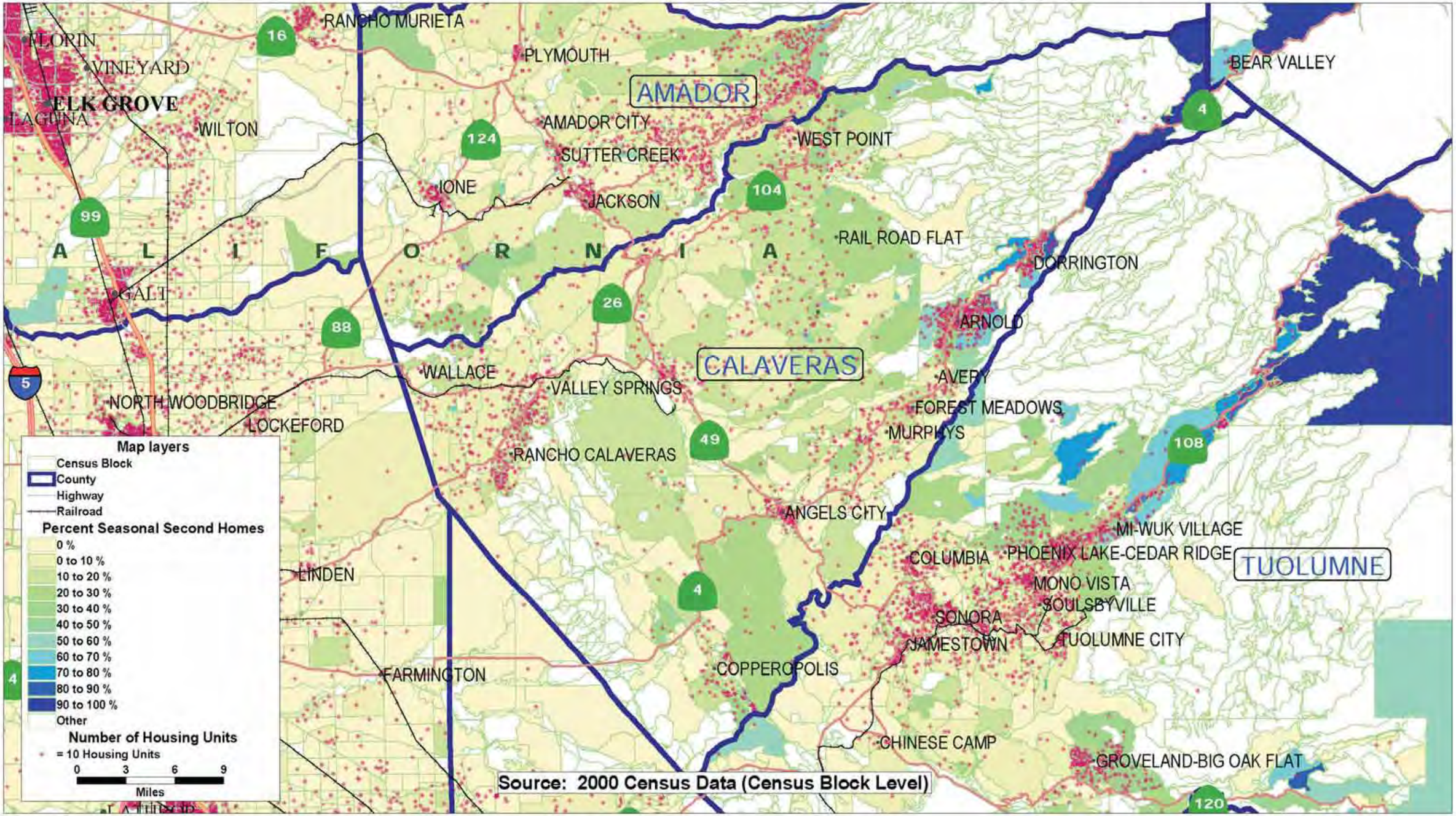
Another measure of the level of tourism in Calaveras County is the seasonal use of homes. The U.S. 2000 Census tracks the number of vacant homes that are seasonally occupied. On a Countywide level, the 2000 Census indicated there were 22,946 housing units within the County. Of these, 6,477 housing units (28 percent) were estimated to be occupied seasonally. As demonstrated in Figure 2, results by block group in Calaveras County show that the eastern portion of the County along SR 4 near Bear Valley Ski Resort contains the largest concentration of seasonal second homes (80 to 100 percent seasonal homes). The communities of Arnold and Dorrington contain block groups with 60 to 80 percent seasonal homes, and the community of Copperopolis between SR 4 and the Tuolumne County line contain block groups with 20 to 40 percent seasonal homes.

Tourist travel seems to have the greatest effect on SR 4. The problem can be magnified by natural occurrences such as heavy snow or mud slides. It is worthwhile for CCOG to consider transportation improvement projects that relieve congestion in recreational areas or provide for safer travel along the more heavily traveled corridors.

### Economic Base and Employment

Historically, the local economy was based on mining, agriculture, and forestry. More recently, there has been an increase in new community developments to support the increase in

# Figure 2: Percent Seasonal Homes in Calaveras County and Surrounding Areas



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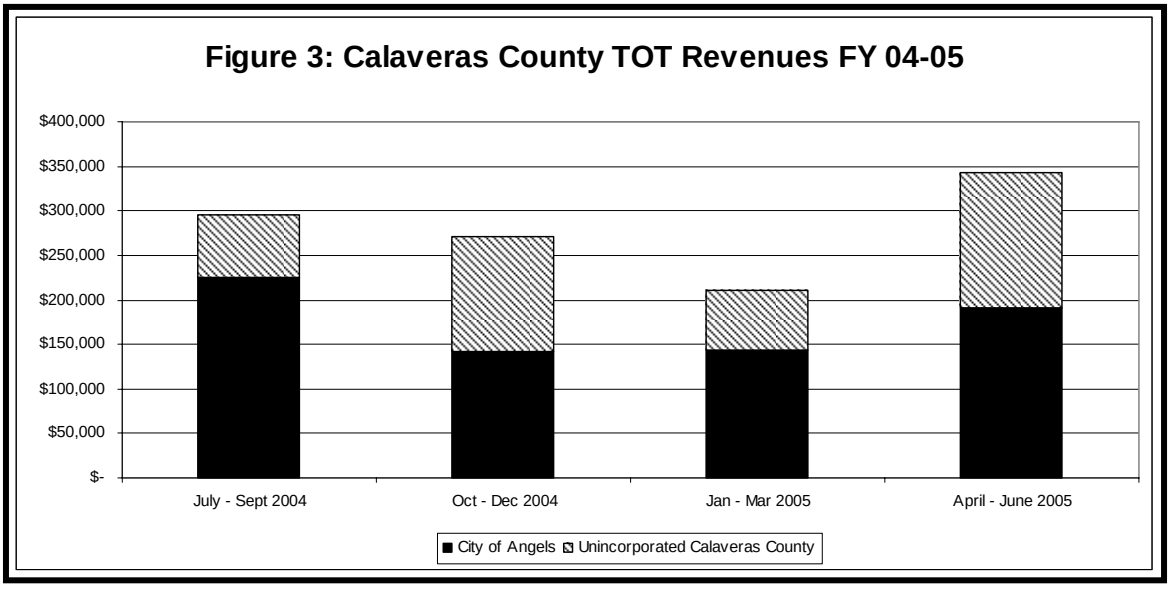
population. Tourism (such as vineyards, local art galleries and gold rush museums) is an essential aspect of the County's economy. In 2005, the largest employment industries in the County were private service producing industries (52.8 percent). This includes the "retail trade" and "leisure and hospitality" sectors. The second largest employment industry was government (27.36 percent) followed closely by goods-producing industries (19.2 percent) such as "natural resource production, mining and construction." According to the *Calaveras County Land Use Assumptions Memorandum* and the Employment Development Department, there were approximately 9,910 jobs in Calaveras County in 2006.

In 2006, 20,040 Calaveras County residents were employed. With a total Countywide labor force of 21,110, there is in an average unemployment rate of 5.1 percent, which is slightly lower than the statewide average of 5.3 percent (California Employment Development Department, 2007).

Figure 3 demonstrates that tourism contributes to the regional economy. Combined Transient Occupancy Tax (TOT) revenues between unincorporated Calaveras County and the City of Angels totaled over $1.1 million dollars in the Fiscal Year (FY) 2004-2005. April to June is the peak tourist season for the County as a whole, and July through September is the peak tourist season for the City of Angels. Providing a transportation system that accommodates tourism is important to the economic vitality of the region.




**Income**

Trends in personal income reflect the growing importance of retirees to the overall economy, as inferred from related income sources such as investments and transfer payments (retirement income). The Bureau of Economic Analysis reports proportions by income source for Calaveras County residents, as shown in Table 6.

Per capita personal income grew from $17,898 in 1993 to $25,395 in 2003, a 3.6 percent annual increase over the ten-year period. During this same period, the average annual growth rate for the state was 4 percent, and for the nation was 4.0 percent (Bureau of Economic Analysis).

***TABLE 6: Trends in Total Personal Income for Calaveras County Residents***

| Type | 1993 | 2003 | Annual % Change | Total Change | % of Total Personal Income In 2003 |
|---|---|---|---|---|---|
| Net Earnings | $359,018 | $647,790 | 6.1% | 80.4% | 57.0% |
| Dividends, Interest and Rent | $148,272 | $246,515 | 5.2% | 66.3% | 21.7% |
| Transfer Payments | $136,024 | $241,526 | 5.9% | 77.6% | 21.3% |
| *Total Personal Income* | *$643,314* | *$1,135,831* | *5.8%* | *76.6%* | *100.0%* |

Source: Bureau of Economic Analysis.

According to 2000 U.S. Census data, the County's median household income is estimated at $41,022, compared to California's at $47,493. The U.S. Census uses weighted average poverty thresholds that vary by the number of individuals in the family to determine poverty status. For example, in 1999, the poverty threshold for a family of four including two children under the age of 18 was $16,895. An estimated 11.8 percent of the population of Calaveras County is living below the poverty level, which is 2.4 percent lower than the State's poverty rate of 14.2 percent. As low income individuals represent a significant proportion of public transit passengers, this data reflects Calaveras County's need to allocate resources to public transit and other transportation improvement projects which would increase mobility for residents without a personal vehicle.

## TRANSPORTATION SYSTEM DESCRIPTION

The roadway system in Calaveras County totals approximately 1,055 maintained miles (paved and unpaved roadways). In addition to private roadways, the public roadway system consists of 149 miles in the state highway system, 689 miles in the County roadway system, 29 miles in the City roadway system, 128 miles owned and operated by federal agencies such as the U.S. Forest Service and the Army Corps of Engineers, and 60 miles operated by the state park service.

One notable characteristic of Calaveras County's roadway system is the minimal number of traffic signals; there are only five in the entire County. Traffic control is generally provided by stop signs on side-street approaches.

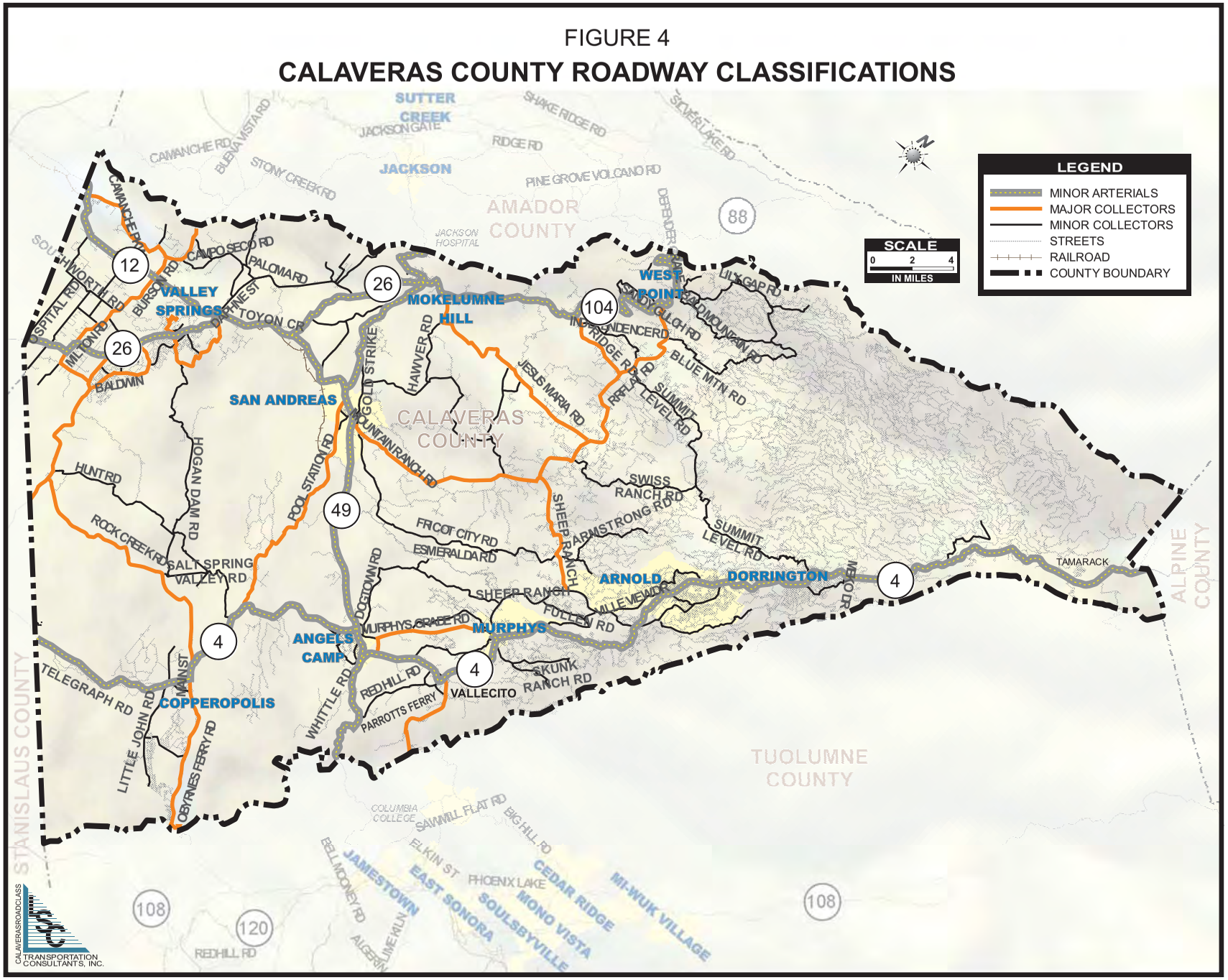
### Road Classification

The majority of the existing streets and highways within Calaveras County are two-lane roadways of varying width (depending on functional classification and usage). Figure 4 depicts Calaveras County's main roadway system, along with their functional classification. A complete list of roadways in Calaveras County and their functional classification is found in Appendix D. The following summaries provide the definition of major roadway functional classifications.

- Minor Arterial – Minor arterials are roadways that are expected to allow through traffic to flow at relatively high speeds with minimum interference and provide low proportions of access

FIGURE 4

## CALAVERAS COUNTY ROADWAY CLASSIFICATIONS



points. Within Calaveras County, all state routes are classified as minor arterials. These routes include SR 4, 12, 26, and 49.

- Major Collectors – Major collectors provide service to larger towns not directly served by the arterial system and essentially move traffic from one community to the next by providing connections to/from smaller communities to the minor arterials. Examples of major collectors are Murphys Grade Road, Parrotts Ferry Road, and O'Byrnes Ferry Road.

- Minor Collectors – Minor collectors move traffic from traffic generators such as residential areas or commercial centers, to major collectors or minor arterials. Minor collectors are generally located within residential areas, where they connect a number of local roads to a major collector. Minor collector roadways include Copper Cove Drive, Ospital Road and Moran Road.

- Local Roads – Local roads serve travel over relatively short distances to access specific properties or adjacent lands. They include all roads not otherwise designated according to classes above.

- Legacy Streets –The term "Legacy Streets" is used to designate streets which are historical in nature and cannot be significantly modified without destroying their historical character. On such designated streets there are specific design and usage guidelines governing the right-of-way, traffic flow, and parking.

**Major Roadway Network**

Calaveras County is served by State Highways 4, 12, 26, and 49. The following describes each highway in more detail.

State Route 4

State Route 4 is a two-lane highway that runs southwest to northeast through the County, entering Calaveras County near Copperopolis, and exiting near Tamarack on the way to Alpine County. The highway links the communities of Copperopolis, Angels Camp, Murphys, and Arnold. It also provides access to the Calaveras Big Trees State Park. The western portions of the highway are affected by commuter and recreational traffic. The central and eastern segments of SR 4 are used by recreational and truck traffic. As recommended in the Route Concept Report, passing lanes and left-turn lanes could improve performance on these segments of the highway.

State Route 12

State Route 12 travels through the western portion of the County and serves as a connector to San Joaquin County, Wallace, Burson, San Andreas, Valley Spring, and other highways within Calaveras County, such as SR 12 and 49. The route passes through the community of Valley Springs. There are no designated bike lanes on SR 12, but there are Park-and-Ride locations planned in Valley Springs.

State Route 26

State Route 26 traverses the northwest corner of Calaveras County by entering near the community of Rancho Calaveras and exiting at West Point. The route is functionally classified

as a minor arterial and provides access to New Hogan Reservoir. The communities of Valley Springs, Rancho Calaveras, La Contenta, Glencoe, Mokelumne Hill, and West Point are served by this route.

State Route 49

State Route 49 runs north to south through Calaveras County. The highway links communities in the Sierra foothills known as the "Mother Lode" in California's Gold Country. SR 49 acts as "Main Street" for the City of Angels and San Andreas, and also serves the community of Mokelumne Hill. Both commuters and tourists use the highway as it connects Calaveras County with Tuolumne County and the City of Sonora to the south and Amador County and the City of Jackson to the north.

The four state highways in Calaveras County serve as the backbone of its transportation network. For many communities (Altaville, Angels Camp, Avery, Arnold, Wallace, Burson, Valley Springs, Glencoe, West Point and San Andreas) it serves as the "Main Street." As Caltrans is responsible for long-range planning on state highways, coordination efforts with the state agency is required to plan transportation improvement projects that result in appropriate use of resources that will benefit both the state and local entities. In addition, state highway improvements should be coordinated with local land use/community plans.

**Scenic Roadways**

Calaveras County's natural beauty is often cited as making the County a desirable place to live. This view is expressed by residents of the County, recreational travelers visiting the County, and small businesses seeking to relocate to the County. It is therefore important that the County develop in a manner which preserves and protects these characteristics. A significant percentage of residents and non-residents alike experience some, if not most, of their scenic viewing from roads and highways.

As shown in Figure 5, and identified in the Scenic Highways section of the County's 1996 General Plan, the following roadway segments have been identified as scenic highways:

State Designated Scenic Highways – Along SR 4 from Arnold in Calaveras County to Highway 89 in Alpine County (Markleeville), also known as Ebbetts Pass Highway.

County Designated Scenic Highways – The following roadway segments are County designated scenic highways: SR 4 between the Stanislaus County line and Angels Camp; SR 4 between Angels Camp and Murphys; and SR 49 within the County.

Additionally, Highway 49 from the Tuolumne County line to the Amador County line, and SR 4 between Angels Camp and Arnold are eligible for the State Scenic Highways designation.

**National Scenic Byways**

In 1990, the Forest Service adopted a National Scenic Byway system to showcase outstanding National Forest scenery, provide interpretation of National Forest management, meet the growing demand for recreational driving opportunities, increase use of National Forests by non-traditional users (urban minorities, disadvantaged and elderly citizens), and enhance rural economic development. In the fall of 2005, the Ebbetts Pass State Scenic Highway received

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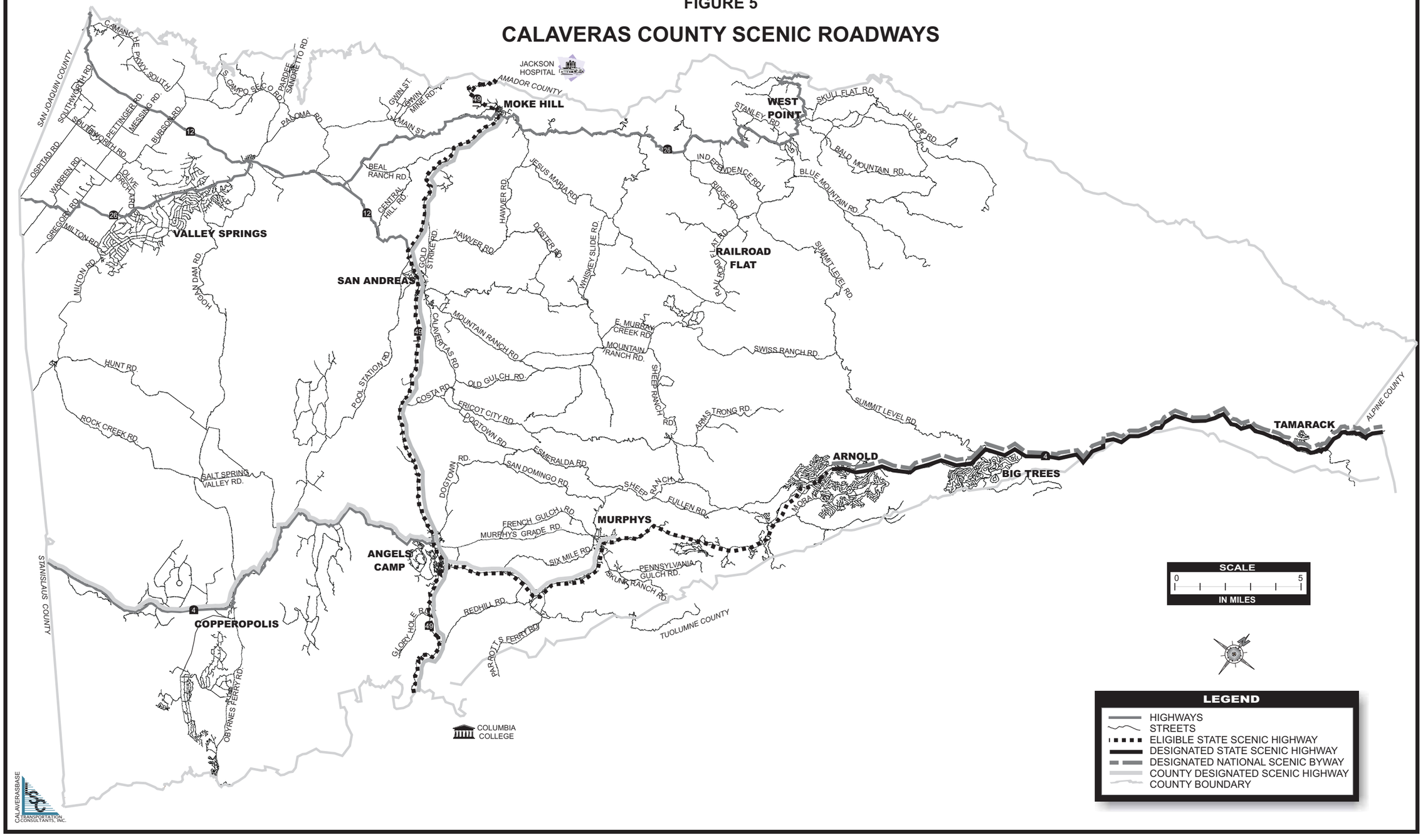
FIGURE 5

# CALAVERAS COUNTY SCENIC ROADWAYS



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National Scenic Byway status. This 58-mile section of SR 4 stretches between Arnold in Calaveras County and Markleeville in Alpine County. Traveling through Stanislaus and Toiyabe National Forests, the route passes high mountain meadows, glacial lakes, and mountain streams, as well as landmarks such as the Pacific Crest Summit, Hermit Valley, and Ebbetts Pass. CCOG believes that the new designation will bring increased marketing exposure, access to grants related to improving the traveler's experience on the road, and a focused collaborative approach to preserving and improving the assets of the corridor.

As a prerequisite for National Scenic Byway designation, CCOG produced a Corridor Management Plan (CMP) for the Ebbetts Pass National Scenic Byway. The CMP provides a vision for maintaining and enhancing the Scenic Byway and prescribes management strategies such as: development of interpretive features for visitors, protection of the highways intrinsic qualities and continued participation from land management agencies, highway agencies, and the community. The CMP identified eight goals for the Ebbetts Pass National Scenic Byway.

- To protect and enhance the intrinsic qualities of the corridor for the enjoyment of present and future generations.

- To provide interpretive and educational opportunities related to the scenic, natural, recreational, cultural, historical, and archaeological features so visitors may develop an appreciation for the unique qualities of the highway corridor.

- To promote tourism along the highway consistent with community goals and resource development needs.

- To develop partnerships to broaden the base of support for the highway.

- To design, build, and maintain interpretive sites to enhance the knowledge, appreciation, and enjoyment of the highway among visitors and residents of all abilities.

- To design, build, and maintain parking, sanitation, and other support facilities to be accessible to people of all abilities, and to protect the resources of the corridor.

- To develop an integrated highway signage program that incorporates the National Scenic Byway logo and marketing icons, and is consistent with state and local signing policies.

- To design and implement a “living guidebook” website to assist travelers before they tour the area.

**Federal Aid Secondary Roads**

The Federal-Aid Highway Act of 1944 designated 39,800 miles as "National System of Interstate Highways" and established a federal-aid secondary system of principal secondary and feeder roads. As Federal Aid Secondary Roads (FAS) the following Calaveras County roadways were constructed with federal funds.

O’Byrnes Ferry Road – Runs north to south through the growing Copperopolis area connecting SR 4 to SR 108 in Tuolumne County. This road will be affected by several proposed development projects in Copperopolis.

Milton Road – Located in the western portion of the County, Milton Road runs north to south providing a connection between SR 26 near Valley Springs and SR 4 in San Joaquin County. With development in Valley Springs and greater job opportunities in San Joaquin County, Milton Road is a regionally significant roadway where increased usage is possible.

Parrotts Ferry Road – This road connects the communities along SR 4 to Tuolumne County. The road also runs from north to south and provides the most direct access to the city of Sonora from the community of Murphys and the most direct access to Columbia College from Calaveras County.

Rail Road Flat Road – This road runs from SR 26 just south of West Point to the intersection of Mountain Ranch Road and Sheep Ranch Road. The road provides an important connection to the state highway system for remote central county communities.

**Local Roads of Regional Significance**

The Calaveras County Department of Public Works developed a list of improvement projects for "local roads of regional significance." Projects on the list were required to satisfy at least one of three major regional transportation planning criteria. The criteria required each local roadway to offer transportation routes that connect major communities in the County; provide parallel capacity for major transportation routes; or serve as emergency relief in case of accidents, landslides, fires or other catastrophic reductions in capacity to major transportation routes. The local roads of regional significance category includes: Avery Sheep Ranch Road, Burson Road, Jenny Lind Road, Moran Road, Mountain Ranch Road, Murphys Grade Road, Paloma Road, Pool Station Road, Ridge Road, and Sheep Ranch Road. Federal Aid Secondary (FAS) roads are also local roads of regional significance. The Road Impact Mitigation (RIM) Fee project list (Table 22 in Chapter 4) lists local roads of regional significance improvement projects.

**Existing Traffic Volumes**

Annual Average Daily Traffic (AADT) volume is defined as the total two-way traffic volume on a roadway over the year divided by 365 days. The Caltrans traffic count year is from October 1 through September 30. Traffic counting is generally performed by Caltrans (on state highways) using electronic counting instruments moved to various locations throughout the state in a program of continuous traffic count sampling. The resulting counts are adjusted to reflect an estimate of annual average daily traffic by compensating for seasonal fluctuation, weekly variation, and other variables that may be present. The recordation of AADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways, and other purposes.

The highest AADT volume in Calaveras County in 2005 (the latest year for which data is currently available) was observed on SR 49 in Angels Camp at Murphys Grade Road (17,000), as shown Table 7. Other high AADT volumes were observed on SR 49 in Angels Camp near the South Junction of SR 4 (15,900), in San Andreas at Main Street (13,000), near Mountain Ranch Road (12,200), and on SR 4 near White Pines Road (12,100). In summary, Table 7 indicates that the greatest traffic volumes occur in the communities of Angels Camp, San Andreas, and Arnold.

Table 7 also presents historic AADT data for the state routes in the County from 2002 to 2005. Rather large proportionate increases in AADT were recorded in the Valley Springs region along

***TABLE 7: Calaveras County State Highway Daily Traffic Volumes 2002-2005***

| Location | Annual Average Daily Traffic Volumes | | | | Change in Traffic Volumes 2002-03 | | 2003-04 | | 2004-05 | | Average Annual % Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | # | % | # | % | # | % | 2002-05 |
| **State Route 4** | | | | | | | | | | | |
| Stanislaus-Calaveras County Line | 5,000 | 5,000 | 5,200 | 5,400 | 0 | 0.0% | 200 | 4.0% | 200 | 3.8% | 1.9% |
| O Byrnes Ferry Road, West | 5,000 | 5,000 | 5,100 | 5,200 | 0 | 0.0% | 100 | 2.0% | 100 | 2.0% | 1.0% |
| Angels Camp, East Jct. Rte. 49, East | 6,700 | 6,700 | 6,800 | 6,900 | 0 | 0.0% | 100 | 1.5% | 100 | 1.5% | 0.7% |
| Rolleri Bypass Road | 6,400 | 6,400 | 6,500 | 6,600 | 0 | 0.0% | 100 | 1.6% | 100 | 1.5% | 0.8% |
| Vallecito, East | 8,300 | 8,300 | 8,400 | 8,600 | 0 | 0.0% | 100 | 1.2% | 200 | 2.4% | 0.9% |
| Big Trees/Tom Bell Roads, East | 9,700 | 9,700 | 9,800 | 10,000 | 0 | 0.0% | 100 | 1.0% | 200 | 2.0% | 0.8% |
| Avery, Moran Road West Junction, West | 10,600 | 10,600 | 10,800 | 11,000 | 0 | 0.0% | 200 | 1.9% | 200 | 1.9% | 0.9% |
| White Pines Road, West | 11,700 | 11,700 | 11,900 | 12,100 | 0 | 0.0% | 200 | 1.7% | 200 | 1.7% | 0.8% |
| Moran Road East Junction, West | 7,300 | 7,300 | 7,400 | 7,500 | 0 | 0.0% | 100 | 1.4% | 100 | 1.4% | 0.7% |
| Dorrington, West | 4,000 | 4,000 | 3,900 | 4,000 | 0 | 0.0% | -100 | -2.5% | 100 | 2.6% | 0.0% |
| Meko Drive, East | 1,750 | 1,750 | 1,700 | 1,750 | 0 | 0.0% | -50 | -2.9% | 50 | 2.9% | 0.0% |
| Big Meadows, West | 1,550 | 1,550 | 1,500 | 1,550 | 0 | 0.0% | -50 | -3.2% | 50 | 3.3% | 0.0% |
| Calaveras-Alpine County Line | 1,250 | 1,250 | 1,200 | 1,100 | 0 | 0.0% | -50 | -4.0% | -100 | -8.3% | -3.1% |
| **State Route 12** | | | | | | | | | | | |
| San Joaquin-Calaveras County Line | 7,300 | 7,300 | 7,400 | 7,500 | 0 | 0.0% | 100 | 1.4% | 100 | 1.4% | 0.7% |
| Burson, Burson Road, East | 8,500 | 8,500 | 8,900 | 9,000 | 0 | 0.0% | 400 | 4.7% | 100 | 1.1% | 1.4% |
| Valley Springs, Pine Street, East | 8,700 | 8,700 | 9,000 | 9,100 | 0 | 0.0% | 300 | 3.4% | 100 | 1.1% | 1.1% |
| Jct. Rte. 26 South, West | 8,700 | 8,700 | 9,000 | 9,100 | 0 | 0.0% | 300 | 3.4% | 100 | 1.1% | 1.1% |
| West Junction Lime Creek Road, East | 6,900 | 6,900 | 7,000 | 8,700 | 0 | 0.0% | 100 | 1.4% | 1,700 | 24.3% | 6.0% |
| Toyon, Jct. Rte. 26 North, West | 6,000 | 6,000 | 6,800 | 9,000 | 0 | 0.0% | 800 | 13.3% | 2,200 | 32.4% | 10.7% |
| San Andreas, Jct. Rte. 49 | 6,600 | 6,600 | 6,800 | 9,400 | 0 | 0.0% | 200 | 3.0% | 2,600 | 38.2% | 9.2% |
| **State Route 26** | | | | | | | | | | | |
| San Joaquin-Calaveras County Line, East | 3,800 | 3,800 | 3,800 | 4,900 | 0 | 0.0% | 0 | 0.0% | 1,100 | 28.9% | 6.6% |
| Gregory-Milton Road, West | 3,200 | 3,200 | 3,200 | 4,800 | 0 | 0.0% | 0 | 0.0% | 1,600 | 50.0% | 10.7% |
| Jenny Lind Road, West | 3,550 | 3,550 | 3,550 | 4,000 | 0 | 0.0% | 0 | 0.0% | 450 | 12.7% | 3.0% |
| Silver Rapids Road, East | 6,800 | 6,800 | 6,800 | 7,000 | 0 | 0.0% | 0 | 0.0% | 200 | 2.9% | 0.7% |
| La Contenta Country Club Entrance, West | 9,400 | 9,400 | 9,400 | 10,000 | 0 | 0.0% | 0 | 0.0% | 600 | 6.4% | 1.6% |
| Hogan Dam Road, East | 9,400 | 9,400 | 9,400 | 9,500 | 0 | 0.0% | 0 | 0.0% | 100 | 1.1% | 0.3% |
| Valley Springs, West Jct. Rte. 12 | 9,900 | 9,900 | 9,900 | 10,100 | 0 | 0.0% | 0 | 0.0% | 200 | 2.0% | 0.5% |
| Toyon, East Jct. Rte. 12 | 1,300 | 1,300 | 1,300 | 1,350 | 0 | 0.0% | 0 | 0.0% | 50 | 3.8% | 0.9% |
| Mokelumne Hill, Jct. Rte. 49, West | 2,100 | 2,100 | 2,100 | 2,150 | 0 | 0.0% | 0 | 0.0% | 50 | 2.4% | 0.6% |
| Ridge Road, East | 1,250 | 1,250 | 1,250 | 1,500 | 0 | 0.0% | 0 | 0.0% | 250 | 20.0% | 4.7% |
| Railroad Flat Road, East | 1,900 | 1,900 | 1,900 | 1,900 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0.0% |
| Winton Road, West | 2,400 | 2,400 | 2,400 | 2,200 | 0 | 0.0% | 0 | 0.0% | -200 | -8.3% | -2.2% |
| Main Street, East | 2,200 | 2,200 | 2,200 | 2,200 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0.0% |
| Calaveras-Amador County Line | 2,300 | 2,300 | 2,300 | 2,300 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0.0% |
| **State Route 49** | | | | | | | | | | | |
| Tuolumne-Calaveras County Line | 5,500 | 5,800 | 5,900 | 6,000 | 300 | 5.5% | 100 | 1.7% | 100 | 1.7% | 2.2% |
| Angels Camp, South Jct. Rte. 4, North | 12,900 | 15,500 | 15,600 | 15,900 | 2,600 | 20.2% | 100 | 0.6% | 300 | 1.9% | 5.4% |
| Angels Camp, Murphys Grade Road, South | 13,000 | 16,500 | 16,700 | 17,000 | 3,500 | 26.9% | 200 | 1.2% | 300 | 1.8% | 6.9% |
| Angels Camp, North Jct. Rte. 4, South | 11,300 | 11,800 | 11,900 | 12,100 | 500 | 4.4% | 100 | 0.8% | 200 | 1.7% | 1.7% |
| Fricot Road, North | 6,700 | 6,900 | 7,000 | 7,100 | 200 | 3.0% | 100 | 1.4% | 100 | 1.4% | 1.5% |
| San Andreas, Mountain Ranch Road, North | 11,600 | 11,900 | 12,000 | 12,200 | 300 | 2.6% | 100 | 0.8% | 200 | 1.7% | 1.3% |
| San Andreas, Main Street, South | 12,200 | 12,600 | 12,700 | 13,000 | 400 | 3.3% | 100 | 0.8% | 300 | 2.4% | 1.6% |
| Jct. Rte. 12 West, South | 10,500 | 10,700 | 10,900 | 11,100 | 200 | 1.9% | 200 | 1.9% | 200 | 1.8% | 1.4% |
| Gold Strike Road, North | 5,100 | 5,200 | 5,300 | 5,400 | 100 | 2.0% | 100 | 1.9% | 100 | 1.9% | 1.4% |
| Mokelumne Hill, Jct. Rte. 26, North | 5,400 | 5,500 | 5,600 | 5,700 | 100 | 1.9% | 100 | 1.8% | 100 | 1.8% | 1.4% |
| Calaveras-Amador County Line, South | 5,000 | 5,000 | 5,100 | 5,200 | 0 | 0.0% | 100 | 2.0% | 100 | 2.0% | 1.0% |

Source: *2000-2005 Traffic Volumes on California State Highways* , Caltrans, 2007.

SR 12 at the Toyon Junction SR 26 Northwest (10.7 percent annual increase) and on SR 26 near Gregory-Milton Road (10.7 percent annual increase). Decreases in traffic volumes were found in only two locations in the County and were along SR 4 at the Calaveras – Alpine County line and on SR 26 at Winton Road.

The Calaveras County Transportation Demand Model, developed by Fehr and Peers Transportation Consultants, provides average daily traffic volumes in 2002 for a summer weekday along a majority of the minor arterial, major collectors, minor collectors and local roads in the County as shown in Figure 6. As the figure indicates, the highest traffic occurs on the state highways, particularly in San Andreas and Angels Camp. As the Angels Camp Bypass is assumed in the Calaveras County Travel Demand Model, model generated traffic volumes for existing conditions along SR 49 through Angels Camp are less than Caltrans counts for the same time period. This reflects the future benefit of the Angels Camp Bypass. Other high volume County roadways include O'Byrnes Ferry Road (4,200 ADT) located south of

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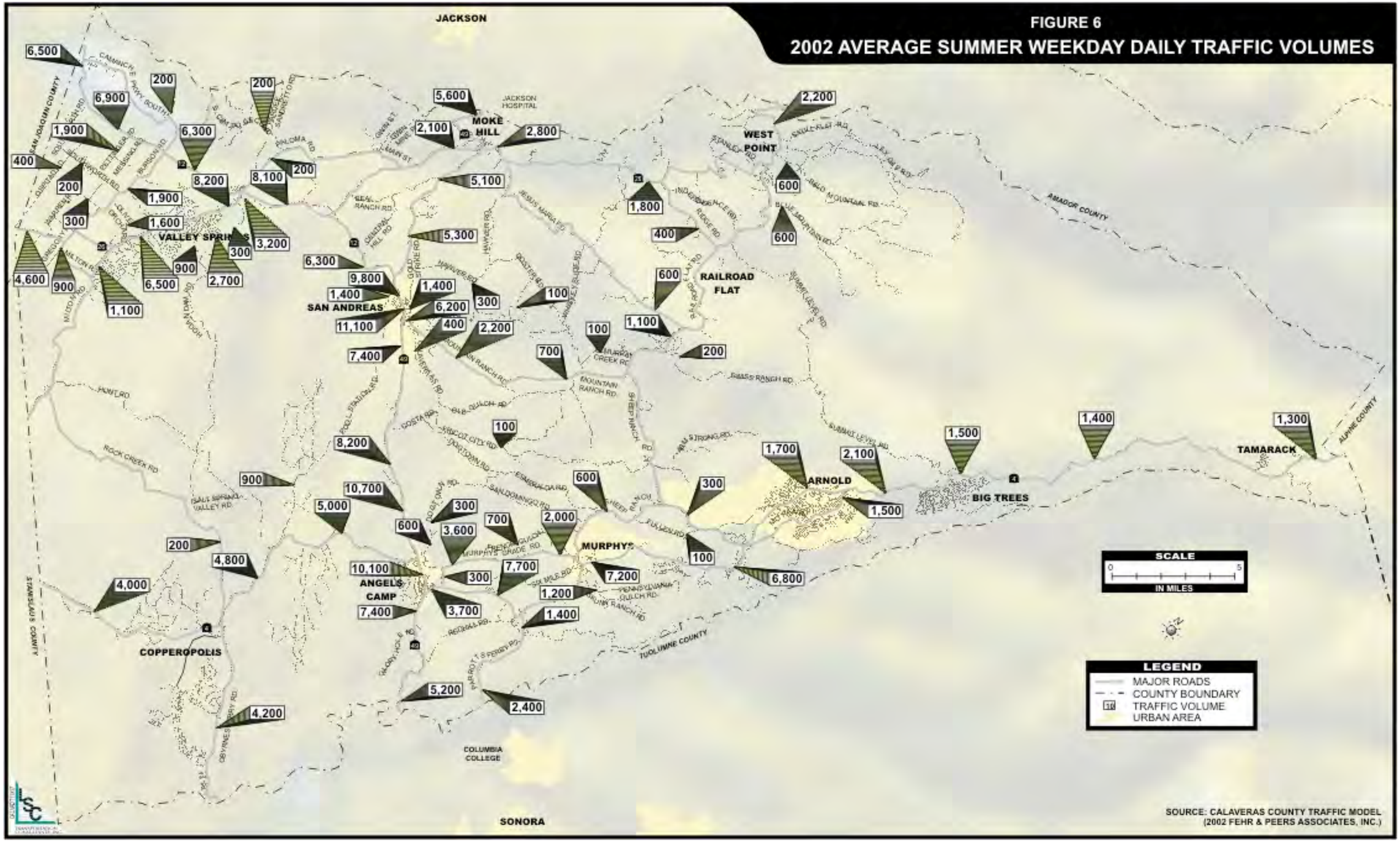
FIGURE 6

## 2002 AVERAGE SUMMER WEEKDAY DAILY TRAFFIC VOLUMES



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Copperopolis, Murphys Grade Road (3,600 ADT) near Murphys, Parrotts Ferry Road (2,400 ADT) southwest of Angels Camp and Mountain Ranch Road (2,200 ADT) near San Andreas.

**State Highway Truck Networks**

In 1982, the federal government passed the Surface Transportation Assistance Act (STAA). This Act required states to allow larger trucks on the "National Network," which is comprised of the Interstate system plus the non-Interstate Federal-aid Primary System. The four major truck size categories are:

- STAA Truck with Single Trailer – 48 feet maximum or 53 feet maximum with kingpin-to-rear-axle (KPRA) of 40 feet maximum.

- STAA Truck with Double Trailer – 28 feet 6 inch maximum for semi-trailer and trailer.

- California Legal Truck with Single Trailer – KPRA = 40 feet maximum (if 2 axles in rear); KPRA = 38 feet maximum (if 1 axle in rear); combination length = 65 feet maximum.

- California Legal Truck with Double Trailer – 28 feet 6 inch maximum for semi-trailer and trailer with combination length of 75 feet maximum or; either trailer or semi-trailer = 28 feet 6 inch maximum and the other trailer has no limit with combination length of 65 feet maximum.

All state highways are assigned route classifications which designate the permissible truck size for the route. In Calaveras County, STAA network routes include:

- SR 4 from the Stanislaus County line to Rock Creek Road at O'Byrnes Ferry Road near Copperopolis
- SR 4 from the SR 49 northern intersection to the Alpine County line
- SR 49 from San Andreas to the SR 4 southern intersection
- SR 12 from the San Joaquin County line to SR 49

California Legal Network routes include:

- SR 49 from the Amador County line to San Andreas
- SR 26 from SR 12 to SR 49

Certain California Legal routes cannot safely accommodate trucks with KPRA of 38 feet, due to limiting geometrics such as sharp turns and highway width. In these cases, the route is posted with an advisory sign stating the advised maximum KPRA length. The driver is legally responsible for unsafe off-tracking, such as crossing the centerline, and driving on shoulders, curbs, or sidewalks. There are four California Legal Advisory Network route segments in Calaveras County:

- SR 4 at Rock Creek Road at O'Byrnes Ferry Road near Copperopolis to SR 49
- SR 49 from SR 4 southern intersection to Tuolumne County line
- SR 26 from San Joaquin County line to SR 12
- SR 26 from San Andreas to Amador County line

STAA routes traversing Calaveras County are disjointed. An STAA size truck is unable to travel from Stockton to Angels Camp on SR 4. Although the new SR 4 Bypass will meet STAA requirements, the entire length of SR 4 in Calaveras County will not be on the STAA network.

**Goods Movement**

A combination of state highways and County roads serve as the primary network for goods movement in Calaveras County. Adequate maintenance and efficient operation of this roadway network is critical to the continued economic vitality of the County as well as safety of the public. As reflected in the interviews with truck traffic generators, conditions for goods movement are generally perceived as good, but some see new developments negatively impacting the regional transportation system. Potential conflicts between truck, recreational vehicle traffic and 40-foot tour buses on the County's narrow two-lane highways are seen as an issue. Some roads are considered to be simply too narrow to accommodate both goods movement and recreational traffic safely. Due to permitting constraints, larger trucks typically must take less direct routes to delivery locations, thereby decreasing efficiency. Additionally, a lack of shoulders and passing opportunities on the highway system is a safety concern in Calaveras County. All these factors can negatively impact goods movement through the County.

Table 8 presents data regarding truck activity on the state highways in Calaveras County from 2001 to 2005. Annual average daily truck traffic is the total truck traffic volume divided by 365 days. Truck counting is done throughout the state in a program of continuous truck count sampling. The sampling varies by location, and includes a partial day, 24-hour, 7-day and continuous vehicle classification counts. Road tube counters are used to count and classify truck traffic by the number of axles. The partial day and 24-hour counts are usually made on high volume, urban highways. The 7-day counts are made on low volume, rural highways. The counts are usually taken only once in the year, and about one-sixth of the locations are counted annually. The resulting counts are adjusted to an estimate of annual average daily truck traffic by compensating for seasonal influence, weekly variation, and other variables that may be present.

The highest volume in 2005 was observed on SR 49 in Angels Camp at the south junction with SR 4 (1,431). Other locations with high truck traffic volumes include SR 49 at the junction with SR 12 (677), SR 12 in San Andreas at the junction of SR 49 (630) and on SR 49 at Mountain Ranch Road (610). In 2005, the proportion of all traffic consisting of trucks was highest on SR 49 in Angels Camp at the junction with SR 4 (9.0 percent), followed by SR 4 at Meko Drive (8.5 percent).

As Caltrans records truck traffic volumes in the region once a year and not all count locations are updated annually, the data in Table 8 may not reflect seasonal variations or short-term increases in truck traffic. Another factor which will contribute to an increase in truck traffic over the short term is trucks carrying construction equipment and building supplies from the Central Valley over SR 12 to future development project sites in Wallace, Burson, Valley Springs and San Andreas.

Overall, state highway truck traffic increased between 2001 and 2005 on most segments of the state highway system, with the greatest increase seen on SR 26 in Mokelumne Hill at the junction with SR 49 (a 58.3 percent increase). It should be noted that although the proportionate increase of truck traffic on this segment was the largest, actual truck traffic volumes totaled to less than 100 AADT in 2005. The greatest decrease was on SR 49 north of the SR 49/SR4

***TABLE 8: Truck Traffic on Calaveras County State Highways***

| Location | Average Annual Daily Truck Traffic [1] 2001 | 2002 | 2003 | 2004 | 2005 | Change in Truck Traffic 2001-05 # | % | Annual % Change 2001-05 | Total Annual Avg. Daily Traffic Volumes 2005 | Percent Trucks 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| **SR 4 @** | | | | | | | | | | |
| Stanislaus/Calaveras County Line | 209 | 225 | 225 | 233 | 242 | 33 | 15.8% | 3.0% | 5,400 | 4.5% |
| Angels Camp, Jct. Rte. 49, West | 154 | 184 | 184 | 188 | 192 | 38 | 24.7% | 4.5% | 4,800 | 4.0% |
| Angels Camp, Jct. Rte. 49, East | 224 | 268 | 268 | 272 | 276 | 52 | 23.2% | 4.3% | 6,900 | 4.0% |
| Vallecito, West | 364 | 436 | 436 | 442 | 449 | 85 | 23.4% | 4.3% | 6,900 | 6.5% |
| Vallecito, East | 455 | 547 | 547 | 554 | 567 | 112 | 24.6% | 4.5% | 8,600 | 6.6% |
| Big Trees/Tom Bell Roads, East | 405 | 485 | 485 | 455 | 500 | 95 | 23.5% | 4.3% | 10,000 | 5.0% |
| Big Trees/Tom Bell Roads, West | 375 | 450 | 450 | 490 | 465 | 90 | 24.0% | 4.4% | 9,300 | 5.0% |
| Moran Road East Junction, West | 228 | 292 | 292 | 296 | 300 | 72 | 31.6% | 5.6% | 7,500 | 4.0% |
| Big Trees State Park, East | 200 | 260 | 260 | 273 | 280 | 80 | 40.0% | 7.0% | 4,000 | 7.0% |
| Big Trees State Park, West | 210 | 266 | 266 | 253 | 260 | 50 | 23.8% | 4.4% | 3,700 | 7.0% |
| Meko Drive, West | 140 | 140 | 140 | 136 | 140 | 0 | 0.0% | 0.0% | 1,650 | 8.5% |
| Calaveras/Alpine County Line | 25 | 25 | 25 | 24 | 22 | -3 | -12.0% | -2.5% | 1,100 | 2.0% |
| **SR 12 @** | | | | | | | | | | |
| Valley Springs, Jct. Rte. 26 South, West | 517 | 549 | 549 | 568 | 574 | 57 | 11.0% | 2.1% | 9,100 | 6.3% |
| Valley Springs, Jct. Rte. 26 South, East | 397 | 421 | 421 | 427 | 439 | 42 | 10.6% | 2.0% | 7,200 | 6.1% |
| Toyon, Jct. Rte. 26 North, West | 342 | 360 | 360 | 366 | 540 | 198 | 57.9% | 9.6% | 9,000 | 6.0% |
| San Andreas, Jct. Rte. 49, West | 415 | 442 | 442 | 456 | 630 | 215 | 51.8% | 8.7% | 9,400 | 6.7% |
| **SR 26 @** | | | | | | | | | | |
| Jenny Lind Road, West | 241 | 241 | 241 | 241 | 272 | 31 | 12.9% | 2.4% | 4,000 | 6.8% |
| Jenny Lind Road, East | 274 | 274 | 274 | 274 | 290 | 16 | 5.8% | 1.1% | 4,600 | 6.3% |
| La Contenta Country Club Entrance, West | 475 | 475 | 475 | 475 | 450 | -25 | -5.3% | -1.1% | 10,000 | 4.5% |
| La Contenta Country Club Entrance, East | 423 | 423 | 423 | 423 | 486 | 63 | 14.9% | 2.8% | 9,000 | 5.4% |
| Valley Springs, Jct. Rte. 12, West | 426 | 426 | 426 | 426 | 434 | 8 | 1.9% | 0.4% | 10,100 | 4.3% |
| Valley Springs, Jct. Rte. 12, East | 65 | 65 | 65 | 65 | 68 | 3 | 4.6% | 0.9% | 1,350 | 5.0% |
| Mokelumne Hill, Jct. Rte. 49, East | 62 | 62 | 62 | 62 | 64 | 2 | 3.2% | 0.6% | 1,400 | 4.6% |
| Mokelumne Hill, Jct. Rte. 49, West | 60 | 93 | 93 | 93 | 95 | 35 | 58.3% | 9.6% | 2,150 | 4.4% |
| Ridge Road, East | 64 | 64 | 64 | 64 | 77 | 13 | 20.3% | 3.8% | 1,250 | 6.2% |
| Ridge Road, West | 74 | 74 | 74 | 74 | 77 | 3 | 4.1% | 0.8% | 1,500 | 5.1% |
| Glenco, Associated Office Road, West | 73 | 73 | 73 | 73 | 83 | 10 | 13.7% | 2.6% | 920 | 9.0% |
| Glenco, Associated Office Road, East | 47 | 47 | 47 | 47 | 48 | 1 | 2.1% | 0.4% | 1,600 | 3.0% |
| Winton Road, West | 99 | 101 | 101 | 101 | 92 | -7 | -7.1% | -1.5% | 2,200 | 4.2% |
| Winton Road, East | 89 | 84 | 84 | 84 | 80 | -9 | -10.1% | -2.1% | 2,100 | 3.8% |
| **SR 49 @** | | | | | | | | | | |
| Tuolumne/Calaveras County Line, East | 220 | 220 | 232 | 236 | 240 | 20 | 9.1% | 1.8% | 6,000 | 4.0% |
| Angels Camp, South Jct. Rte. 4, West | 637 | 637 | 672 | 679 | 693 | 56 | 8.8% | 1.7% | 9,900 | 7.0% |
| Angels Camp, South Jct. Rte. 4, East | 1161 | 1161 | 1395 | 1404 | 1431 | 270 | 23.3% | 4.3% | 15,900 | 9.0% |
| North Jct. Rte. 4, East | 356 | 356 | 519 | 524 | 532 | 176 | 49.4% | 8.4% | 12,100 | 4.4% |
| North Jct. Rte. 4, West | 497 | 497 | 372 | 376 | 384 | -113 | -22.7% | -5.0% | 9,600 | 4.0% |
| Mountain Ranch Road, West | 375 | 375 | 385 | 600 | 400 | 25 | 6.7% | 1.3% | 8,000 | 5.0% |
| Mountain Ranch Road, East | 580 | 580 | 595 | 390 | 610 | 30 | 5.2% | 1.0% | 12,200 | 5.0% |
| Jct. Rte. 12 West, West | 641 | 641 | 653 | 665 | 677 | 36 | 5.6% | 1.1% | 11,100 | 6.1% |
| Jct. Rte. 12 West, East | 299 | 299 | 306 | 313 | 320 | 21 | 7.0% | 1.4% | 4,700 | 6.8% |
| Mokelumne Hill, Jct. Rte. 26, West | 302 | 302 | 309 | 316 | 324 | 22 | 7.3% | 1.4% | 4,500 | 7.2% |
| Mokelumne Hill, Jct. Rte. 26, East | 367 | 367 | 374 | 381 | 388 | 21 | 5.7% | 1.1% | 5,700 | 6.8% |

Note 1: Truck traffic includes all vehicles in the two-axle class (including 1-1/2 ton trucks with dual rear tire and excludes pickups and vans with only four tires) and above.
Source: *2001-2003 Annual Average Daily Truck Traffic on the California State Highway System*, Caltrans, 2005.

north junction outside of Angels Camp with a 22.7 percent decrease in daily truck traffic over the five-year period. However truck traffic immediately south of the north SR 4 / SR 49 junction increased by 49.4 percent which demonstrates that truck traffic is flowing between SR 49 (south of Angels Camp) to SR 4.

In terms of truck traffic on County maintained roadways, 450 one-time permits were issued by the County in 2004, and 77 companies/agencies applied for annual permits in 2004. County staff noted that not all the companies who applied for annual truck permits may have made actual trips in Calaveras County.

As the region grows, larger trucks require travel through Calaveras County in particular on SR 4 and SR 49. Calaveras County has undergone significant development in the last few years. As a result, truck volumes have increased accordingly and larger sized trucks are required to

transport goods through the County. Not all of Calaveras County roadways and state highways were designed to support this level of trucking activity. Improving state highways and intersections to STAA levels, constructing turnouts and passing lanes and upgrading County roads such as Parrots Ferry Road, Moran Road, O'Byrnes Ferry Road, Mountain Ranch Road and Sheep Ranch Road will benefit traffic flow, roadway safety and the local economy. Although policy decisions on limiting trucking activity throughout the County is not within the scope of this document, decision-makers should take into account, along with the economic impact of trucking activity, the impact an increasing number of trucks will have on the community and a limited regional transportation system.

## Existing Traffic Conditions

Level of Service

The concept of level of service is defined as a qualitative measure describing operational conditions of a roadway within a traffic stream. A level of service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations from A to F, with Level of Service A representing the best operating conditions, and Level of Service F the worst.

In general, the various levels of service are defined as follows for uninterrupted flow facilities:

- **Level of Service A** represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

- **Level of Service B** is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A because the presence of others in the traffic stream begins to affect individual behavior.

- **Level of Service C** is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.

- **Level of Service D** represents a high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.

- **Level of Service E** represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this

level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.

- **Level of Service F** is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, and then be required to stop in a cyclic fashion. Level of Service F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow which causes the queue to form, and Level of Service F is an appropriate designation for such points.

The *1996 Calaveras County General Plan Circulation Element* contains the following policy and implementation measures:

> *"Policy III-7C: Ensure monies are collected to upgrade County roads to the standards of their respective functional service classifications.*
>
> > *"Implementation Measure III-7C-1: Require developers seeking discretionary approval of a project or construction of new multifamily residential, commercial, or industrial development on parcels served by regional County roads at level of service A, B, or C to contribute as needed to the road improvement mitigation fund for both the road region and the road serving the subject property.*
> >
> > *"Implementation Measure III-7C-2: When a project is proposed to be located in a road region which includes County roads at level of service D, E or F on which traffic generated by the project will logically travel, allow the developer the following road improvement options:*
> >
> > – *Defer project consideration until the County road is upgraded to level of service A, B, or C.*
> > – *Construct at developer expense all onsite and offsite improvements necessary to upgrade all County roads impacted by the project to service level A, B, or C.*
> > – *Form an improvement district with other property owners in the area to share the cost of upgrading impacted County roads to service level A, B, or C.*
> >
> > *"Implementation Measure III-7C-3: If a developer funds the cost of upgrading a County road to service level A, B or C, permit execution of an agreement to reimburse the developer for expenses beyond the required proportional share or improvements; reimbursement may come from fees collected from future developers or future building permits issued in the road region."*

As the Calaveras County General Plan is currently in the update process, LOS policy may change in the future. Caltrans policy states that the concept level of service on interregional routes in rural areas is LOS C. With the exception of SR 26, all state highways in Calaveras County are considered interregional routes.

*Roadway LOS*

LOS for rural highways is largely determined by roadway geometry factors, such as grades, vertical and horizontal curves, and the presence of passing opportunities. In mountainous topography and particularly through canyons, roadway LOS can be relatively low, even absent substantial traffic volumes. Roadway LOS can also be impacted in developed areas by pedestrian, bicycle and parking activity. In recreational areas such as Calaveras County, roadway LOS issues are compounded by inexperienced mountain drivers, lack of passing opportunities and pullouts and truck traffic.

The following are Caltrans' estimates of LOS on primary roadway segments during peak traffic conditions.

*State Route 4 (State Route 4 Transportation Concept Report, Caltrans, 2002)*

- Stanislaus County Line and O'Byrnes Ferry Road – LOS B
- O'Byrnes Ferry Road and Rock Creek Road – LOS B
- Rock Creek Road and West City of Angels Limit – LOS B
- City of Angels Limit and East City of Angels Limit – LOS C
- East City of Angels Limit and West Moran Road – LOS D
- West Moran Road and East Moran Road – LOS E
- East Moran Road and Dorrington – LOS D
- Dorrington and Big Meadows – LOS D
- Big Meadows and Alpine County Line – LOS D

*State Route 12*

The Transportation Concept Report is currently being updated. The final version is not yet available; however, the Valley Springs Bypass PSR provides existing LOS for roadway segments in Valley Springs.

- West of SR 12/26 intersection – LOS C
- East of SR 12/26 intersection (combined SR 12-26 segment) – LOS C

*State Route 49*

The Transportation Concept Report is currently being updated. The final version is not yet available.

*State Route 26 (State Route 26 Transportation Concept Report, Caltrans, 2003)*

- between San Joaquin County and Silver Rapids Road - LOS C
- between Silver Rapids Road and East Junction with SR 12 – LOS D
- between West Junction with SR 12 and Ridge Road – LOS B
- between Ridge Road and West Point – LOS B
- between West Point and Amador County – LOS A

Existing conditions (2002) roadway LOS on key regional corridors was estimated using PM peak hour volumes from the Calaveras Travel Demand Model and Florida DOT's HIGHPLAN software. Based on the conclusion that the *Highway Capacity Manual* (HCM) rural roadway methodology is not appropriate for more developed rural areas, the Florida DOT recently

developed the LOSPLAN software. HIGHPLAN, a module of the LOSPLAN software, uses the HCM 2000 analysis technique and new capacity values but is based on the premise that the most relevant service measure for motorists on two-lane highways in developed areas is to maintain a “reasonable” speed, instead of the HCM 2000's primary service measure of “percent time spent following” (the percent of a driver’s trip spent following another car). Drivers in developed areas primarily base their LOS on how close they are going relative to their free flow speeds and not so much based on the ability to set their own travel speed or to pass. In other words, as it is not the typical driver's expectation to be able to make a passing maneuver while driving through rural areas, it is not appropriate to consider LOS based upon the ability to pass. The HIGHPLAN methodology was determined to be appropriate by Caltrans, Calaveras County and CCOG for LOS analysis in the RTP.

Table 9 presents the results. As shown in Table 9, LOS C is exceeded in the PM peak hour in the peak direction on the following roadway segments:

- SR 49 between SR 12 in San Andreas and Mountain Ranch Road
- SR 49 between Fourth Crossing Road and Brunner Hill Road at the north end of Angels Camp
- Mountain Ranch Road

*Intersection LOS*

The Calaveras Council of Governments contracted with All Traffic Data located in Roseville, California in the summer of 2005 to conduct AM and PM peak-hour turning-movement counts at various intersections in Calaveras County. Signalized and two-way stop-controlled intersection LOS was evaluated for the study intersections using Synchro software (Version 6, Trafficware 2004) based on the 2000 *Highway Capacity Manual* (HCM) methodologies. As HCM is unable to analyze atypical intersections, the approaches to the SR 4 (NB)/ Blagen and SR 4 (SB)/ Dunbar intersections were combined into a “T” intersection configuration. Traffic volumes used to calculate LOS are provided in Appendix E. As shown in Table 10, LOS thresholds are currently at acceptable levels at all study intersections except for SR 4 South and SR 49 (Southern Intersection) during the PM peak hour on a summer weekday. Note that at unsignalized intersections, the worst approach LOS is reported, while the total intersection LOS is reported for signalized intersections.

Another key intersection in Calaveras County is the 4-way stop in the community of Valley Springs at SR 12 and SR 26. This intersection was analyzed in the Valley Springs Bypass Project Study Report (PSR). According to the report, the intersection includes a non-standard truck turning radius at the southeast, northeast, and northwest corners and tight intersection geometry. Additionally, several commercial properties exist in the vicinity increasing traffic congestion. Currently the intersection operates at LOS F and up to a five-minute delay is possible. Poor LOS is expected to continue due to population growth and increased recreational traffic in the area. The proposed Valley Springs Bypass project and SR 12/26 intersection improvements (discussed in Chapter 4) are intended to reduce congestion and delay at the SR12/26 intersection at Valley Springs.

## Vehicle-Miles of Travel

The amount of vehicle-miles traveled on state highways in Calaveras County changed significantly between 1999 and 2004. In 2004 (the last year for which data is currently available)

***TABLE 9: Calaveras County 2002 PM Peak Hour Roadway Capacity Analysis***

| Roadway Segment | Classification | LOS C Capacity (vph in peak direction) | 2002 Traffic Volume (vph in peak direction) | LOS | LOS C Capacity Exceeded? |
|---|---|---|---|---|---|
| SR 49 between Amador County Line and SR 12 (San Andreas) | Minor Arterial | 320 | 268 | C | NO |
| SR 49 between SR 12 (San Andreas) and Mountain Ranch Rd | Minor Arterial | 460 | 489 | D | **YES** |
| SR 49 between Mountain Ranch Rd and Fourth Crossing Rd | Minor Arterial | 590 | 398 | C | NO |
| SR 49 between Fourth Crossing Rd and Brunner Hill Rd (N. end of Angels Camp) | Minor Arterial | 470 | 396 | C | NO |
| SR 49 between Brunner Hill Rd and SR 4 Jct. South (Angels Camp Downtown) | Minor Arterial | 420 | 567 | D | **YES** |
| SR 49 from SR 4 Jct. South (Angels Camp) to Tuolumne County Border | Minor Arterial | 510 | 368 | C | NO |
| SR 4 from Stanislaus County line to O'Byrnes Ferry Rd (Copperopolis) | Minor Arterial | 470 | 121 | B | NO |
| SR 4 between O'Byrnes Ferry Rd (Copperopolis) and SR 49 | Minor Arterial | 440 | 228 | B | NO |
| SR 4 between Angels Camp and Allen St (just west of Murphys) | Minor Arterial | 420 | 366 | C | NO |
| SR 4 between Allen St and Broadview Ln (Murphys Downtown) | Minor Arterial | 830 | 545 | C | NO |
| SR 4 between Broadview Ln (Murphys) and Valley View Dr (Arnold) | Minor Arterial | 550 | 514 | C | NO |
| SR 4 between Valley View Dr and Henry Rd (Arnold Downtown) | Minor Arterial | 520 | 228 | C | NO |
| SR 4 between Henry Rd (Arnold) and Alpine Co. line | Minor Arterial | 490 | 162 | B | NO |
| SR 12 between San Joaquin County line and Valley Springs | Minor Arterial | 420 | 341 | C | NO |
| SR 12 between Valley Springs and SR 26 East Jct. | Minor Arterial | 580 | 381 | C | NO |
| SR 26 between San Joaquin County line and Olive Orchard Rd | Minor Arterial | 420 | 275 | C | NO |
| SR 26 between Olive Orchard Rd and Lime Creek Rd (Valley Springs) | Minor Arterial | 830 | 458 | C | NO |
| SR 26 between SR 12 Jct East of Valley Springs and Mokelumne Hill | Minor Arterial | 330 | 94 | B | NO |
| SR 26 between Mokelumne Hill and West Point | Minor Arterial | 250 | 150 | C | NO |
| Murphys Grade Rd between Angels Camp and Murphys | Major Collector | 260 | 246 | C | NO |
| Mountain Ranch Rd between SR 49 and Sheep Ranch Rd | Major Collector | 230 | 246 | D | **YES** |
| O'Byrnes Ferry Rd between SR 4 and Tuolumne County line | Major Collector | 440 | 193 | B | NO |

Note: Roadway capacities based upon Florida DOT's HIGHPLAN Software.

Source: Calaveras County Transportation Demand Model, 2002

**TABLE 10: Calaveras County 2005 Summer Weekday Intersection LOS**

| Intx # | Intersection | | AM Peak-Hour LOS [1] | PM Peak-Hour LOS [1] |
|---|---|---|---|---|
| | North/South | East/West | | |
| 1 | SR 26 | Railroad Flat Road | A | A |
| 2 | SR 26 | Ridge Road | A | A |
| 3[(2)] | SR 4 (NB)/ Blagen & Dunbar | SR 4 (SB) | B | C |
| 4 | SR 4 | Main Street (Murphys) | C | C |
| 5 | SR 4 | Parrotts Ferry Road | B | B |
| 9 | SR 49 | SR 26 | B | C |
| 11 | Pettinger Road | SR 12 | B | B |
| 12 | SR 49 | Gold Strike Road | A | B |
| 13 | SR 49 | Pool Station Road | C | C |
| 14 | SR 49 | Mountain Ranch Road | C | C |
| 17 | SR 49 | SR 4 (Northern Intersection) | B | B |
| 18 | Murphys Grade Road / Demarest Street | SR 4 | B | B |
| 19 | SR 49 (Southern Intersection) | SR 4 South | C | F |
| 20 | Bret Harte Drive | SR 4 | B | C |
| 21 | Avery Sheep Ranch Road | SR 4 | B | B |

Note 1: Worst Approach LOS is reported for unsignalized intersections, while total intersection LOS is reported for signalized intersections.
Note 2: HCM is not able to analyze atypical intersections; therefore Blagen and Dunbar approaches were combined into a "T" intersection configuration.
Source: LSC Transportation Consultants, Inc. and All Traffic Data.

an estimated 281.3 million miles were traveled along state highways in Calaveras County. This is an increase of 16.2 percent over 1999 (242 million miles), an increase of 3 percent per year. Using the Calaveras County Transportation Demand model, daily vehicle miles of travel for the average summer weekday were estimated for the County as a whole. In 2002, approximately 1.03 million daily vehicle miles were traveled on both state highways and County roadways. Under future conditions (2025) approximately 2.76 million daily vehicle miles will be traveled Countywide. This represents a 166.9 percent total increase, which amounts to a 4.4 percent increase per year.

### Traffic Accidents

The number of reported traffic accidents on roadways in Calaveras County totaled 440 accidents in 2002. Of these accidents, there were a total of 295 injuries and two fatalities (Caltrans District 10, 2002).

### Registered Vehicles

In 2003, there were 64,502 fee-paid vehicles registered in Calaveras County. Between 2000 and 2003, the population increased 7.4 percent (2,991 people), while the number of automobiles and trucks registered increased by 12.0 percent (6,902 vehicles). In 2003, there were 64,502 registered vehicles and 43,535 residents of the County, reflecting a ratio of 1.5 vehicles per resident (Department of Motor Vehicles, Department of Finance, Caltrans).

### Bridges

Calaveras County roadways include a total of 99 bridges (Caltrans District 10, 2005). As shown in Table 11, 14 of the 72 bridges under the jurisdiction of the County are “structurally

***TABLE 11: Log of Bridges on County Roadways***

| Bridge Number | District | Bridge Name | Facility Carried | Bypass Length | Lanes ONUN | AADT | Appr Width | Str Type | Road Width | Year Built | SD/ FO | Length | Suff Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30C0004 | 10 | Rock Creek | Rock Creek Rd | 40 | 0200 | 100 | 4.6 | 201 | 8.5 | 1990 | | 31 | 99.8 |
| 30C0005 | 10 | Rock Creek Overflow | Rock Creek Rd | 26 | 0200 | 27 | 4.6 | 201 | 5.8 | 1936 | | 10 | 76.4 |
| 30C0013 | 10 | Cosgrove Creek | Hogan Dam Rd | 13 | 0200 | 500 | 5.5 | 201 | 5.7 | 1941 | FO | 11 | 71.3 |
| 30C0016 | 10 | Mokelumne River | Middle Bar Rd | 24 | 0200 | 30 | 3.7 | 310 | 6.1 | 1912 | SD | 63 | 35.9 |
| 30C0017 | 10 | North Fork Calaveras River | Jesus Maria Rd | 35 | 0200 | 300 | 4.9 | 205 | 8.5 | 1989 | | 28 | 99.5 |
| 30C0018 | 10 | Youngs Creek | Lime Creek Rd | 3 | 0200 | 100 | 5.8 | 104 | 6.5 | 1915 | SD | 18 | 66.9 |
| 30C0019 | 10 | Youngs Creek | Lime Creek Rd | 3 | 0200 | 100 | 5.8 | 204 | 6.4 | 1917 | | 14 | 79.0 |
| 30C0020 | 10 | Cosgrove Creek | Hogan Dam Rd | 13 | 0200 | 1000 | 6.1 | 319 | 6.4 | 1962 | FO | 14 | 71.9 |
| 30C0021 | 10 | Coyote Creek | Douglas Flat | 199 | 0100 | 50 | 3.0 | 302 | 3.6 | 1935 | SD | 13 | 22.0 |
| 30C0022 | 10 | Murray Creek | Gold Strike Rd | 8 | 0200 | 200 | 6.1 | 302 | 8.2 | 1949 | | 16 | 95.9 |
| 30C0023 | 10 | North Fork Calaveras River | Gold Strike Rd | 8 | 0200 | 200 | 7.3 | 201 | 8.5 | 1951 | | 47 | 96.9 |
| 30C0024 | 10 | Calaveritas Creek | Calaveritas Rd | 5 | 0100 | 100 | 4.9 | 310 | 5.5 | 1928 | SD | 31 | 38.9 |
| 30C0026 | 10 | San Andreas Creek | Main St | 1 | 0200 | 400 | 6.1 | 111 | 6.8 | 1914 | | 9 | 67.6 |
| 30C0027 | 10 | Middle Fork Mokelumne River | Schadd Rd | 199 | 0200 | 100 | 6.7 | 504 | 8.5 | 1968 | | 16 | 91.1 |
| 30C0028 | 10 | Black Creek | O'Byrnes Ferry Rd | 80 | 0200 | 5000 | 8.5 | 204 | 8.5 | 1972 | | 38 | 96.5 |
| 30C0030 | 10 | Indian Creek | Sheep Ranch Rd | 42 | 0200 | 200 | 4.9 | 101 | 8.5 | 1989 | | 9 | 99.6 |
| 30C0033 | 10 | San Andreas Creek | California St | 1 | 0200 | 200 | 5.8 | 119 | 6.4 | 1953 | | 11 | 83.0 |
| 30C0034 | 10 | Angels Creek | Utica Powerhouse Rd | 3 | 0200 | 50 | 3.7 | 101 | 5.5 | 1920 | | 10 | 64.5 |
| 30C0035 | 10 | Calaveritas Creek | Poole Station Rd | 42 | 0200 | 900 | 9.8 | 106 | 9.8 | 2001 | | 23 | 98.2 |
| 30C0036 | 10 | Angels Creek | Main St | 3 | 0200 | 800 | 9.1 | 111 | 9.1 | 1909 | | 9 | 60.0 |
| 30C0037 | 10 | S Fork Mokelumne River | Railroad Flat Rd | 23 | 0200 | 700 | 9.2 | 101 | 9.2 | 2001 | | 41 | 97.2 |
| 30C0038 | 10 | San Domingo Creek | Sheep Ranch Rd | 35 | 0200 | 200 | 4.9 | 101 | 8.6 | 1980 | | 12 | 99.7 |
| 30C0039 | 10 | San Antonio Creek | Sheep Ranch Rd | 84 | 0200 | 300 | 7.3 | 302 | 7.2 | 1930 | | 13 | 58.2 |
| 30C0040 | 10 | O'neil Creek | Sheep Ranch Rd | 84 | 0200 | 300 | 7.6 | 302 | 7.7 | 1930 | SD | 13 | 38.0 |
| 30C0041 | 10 | Mckinney Creek | Sheep Ranch Rd | 84 | 0200 | 300 | 8.5 | 119 | 8.4 | 1967 | | 6 | 92.9 |
| 30C0042 | 10 | Huntington Creek | Milton Rd | 89 | 0200 | 1000 | 9.8 | 119 | 9.8 | 1967 | | 8 | 94.3 |
| 30C0043 | 10 | S Gulch Creek | Milton Rd | 89 | 0200 | 1000 | 7.7 | 119 | 9.8 | 1967 | | 10 | 94.3 |
| 30C0044 | 10 | Esperanza Creek | Railroad Flat Rd | 42 | 0200 | 300 | 5.8 | 302 | 5.9 | 1940 | FO | 14 | 49.7 |
| 30C0045 | 10 | Bear Creek | Poole Station Rd | 45 | 0200 | 126 | 8.8 | 104 | 8.5 | 1979 | | 15 | 99.7 |
| 30C0046 | 10 | Jesus Maria Creek | Railroad Flat Rd | 29 | 0200 | 300 | 8.5 | 119 | 8.5 | 1978 | | 17 | 96.6 |
| 30C0047 | 10 | Haupt Creek | Double Springs Rd | 2 | 0200 | 50 | 6.1 | 204 | 6.4 | 1917 | | 14 | 64.0 |
| 30C0048 | 10 | French Gulch | Dogtown Rd | 23 | 0100 | 100 | 5.5 | 302 | 5.1 | 1940 | SD | 8 | 43.8 |
| 30C0049 | 10 | San Domingo Creek | Dogtown Rd | 23 | 0100 | 100 | 4.3 | 302 | 4.9 | 1940 | SD | 13 | 38.6 |
| 30C0050 | 10 | Indian Creek | Dogtown Rd | 24 | 0100 | 100 | 4.9 | 201 | 5.2 | 1930 | FO | 9 | 69.1 |
| 30C0051 | 10 | Indian Creek | Dogtown Rd | 24 | 0100 | 100 | 4.9 | 201 | 5.1 | 1930 | FO | 9 | 67.8 |
| 30C0052 | 10 | San Antonio Creek | Dogtown Rd | 24 | 0200 | 100 | 7.0 | 105 | 7.0 | 2001 | | 35 | 98.9 |
| 30C0053 | 10 | Willow Creek | Calaveritas Rd | 19 | 0200 | 100 | 6.1 | 104 | 7.6 | 1925 | | 9 | 97.9 |
| 30C0054 | 10 | San Domingo Creek | Pool Station Rd | 40 | 0200 | 250 | 5.8 | 204 | 5.8 | 1940 | FO | 36 | 37.9 |
| 30C0055 | 10 | San Antonio Creek | Pool Station Rd | 40 | 0200 | 250 | 5.5 | 104 | 5.8 | 1940 | FO | 23 | 47.4 |
| 30C0056 | 10 | Bear Creek | Hogan Dam Rd | 199 | 0200 | 50 | 5.2 | 302 | 6.7 | 1960 | | 8 | 79.5 |
| 30C0057 | 10 | Slate Creek | Hogan Dam Rd | 199 | 0200 | 50 | 4.9 | 302 | 6.7 | 1959 | | 10 | 81.0 |
| 30C0058 | 10 | Calaveras River | Hogan Dam Rd | 199 | 0200 | 150 | 5.5 | 302 | 6.7 | 1960 | | 38 | 57.5 |
| 30C0060 | 10 | Bear Creek | Burson Rd | 11 | 0200 | 300 | 6.1 | 101 | 8.5 | 1986 | SD | 8 | 95.8 |
| 30C0061 | 10 | Jesus Maria Creek | Swiss Ranch Rd | 16 | 0100 | 39 | 3.7 | 201 | 4.7 | 1952 | | 8 | 68.9 |
| 30C0062 | 10 | Jesus Maria Creek | Whiskey Slide Rd | 24 | 0100 | 50 | 3.0 | 302 | 4.2 | 1936 | SD | 12 | 37.8 |
| 30C0063 | 10 | San Domingo Creek | San Domingo Rd | 14 | 0100 | 50 | 2.7 | 302 | 4.7 | 1935 | SD | 7 | 30.8 |
| 30C0064 | 10 | Angels Creek | Algiers St | 2 | 0100 | 100 | 4.9 | 302 | 4.7 | 1940 | | 9 | 76.0 |
| 30C0065 | 10 | Angels Creek | Rolleri Bypass Rd | 24 | 0100 | 100 | 5.5 | 302 | 4.2 | 1932 | | 10 | 70.0 |
| 30C0066 | 10 | Warren Creek | Warren Rd | 10 | 0200 | 75 | 5.2 | 101 | 6.1 | 1937 | | 9 | 79.0 |
| 30C0067 | 10 | Warren Creek | Warren Rd | 10 | 0200 | 100 | 5.5 | 101 | 6.2 | 1937 | SD | 10 | 62.5 |
| 30C0068 | 10 | Indian Creek | Warren Rd | 10 | 0200 | 75 | 5.5 | 101 | 6.7 | 1936 | | 14 | 65.5 |
| 30C0069 | 10 | Calaveras River | Milton Rd | 55 | 0200 | 177 | 8.5 | 205 | 8.5 | 1979 | | 54 | 99.5 |
| 30C0070 | 10 | Coyote Creek | Parrotts Ferry Rd | 5 | 0200 | 1387 | 9.4 | 201 | 9.8 | 1981 | SD | 34 | 95.7 |
| 30C0071 | 10 | Kathy Creek | Silver Rapids Rd | 13 | 0200 | 1000 | 7.3 | 119 | 10.0 | 1975 | | 12 | 91.1 |
| 30C0072 | 10 | Warren Creek | Evergreen Rd | 3 | 0200 | 100 | 4.6 | 101 | 5.5 | 1938 | | 13 | 73.0 |
| 30C0073 | 10 | Mokelumne River | Camanche Parkway | 64 | 0200 | 634 | 8.5 | 502 | 7.9 | 1964 | | 122 | 89.3 |
| 30C0074 | 10 | Angels Creek | Kurt Drive | 199 | 0200 | 100 | 9.8 | 101 | 9.8 | 1983 | | 7 | 91.1 |
| 30C0075 | 10 | Branch Of Coyote Creek | Main Street | 2 | 0200 | 300 | 6.1 | 104 | 9.8 | 1915 | | 7 | 97.0 |
| 30C0076 | 10 | Black Creek | Copper Cove Drive | 199 | 0200 | 500 | 7.9 | 119 | 7.9 | 1965 | | 12 | 81.5 |
| 30C0079 | 10 | Bear Creek | Pettinger Rd | 6 | 0200 | 200 | 5.8 | 201 | 6.1 | 1937 | | 9 | 59.4 |
| 30C0080 | 10 | Cosgrove Creek | Vista Del Lago Dr | 2 | 0200 | 1000 | 6.7 | 201 | 9.7 | 1968 | SD | 21 | 91.9 |
| 30C0082 | 10 | Angels Creek | Booster Way | 2 | 0200 | 100 | 4.6 | 201 | 7.3 | 1990 | | 19 | 97.0 |
| 30C0083 | 10 | Licking Fk Mokelumne River | Railroad Flat Rd | 24 | 0200 | 700 | 9.8 | 201 | 9.8 | 1993 | | 18 | 97.2 |
| 30C0084 | 10 | Forest Creek | Schadd Rd | 0 | 0100 | 25 | 5.5 | 302 | 3.4 | 1993 | SD | 14 | 21.0 |
| 30F0001 | 10 | San Antonio Creek | Ponderosa Way | 13 | 0100 | 50 | 3.7 | 302 | 3.3 | 1940 | FO | 25 | 66.7 |
| 30F0002 | 10 | North Fork Calaveras River | Ponderosa Way | 21 | 0100 | 100 | 5.2 | 310 | 3.7 | 1935 | | 52 | 47.7 |
| 30F0003 | 10 | Mokelumne River | Ponderosa Way | 43 | 0000 | 100 | 3.0 | 310 | 3.7 | 1934 | FO | 70 | 45.7 |
| 30F0004 | 10 | Calaveritas Creek | Ponderosa Way | 23 | 0100 | 100 | 3.7 | 302 | 5.1 | 1949 | FO | 12 | 52.8 |
| 30P0001 | 10 | N Fk Stanislaus River | | 199 | 0200 | | 7.0 | 302 | 8.5 | 1959 | | 74 | 89.2 |
| 32C0007 | 10 | Stanislaus River | O'Byrnes Ferry Rd | 66 | 0200 | 2343 | 7.0 | 205 | 6.1 | 1957 | FO | 176 | 68.1 |

Source: California Department of Transportation, Division of Structure Maintenance & Investigations, February 2005.

deficient" (SD), and 11 are "functionally obsolete" (FO). Structural deficiencies indicates that a bridge has a load limit and a permit is required prior to crossing with loads exceeding the limit. Functionally obsolete refers to bridges with access limits such as the presence of only one travel lane, lack of proper bridge rails, or lack of appropriate clearance.

The Calaveras County state highway bridge inventory, presented in Table 12, provides an inventory of all the state bridges located in Calaveras County. Of the 27 bridges located along state highways in the County,15 are rated as structurally deficient or functionally obsolete.

***TABLE 12: Log of Bridges on State Highways in Calaveras County***

| Postmile | Bridge No. | Structure Name or Route Information | Structure Type Main | Structure Type Appr | Bridge Length | Width | Num Spans | Sidewalk Width Lt | Sidewalk Width Rt | Suff. Rating[1] | Year Built | Year Wid/Ext |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10-CAL-004** | | | | | | | | | | | | |
| R004.85 | 30 0046 | McCarty Creek | 119 | | 8.2 | 0.0 | 3 | | | | 1972 | |
| R005.89 | 30 0034 | Little Johns Creek | 205 | | 62.5 | 12.8 | 3 | | | | 1972 | |
| _016.15 | 30 0036 | W Branch Cherokee Creek | 302 | | 6.7 | 6.8 | 1 | | | 63.0 | 1930 | 1941 |
| _017.66 | 30 0047 | Waterman Creek | 119 | | 12.8 | 10.4 | 4 | | | | 1941 | 1973 |
| R019.08 | 30 0050 | Cherokee Creek | 319 | | 6.4 | 0.0 | 2 | | | | 1989 | |
| _021.41 | 30 0008 | Angels Creek | 104 | | 14.0 | 11.3 | 1 | 1.7 | 0.4 | 69.0 | 1946 | 1960 |
| _024.03 | 30 0009 | Six Mile Creek | 201 | | 23.8 | 10.6 | 3 | 0.4 | 0.4 | | 1961 | |
| **10-CAL-012** | | | | | | | | | | | | |
| _010.32 | 30 0002 | Cosgrove Creek | 201 | | 28.3 | 9.8 | 4 | | | 68.5 | 1956 | |
| _012.15 | 30 0005 | Lime Creek | 119 | | 9.4 | 15.2 | 3 | | | 65.0 | 1939 | |
| _013.93 | 30 0006 | Haupt Creek | 505 | | 32.0 | 16.7 | 1 | | | | 1993 | |
| _017.25 | 30 0007 | North Fork Calaveras River | 204 | | 91.7 | 9.9 | 6 | 0.7 | 0.7 | 68.8 | 1938 | |
| **10-CAL-026** | | | | | | | | | | | | |
| _000.82 | 30 0023 | Indian Creek | 201 | | 25.2 | 13.1 | 3 | | | 88.3 | 1998 | |
| _002.46 | 30 0024 | Indian Creek | 201 | | 17.9 | 16.7 | 2 | | | | 1998 | |
| _004.31 | 30 0025 | Indian Creek | 119 | | 11.0 | 0.0 | 2 | | | 78.5 | 1990 | |
| _029.33 | 30 0048 | West Point Sidehill Viaduct | 201 | | 83.8 | 3.4 | 11 | | | | 1984 | |
| _030.00 | 30 0022 | South Fork Mokelumne River | 104 | | 36.6 | 8.1 | 3 | 0.4 | 0.4 | 75.0 | 1936 | |
| R033.65 | 30 0052 | Middle Fork Mokelumne River | 505 | | 44.2 | 13.3 | 1 | | | | 1997 | |
| _038.31 | 30 0049 | North Fork Mokelumne River | 104 | 201 | 62.2 | 7.9 | 8 | 0.3 | 0.3 | 62.7 | 1930 | 1948 |
| **10-CAL-049** | | | | | | | | | | | | |
| _006.51 | 30 0020 | Six Mile Creek | 101 | | 10.1 | 9.1 | 1 | 0.3 | 0.3 | 65.9 | 1940 | |
| _007.16 | 30 0019 | Angels Creek | 111 | | 15.2 | 9.8 | 1 | | | 58.6 | 1909 | |
| _009.01 | 30 0042 | Cherokee Creek | 119 | | 7.0 | 14.8 | 2 | | | | 1941 | 1986 |
| _012.51 | 30 0018 | San Domingo Creek | 302 | | 46.3 | 8.4 | 5 | 0.4 | 0.4 | 57.6 | 1934 | |
| _014.09 | 30 0017 | San Antonio Creek | 302 | | 46.3 | 8.4 | 5 | 0.4 | 0.4 | 60.3 | 1934 | |
| _016.41 | 30 0016 | Calaveritas Creek | 104 | | 73.8 | 8.3 | 7 | | | 65.8 | 1930 | |
| _016.46 | 30 0039 | Calaveras Cement Co Oc | 104 | | 12.2 | 5.6 | 1 | 0.4 | 0.4 | | 1935 | |
| R020.69 | 30 0030 | Murray Creek | 204 | | 33.2 | 10.6 | 3 | 0.1 | 0.1 | | 1963 | |
| R021.49 | 30 0031 | North Fork Calaveras River | 204 | | 58.2 | 10.6 | 3 | 0.1 | 0.1 | 92.3 | 1963 | |

Note 1: Sufficiency ratings for structurally deficient or functionally obsolete bridges.

Source: California Department of Transportation, Division of Structure Maintenance and Investigations, May 2005.

## Security/Emergency Preparedness

As underscored by the Hurricane Katrina disaster, it is important for local and regional agencies to proactively establish emergency preparedness guidelines and procedures. Calaveras County is located in the foothills of the Sierra Nevada mountain range and the most likely natural disaster scenarios are forest fires, earthquakes, and landslides. Emergency preparedness involves many elements including training/education, planning appropriate responses to possible emergencies, and communication between fire protection and city and county government staff. Identifying evacuation routes and methods is pertinent to the scope of the RTP.

- Four state highways traverse Calaveras County and act as the primary evacuation route for many Calaveras County communities, such as Altaville, Angels Camp, Avery, Arnold, Wallace, Burson, Valley Springs, Glencoe, West Point, San Andreas, Murphys, Dorrington,

and Mokelumne Hill. With the seasonal closure of SR 4 east of the Alpine County line (and limited capacity even when this roadway is open), evacuation routes should follow SR 4, SR 12 and SR 26 west toward San Joaquin and Stanislaus County, south on SR 49 toward Tuolumne County or north on SR 49 and SR 26 to Amador County. One state highway RTP project that will improve circulation on an important emergency evacuation route is the SR 4 Wagon Trail project. This project will provide a faster and safer alignment for a five mile portion of Highway 4 between Copperopolis and Angels Camp, which is a primary east-west link to the Central Valley.

- Although state highways connect the larger communities in the County, many Calaveras County residents live in very rural areas not directly accessed by state highways and would depend on local roadways as evacuation routes. Additionally, in the event that a portion of a state highway is blocked due to a disaster, certain local roadways could provide alternate evacuation routes. The Calaveras County Department of Public Works developed a list of local roads of regional significance, as discussed above in this chapter. One of the criteria for a local road of regional significance is that the route serves as emergency relief in case accidents, landslides, fires, or other catastrophic events reduce the capacity of major transportation routes. The following local roads of regional significance are potential evacuation routes. These roadways are also associated with transportation improvement projects in Table 22 of the Action Element (Chapter 4):

  - Avery Sheep Ranch Road
  - Jenny Lind Road
  - Milton Road
  - Moran Road
  - Mountain Ranch Road
  - Paloma Road
  - Pool Station Road
  - Railroad Flat Road
  - Ridge Road
  - Sheep Ranch Road

  Murphys Grade Road is considered of regional significance on par with state highways and is designated a regional county road. This roadway provides an alternate evacuation route to SR 4 for Murphys residents. O'Byrnes Ferry Road provides an alternate evacuation route for Copperopolis residents and Parrotts Ferry Road provides an alternate evacuation route for Vallecito residents. Independence Road, Jesus Maria Road, Michel Road, Commanche Parkway, Red Hill Road, Pennsylvania Gulch Road, Camp 9, Ospital/Southworth Roads and Burson/Olive Orchard Roads are also considered evacuation routes.

- Should a local road be blocked by a natural disaster, an alternate emergency access route would be required for evacuation. The Calaveras County Code stipulates maximum lengths of dead-end roads depending on the size of parcels served by the road along with road standards. As part of the *Calaveras County Circulation Study Working Paper 2* (LSC Transportation Consultants, Inc. 2006), a GIS-based analysis was performed to identify dead-end roads which exceed the maximum length. Results showed that Poker Flat Road near Copperopolis, and Pine Drive and Menominee Court near Arnold, exceed County dead-end standards and are located in a high fire threat area.

- In the event of a natural disaster, Calaveras Transit's fleet of nine vehicles would be available to transport evacuees. The transit fleet is stationed in San Andreas, and all vehicles are wheelchair accessible.

- Maury Rasmussen Airport is available for emergency evacuation and there is one officially designated emergency helipad at the Mark Twain St. Joseph's Hospital within the County.

Another possible emergency scenario affecting Calaveras County is the evacuation of Bay Area and/or central valley residents to second homes in Calaveras County in the event of a major catastrophe such as tsunami, earthquake, or biological/chemical attack. As many residents of these urban areas have recreational homes in Calaveras County, such an event could potentially create gridlock conditions on highways in the County. However, it is very difficult to plan for such an event, and not feasible to design roadways in Calaveras County for such a scenario. Emergency preparedness plans established by local agencies should consider this possibility, and potential measures to manage the resulting traffic. The best preventative measures with respect to this document for an "eastward evacuation event" would be to continue to implement projects in the RTP which upgrade roadways and public transit. The City of Angels is currently addressing this problem by drafting a Shelter Reception Plan.

## EXISTING TRANSIT SERVICES

### Calaveras Transit

The Calaveras County Department of Public Works oversees the operation of Calaveras Transit. Calaveras Transit operates five Deviated Fixed Routes from 6:00 AM to 10:00 PM, Monday through Friday. No service is offered on the weekend. The following communities are served on the Deviated Fixed Routes:

- Angels Camp
- Arnold
- Avery
- Glencoe
- Jackson (Amador County)
- Lodi (San Joaquin County)
- Mokelumne Hill
- Mountain Ranch
- Murphys
- Railroad Flat
- San Andreas
- Valley Springs
- Wallace
- West Point
- Columbia (Tuolumne County)

Inter-County connections are available in San Joaquin County (Lodi), Tuolumne County (Columbia College), and Amador County (Jackson). A recent addition to the list of inter-county destinations is the ski bus route between San Andreas and Bear Valley. One round trip is made on weekends during the ski season.

The current fare for a one-way passenger trip on the Deviated Fixed Routes is $1.00 for general public and $0.75 for students, elderly, and disabled persons. The cost for a one-way trip to Lodi is $2.00, with a discounted fare of $1.50. A round trip on the ski bus costs $10. During FY 2005-2006, Calaveras Transit provided 57,554 one-way passenger trips on the Deviated Fixed Routes and regional services.

## TRANSPORTATION DEMAND MANAGEMENT

### Park-and-Ride Facilities

Currently, Calaveras County has one 40 space Park-and-Ride facility located at the Black Bart Play house in Murphys near SR 4. There are no bike lockers at the facility. The 2004 Caltrans Park-and-Ride Plan considers a new facility on SR 49 near SR 26 in Mokelumne Hill to be a good location for future study. However, Calaveras County would need to acquire the funds necessary to build the lot or the project could be incorporated into a future highway project. Once established, Caltrans would be able to provide maintenance, signage, and liability insurance. Incorporating Park-and-Ride lots in to new subdivision plans in high commute areas as a condition of approval could be one method of funding.

### Foothill Commuter Services

Foothill Commuter Services is a rideshare database that serves Amador, Calaveras, and Tuolumne Counties. The Foothill Rideshare website went live in September of 2006 and is growing its database of registered users. Commuters searching for a carpool partner can submit their information to the database and receive a free match list of other commuters with similar travel patterns. Foothill Commuter Services uses the same database as the San Joaquin Council of Governments "Commute Connection" program, thereby expanding resources available to Foothill commuters. The site also provides information on vanpools, links to public transit, and an internet forum for connecting with individuals making a "one-time trip." Funding for the program comes from a FTA 5313 grant, Valley CAN "Clean Air Now," the Amador County Transportation Commission (ACTC), Tuolumne County Transportation Council (TCTC), and the CCOG.

## EXISTING NON-MOTORIZED FACILITIES

Non-motorized facilities include locally or regionally significant bike lanes/trails, sidewalks, hiking trails, equestrian trails, and other related improvements. Non-motorized facilities are important for local use, as well as for tourists, and recreational purposes.

Bicycle Facilities

Currently, a Class I bike path exists on Blagen Road between the entrance to the post office parking lot and Henry Street, transitioning into a Class III facility totaling +/- 4,370 feet. Another Class I facility exists on Mountain Ranch Road between Michael Road and Garibaldi Street, +/- 3,020 feet. Yet another short stretch exists along Gold Strike Road from the high school to Court Street. The City of Angels also recently completed a Class II bikeway on Stanislaus Avenue between SR 49 and San Joaquin Avenue as part of the Safe Routes to School Program. Class III routes are located in Valley Springs along Hogan Dam Road and Vista Del Lago Road, in San Andreas on a portion of Gold Strike Road, along Winton Road/Highway 26 from Skull Flat Road to SR 26, along Bald Mountain Road between SR 26 and Jurs Road, and along Main Street from SR 26 to Smith Lane. In total, only 4.1 miles of Class I, II, or III bikeways exist in Calaveras County. Limited shoulders and bike routes on Calaveras County roadways make travel by bike difficult and less attractive. Calaveras COG is in the process of updating the Calaveras County Bicycle and Pedestrian Master Plan which includes an extensive list of bicycle facility projects.

Pedestrian Facilities

Limited sidewalks and other pedestrian facilities exist throughout the County. Most communities within Calaveras County have some sidewalks or pedestrian crossings, but there is a lack of connectivity between these facilities, making it difficult to safely complete a trip on foot within the Calaveras County regional transportation system. Where crosswalks are unavailable, pedestrians are forced to cross wide, high volume roadways, which often have limited sight distance. This is particularly challenging for the elderly and disabled population.

*Mokelumne Coast to Crest Trail*

The Mokelumne Coast to Crest Trail (MCCT) is a proposed multi-use trail across central California that will extend from the Pacific Coast to the crest of the Sierra Nevada along the Mokelumne River. To date, 87 miles have been completed on the MCCT thanks to many

volunteers and contributions from public and private agencies. When completed, the multi-use trail will span 300 miles between the highest point at 8,730 feet and the lowest at sea level, connecting seven regional parks. The trail will traverse eight counties and will serve as a backbone trail linking local trails from the San Francisco Bay to the High Sierra. The exact routing of the trail through Calaveras County has not yet been determined. The MCCT is included on the California State Trails Plan and was designated in 2000 as a National Community Millennium Trail under the National Millennium Trails Initiative. Where topography allows, some portions of the trail are handicap accessible.

## EXISTING AIRPORT FACILITIES

The County's only public airport, Maury Rasmussen Field, is located on Carol Kennedy Drive four miles southeast of San Andreas off SR 49. The airport is classified as a General Aviation airport. A Basic Utility Stage II runway exists, consisting of a 3,600 foot by 60-foot physical asphalt surface, with a full-length taxiway east of the runway. The facility has 64 tie-downs, 8 large hangers, 28 "T" hangers, and 7 Port-a-Ports. There are 71 aircraft based at the field, and there are approximately 30,000 annual flight operations. Two helipads are located at the airport, with the facility able to accommodate single- and twin-engine aircraft, as well as small business jets. In addition to the public airfield, there are a number of individually owned and operated airstrips in the County.

The Maury Rasmussen Field Airport provides significant contributions to the County's economy by attracting tourists, businesses, seasonal residents, and commuters who live in Calaveras County and work elsewhere. Therefore, maintaining and improving the airport facility is important for the safety, security, and personal well-being of residents and visitors of the County. It is also important for the economic vitality of the region. The County's airport also plays an important role in the event of an emergency, such as forest fire, flood or medical rescue. The closest international airport is located in Sacramento, roughly 70 miles away.

## RAIL

The only branch of railroad line in Calaveras County extends from Lodi to the Calaveras Cement Plant (closed since 1984) near San Andreas. The Union Pacific Railroad Authority abandoned this line in 1999 due to lack of activity and later sold the right-of-way. Therefore, it is reasonable to assume that rail service will not operate through the County in the near future.

## AIR QUALITY

Air quality is a function of both local climate and local sources of air pollution. It is affected by the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants to the environment. Several important factors determine local air quality, the most critical being the quantity, type, and location of pollution sources. Climatic conditions, such as wind speed and direction, temperature gradients, inversions, and precipitation interact with the physical features of the landscape to determine the movement and dispersion of air pollutants.

Air quality is a significant consideration in planning for and evaluating the transportation system. Both state and federal law contain significant regulations concerning the impact of transportation projects on air quality. Under state law, local and regional air pollution control districts have the primary responsibility for controlling air pollutant emissions from all sources other than vehicular

sources. Control of vehicular air pollution is the responsibility of the California Air Resources Board (CARB). The CARB divides the state into air basins and adopts standards of quality for each air basin. Calaveras County is part of the Mountain Counties Air Basin, with air quality managed by Calaveras County Air Pollution Control District (CCAPCD).

The CCAPCD has a monitoring station located in Calaveras County on Gold Strike Road in San Andreas. Pollutants monitored at this site are Carbon Monoxide, Ozone, $PM_{2.5}$, and $PM_{10}$ which are described below.

**Ozone ($O_3$)**: Ozone is one of a group of complex oxidants found in ambient air. Ozone is not directly produced by combustion, but rather is a secondary pollutant that results from high hydrocarbon levels. Automobile emissions represent the principal, but indirect, source of this pollutant. Ozone is not emitted directly into the air. It is produced by a complex series of photochemical (sunlight requiring) reactions involving hydrocarbons and oxides of nitrogen. To control ozone pollution, it is necessary to control emissions of these other pollutants. Ozone is the primary constituent of what is commonly referred to as smog.

In July 1997, the Environmental Protection Agency (EPA) promulgated a new 8-hour average ozone standard. The new ozone standard is based on research that shows significant adverse health effects from chronic exposure to relatively low-levels of ozone. The new standard is a rolling 8-hour average. Any 8-hour average value greater than 0.08 ppm will be considered to exceed the National Ambient Air Quality Standards (NAAQS).

**Carbon Monoxide (CO)**: Carbon Monoxide (CO) is a tasteless, odorless, and colorless gas, which is slightly lighter than air. It affects humans by replacing oxygen in the bloodstream that reduces the availability of oxygen to the body. The principal source of carbon monoxide is motor vehicle emissions. Peak carbon monoxide concentrations occur when there is a strong nocturnal temperature inversion accompanied by heavy traffic congestion, especially with slow travel speeds. Combustion heaters also contribute to CO levels.

**Particulate Matter 10 ($PM_{10}$)**: Airborne Particulate Matter is caused by a combination of sources including fugitive dust, combustion from automobiles and heating, road salt, conifers, and others. Constituents that comprise suspended particulates include organic, sulfate, and nitrate aerosols which are formed in the air from emitted hydrocarbons, chloride, sulfur oxides, and oxides of nitrogen. Particulates reduce visibility and pose a health hazard by causing respiratory and related problems.

**Particulate Matter 2.5 ($PM_{2.5}$)**: In July 1997, the EPA promulgated a new particulate matter standard that addressed particles smaller than 2.5 microns, or $PM_{2.5}$. The $PM_{2.5}$ standard is 15 micrograms per cubic meter based on an annual average, and 65 micrograms per cubic meter based on a 24-hour average. The $PM_{2.5}$ standard complements the existing federal and state standards of $PM_{10}$. Sources of $PM_{2.5}$ emissions, or fine particles, originate from fuel combustion of a variety of sources, such as motor vehicles, power generating stations, residential fireplaces and wood-burning stoves, agricultural operations and other industrial facilities. Fine particles also form from the interaction of chemicals, such as sulfur dioxide, nitrogen oxides, and volatile organic compounds with other compounds in the air.

In general, Calaveras County has good air quality. However, in 2005 and 2006 Calaveras County exceeded the state hourly ozone standard (0.09 ppm or 180 $\mu g/m^3$). The state hourly ozone standard was exceeded 9 days in 2004 and 13 days in 2006. Calaveras County is also in

non-attainment (in San Andreas) for the new federal 8-hour ozone standard of (0.08ppm or 157µg/$m^3$) and the state 8-hour ozone standard of (0.07ppm or 137µg/$m^3$). Specifically, in 2006 Calaveras County exceeded the federal 8-hour ozone standard 14 days in 2006, with the highest measurement at 0.106 ppm. There have been no days in excess of the federal 8-hour standard during 2007 as of August 15. As Calaveras County is downwind of the more heavily populated Central Valley, not all pollutants measured in Calaveras County originated from within the County.

Federal clean air laws require areas with unhealthy levels of ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and inhalable particulate matter to develop plans, known as State Implementation Plans (SIPs), describing how they will attain national ambient air quality standards (NAAQS). SIPs are not single documents, but a compilation of new and previously submitted plans, programs – such as monitoring, modeling, and permitting – district rules, state regulations, and federal controls. Calaveras County is part of a collaborative effort between the California Air Resources Board and local air pollution districts to develop a SIP for adoption in the future. Once this document is complete, the RTP should be updated to include any strategies for air quality management and air pollutant reductions that result from the SIP process.

As stated in Chapter 1, once GHG emissions standards are developed by CARB, the Calaveras County region will work with state agencies to meet the new emissions standards.

## PROGRESS REPORT

### Tri-County Regional Transportation Improvement Program (RTIP)

In 1996, Amador and Calaveras Counties entered into a Memorandum of Understanding (MOU). Under this agreement the two counties agreed to pool State Transportation Improvement Program (STIP) funds in order to gain state support and funding for the SR 49 Amador Bypass (Amador County) and the SR 4 Angels Camp Bypass (Calaveras County) projects. Alpine County joined the partnership in 1998 and the MOU was expanded to include the SR 4 Arnold Passing Lane and the SR 88 Cooks and Hams Stations Passing Lanes projects. These projects are commonly referred to as “Tri-County MOU I” projects. In the 1998 STIP, the state provided $3.15 million dollars in Interregional Improvement Program funds (IIP) for the Angels Camp Bypass project. By 2002, all four projects obtained environmental clearance and were fully funded. Unfortunately, due to the state budget crisis, many STIP projects that were “programmed” in 2002 were not “allocated” funds at that time. It was not until 2004 that money started flowing towards two of the MOU I projects. Meanwhile the funding delay and right of way acquisition problems caused overall project costs to rise. For this reason the Tri-Counties borrowed against future STIP to help pay for the SR 4 Arnold Passing Lane, SR 88 Cooks and Hams Passing Lanes, and the SR 49 Amador Bypass projects.

As discussed in the *Statewide Issue* section of Chapter 3, the state funding situation has recently improved and the Tri-Counties were awarded $4.4 million dollars from the Corridor Mobility Improvement Account (CMIA Prop 1B) funds to partially cover the $12.8 million dollars construction cost increases of the Angels Camp Bypass. Caltrans has also agreed to allocate $4.3 million dollars in IIP augmentation funds to the Angels Camp Bypass project. Additionally the 2006 STIP augmentation (also funded through Prop 1B) provided the Tri-Counties with enough money to pay back previously borrowed STIP funds, pay for relinquishment costs for the Amador Bypass, and construction cost increases of the Angels Camp Bypass. At present,

only the Angels Camp Bypass remains on the MOU I project list. This project is now fully funded and construction should begin in 2007. The 2008 STIP cycle will begin with a zero balance and any STIP funds received will be available for new highway or local road projects as determined by the RTPAs.

It is unclear at this time whether or not the Tri-Counties will continue to jointly purse STIP funds for future transportation improvement projects. Two projects (SR 4 Wagon Trail and SR 88 Pine Grove Corridor) have been identified as possible “MOU II” projects. Project approval and environmental documentation phases (PA&ED) for both projects are included in the 2006 Tri-County RTIP and have been funded in the 2006 STIP.

**Completed Projects**

Over the past six years there have been several improvement projects completed on roads, bridges, and other areas. As shown in Table 13, projects completed by the County during this time period totaled over 4 million dollars in construction costs. Table 14 reflects projects completed in Calaveras County on state highways. As shown, over 48 million dollars was spent, with funding programmed through the State Highway Operations and Protection Program (SHOPP) and the State Transportation Improvement Program (STIP). Construction of the Arnold Passing Lane at Cottage Springs, eastbound (uphill) on SR 4 east of the community of Arnold was completed in October of 2004. The project resulted in a three-lane highway with two lanes eastbound and one lane west bound. The SR 88 Cooks and Hams Stations passing lanes were completed in December of 2006. Another significant Tri-County STIP project which was recently completed is the Amador Bypass on SR 49. This new roadway segment that bypasses Amador City improving overall flow along SR 49 was completed in February and opened for travel in March 2007. Although the roadway is operational, 1 million dollars in funding is needed to bring the roadway to a state of good repair before the segment of SR 49 is turned over to the County.

***TABLE 13: Completed Improvement Projects in Calaveras County, Fiscal Years 2000/01 Through 2006/07***

| Road and Location | Project Description | Primary Funding Source | Total Cost (x 1000) | Completion Date |
|---|---|---|---|---|
| **Calaveras County** | | | | |
| Pool Station Road - San Antonio Creek | Bridge Replacement over San Antonio Creek (Bridge #30-C-55) | HBRR | $ 863 | 10/1/2005 |
| Pool Station Road - Domingo Creek | Bridge Replacement over Domingo Creek (Bridge #30-C-54) | HBRR | $ 863 | 9/30/2005 |
| Pool Station Road - Calaveritas Creek | Bridge Replacement over Calaveritas Creek (Bridge #30-C-35) | HBRR | $ 870 | 10/1/2003 |
| Little John Road | Intersection of Little John Road to State Highway 4/ Reeds Turnpike | CFD#2/Copperopolis Benefit Basin | $ 86 | 11/1/2002 |
| Little John Road | Extension of Little John Road to State Highway 4/ Reeds Turnpike | Developer Funded | N/A | N/A |
| Bus Procurement (2) | Procurement of 2 new buses for Calaveras Transit | TDA 5311(f) Grant | $ 177 | 4/1/2005 |
| **City of Angels** | | | | |
| City of Angels - Citywide | Street Rehabilitation | Local | $ 667 | 2004 |
| City of Angels - Citywide | Street Rehabilitation | Local | $ 305 | 2005 |
| Stanislaus Avenue | Bicycle Lane | TE/BTA | $ 172 | 2005 |
| | | **Total Cost of Completed Projects** | **$ 4,003** | |

Source: Calaveras County Department of Public Works, City of Angels

***TABLE 14: Completed State Highway Improvement Projects in Calaveras County, Fiscal Years 2000/01 through 2006/07***

| Route | Post Mile | Location | Project Description | Year Completed | Program | Prog Code | Programmed Capital Construction Costs ($ x1000) |
|---|---|---|---|---|---|---|---|
| SR 4 | 53.8/54.9 | Arnold Passing Lane at Cottage Springs | Road Construction | Nov-04 | STIP- MOU I | N/A | $ 3,384 |
| SR 26 | 7.2/8.3 | Near Valley Springs at Silver Rapids Road | Realign Existing Curve | 2005 | SHOPP | 201.01 | $ 3,400 |
| SR 88 | N/A | Cooks/Hams Passing Lane (Alpine County) | Road Reconstruction | 2006 | STIP | N/A | $ 7,286 |
| SR 49 | N/A | Amador Bypass (Amador County) | Road Construction | 2007 | STIP | N/A | $ 33,974 |
| | | | | **Total Cost of Completed Projects** | | | **$ 48,044** |

Source: Caltrans 2002 SHOPP, 2006 RTIP, 2004 SHOPP, CCOG.

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# Chapter 3
# Policy Element

This chapter describes transportation issues in the Calaveras County region and provides goals, objectives, performance measures, and policies to assist in addressing these issues.

## GLOBAL ISSUES

As the world's twelfth largest source of carbon dioxide, the State of California recognizes the need to establish climate change standards. Assembly Bill 32: Global Warming Solutions Act, adopted in 2006, requires the California Air Resources Board (CARB) to adopt rules and regulations that would achieve greenhouse gas (GHG) emissions equivalent to statewide levels in 1990, by 2020. The reduction in GHG emissions will be accomplished through an enforceable statewide cap that will be phased in starting in 2012. Additionally, the Governor enacted Executive Order S-01-07 on January 18, 2007 which mandates the following: 1) that a statewide goal is established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and 2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels is established for California.

In California, transportation accounts for 41.2 percent of climate change emissions (Caltrans Climate Action Program, 2006). Therefore the impact that RTP projects will have on GHG emissions is a relevant issue. Carbon dioxide reduction strategies have been addressed in the Climate Action Program at Caltrans (December 2006). Transportation strategies include: reducing, managing, and eliminating superfluous, non-essential trips which are seen as the primary cause of congestion GHGs and air pollution through smart land use, Intelligent Transportation Systems (ITS), demand management, value pricing, and market-based manipulation strategies. It is important that Calaveras County transportation and land use decision-makers pursue transportation projects that adhere to this strategy in order to meet emission reductions. Examples of projects already included in the RTP are improvement projects which reduce traffic congestion, encourage bikeway and pedestrian projects, transit projects, and Foothill Rideshare activities. Other types of projects which could be implemented in the future, and which will positively contribute to GHG emissions reductions, are regional "blueprint" planning, education, and awareness of the best practices funded through transportation planning grants.

Calaveras County currently is in non-attainment for 8-hour ozone as a result of its location eastward of several large urban centers whose pollution and particulate matter is received as a latent by-product of larger populations, increased automobile and industrial activity, and agricultural practices. Although it is recognized that the pollutants are not being generated locally, the County must be prudent and conservative to determine how to eliminate potential issues prior to development. Growth in California has been consistent and somewhat predictable as populations have expanded further and further from major employment hubs. Growth is reaching the Sierra foothills (i.e. Calaveras County) and the County must deal with the issues and impacts of an economy that is weaning itself off its dependence on a finite supply of fossil fuels.

## STATEWIDE ISSUE

The key transportation problem facing Calaveras County and the State of California is **funding**. In the past, California's transportation revenue stream was stable and funded almost exclusively from user fees (gasoline excise tax, and weight fees) protected by the California Constitution. Today, the program is dependent primarily on motor fuel sales tax, which is not protected under the California Constitution. Since 2001, roughly $7.5 billion dollars in (gas) tax revenue proceeds have been diverted from the transportation program to close the General Fund deficit.

The Traffic Congestion Relief Act of 2000 (AB 2928) was to provide $6.8 billion dollars derived from the state's sales tax on gasoline to fund transportation over a six-year period. Since the Act's inception, funds have been borrowed back for the General Fund, and subsequent sales tax transfers have been postponed or suspended. In 2002, the electorate (with a 69 percent affirmative vote) passed Proposition 42, which is a legislative constitutional amendment that permanently dedicated the revenues (an estimated $1.1 billion dollars annually) from sales tax on gasoline to transportation infrastructure needs. However, the protections of Proposition 42 were quickly set aside the first year (FY 2003-2004) they came into effect, and these revenues remained in the General Fund. The passage of AB 687 (tribal casino bonds to repay loans) in 2004 dedicated $1.5 billion dollars in FY 2004-2005 to the repayment of transportation program loans to the General Fund. Essentially, AB 687 was a replacement to the suspended Proposition 42 transfer. However, due to a lawsuit filed in September 2004, no funds were allocated, as the bonds could not be sold. With the passing of the state budget in July of 2005, Proposition 42 was finally funded. A total of $1.3 billion dollars was directed from sales tax on gasoline to transportation projects. Additionally, Proposition 1A was passed in the November 7, 2006, election. This legislation solidifies the stipulations of Proposition 42 by prohibiting state sales tax on motor vehicle fuels from being used for any purpose other than transportation improvements, authorizes loans of these funds only in the case of severe state fiscal hardship, requires loans of revenues from state sales tax on motor vehicle fuels to be fully repaid within three years, and restricts loans to no more than twice in any 10-year period.

Prop 1B

Another positive change in the transportation funding situation is Proposition 1B. The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters as Proposition 1B on November 7, 2006. This proposition authorizes nearly $20 billion dollars in general obligation bond proceeds to be available for the following programs:

- Corridor Mobility Improvement Account (CMIA) - A total of $4.5 billion dollars is to be allocated to this program. The funds in the CMIA are to be available to the California Transportation Commission (CTC), for allocation for performance improvements on the state highway system or major access routes to the state highway system. The CMIA presents a unique opportunity for the state's transportation community to provide demonstrable congestion relief, enhance mobility, improve safety, and provide better connectivity benefiting traveling Californians. CCOG has received $4.4 million dollars in CMIA funds to help pay for cost increases of the Angels Camp Bypass.

- SR 99 Corridor – A total of $1 billion dollars will be made available to Caltrans for safety, operational enhancements, rehabilitation, or capacity improvements along approximately 400 miles of the SR 99 corridor.

- STIP Augmentation - $2 billion dollars will be allocated to the STIP program to augment funds otherwise available for the STIP from other sources. The STIP consists of two broad programs: the Regional Improvement Program (RIP), consisting of 75 percent of STIP funding, and the Interregional Improvement Program (IIP), comprising the remaining 25 percent of STIP funding. The interregional share is nominated by Caltrans for projects that improve transportation between regions. Funding constraints in the 2006 STIP cycle prevented or delayed the funding of many important transportation improvement projects. The primary intent of STIP augmentation is to advance programming of funds for STIP projects that can be delivered prior to the adoption of the 2008 STIP. The Tri-Counties will receive $9.5 million dollars from STIP augmentation (RIP shares) and $4.3 million dollars of STIP augmentation (IIP shares). As stated in the *Progress Report,* these funds will be directed towards the Angels Camp Bypass cost increases and to payback borrowed STIP funds.

- Department Intercity Rail Improvements - $400 million dollars for intercity rail projects.

- Trade Corridors Improvement Fund (TCIF) - $2 billion dollars will be available for improvements along trade corridors of national significance.

- Port Air Quality - $1 billion dollars will be available to CARB for emission reductions from activities related to the movement of freight along trade corridors.

- State-Local Partnership Program Account – Over a period of five years, the California Transportation Commission (CTC) will use $1 billion dollars in funds to match dollar-for-dollar local funds for eligible projects.

- Local Bridge Seismic Retrofit – This program will provide an 11.5 percent match for federal Highway Bridge Replacement and Repair funds available for seismic retrofits of 479 local bridges.

- Highway-Railroad Crossing Safety Account - $250 million dollars will be available for completion of high-priority grade separation and railroad crossing safety improvements.

- State Highway Operations and Protection Program (SHOPP) – An additional $500 million dollars will be available for SHOPP projects.

- Traffic Light Synchronization - $250 million dollars will be used by Caltrans to fund traffic light synchronization or other technology-based solutions.

- Port, Harbor, and Ferry Terminal Security - $100 million dollars will be allocated by the Office of Emergency Services to award grants for port, harbor, and ferry terminal security improvements.

- School Bus Retrofit - $200 million dollars will be available for school bus retrofit and replacement.

- Transit - $3.6 billion dollars will be allocated to transit projects.

- Transit System Safety, Security, and Disaster Response Account - $1 billion dollars will be allocated for capital projects that provide increased protection against a security and safety threat and to develop a disaster response transportation system.

- Local Streets and Roads - $2 billion dollars will be allocated by the State Controller for local streets and roads projects. The formula distribution of funds is based on the number of vehicles registered in the county, relative to all counties in the state (75 percent of funds) and the number of county maintained road miles relative to all county maintained road miles in the state (25 percent of funds). Timing and exact amounts of these allocations are being debated by the California legislature. It is possible (based on registered vehicles and maintained miles in the County) that Calaveras County will receive $1.3 million dollars in FY 2007-2008 with additional allocations of $500,000 over the following five years. The City of Angels Camp will also receive at least $400,000 over the course of the distribution period. It is likely that some of these funds will be directed towards improving the "existing deficiencies" component of County traffic impact mitigation fee programs.

As a whole, Proposition 1B provides a significant amount of funding to important transportation and goods movement projects throughout the state. When Calaveras County is viewed individually, the region has been allocated less than 1 percent of total Proposition 1B funds. Although Proposition 1B will have a positive impact on Calaveras County by allowing for the construction of the long awaited Angels Camp Bypass and local road maintenance, Proposition 1B is not a recurring revenue source that can be relied on annually.

Local Issues

In recent years, Calaveras County has been challenged by the ongoing state financial crisis. A backlog of local roadway rehabilitation and reconstruction continues to be a problem on all local roads of regional significance in Calaveras County. According to STIP Guidelines local road rehabilitation projects are eligible for STIP funds. STIP revenues have not been available for local roadway rehabilitation projects in Calaveras County for several years because of the Tri-County MOU high priority projects. Maintenance projects on local roads are not STIP eligible. Therefore, the County relies on state highway user's tax and motor fuel sales tax for routine maintenance. Deferred maintenance, coupled with delayed rehabilitation and reconstruction projects, will lead to even greater rehabilitation costs when STIP or other rehabilitation funds arrive.

An under-funded revenue stream of transportation dollars makes it impossible for Calaveras County local jurisdictions to adequately plan and deliver local projects. This instability is further complicated by "timely use of funds" provisions for STIP funds, which require that project delivery deadlines be met. Additionally, rising construction costs (a result of increased worldwide demand for steel, oil, concrete, and other raw materials used for construction) exacerbate funding problems. The Angels Camp Bypass project, discussed in Chapter 4, is a good example of how a delay in STIP funding increased overall construction costs for a state highway STIP project.

## LOCAL AND REGIONAL ISSUES

In addition to the lack of local road maintenance and rehabilitation funding, there are two particularly important local and regional issues facing Calaveras County: existing traffic and

road conditions within Calaveras County and the impacts of future development. The projects identified in this document (Chapter 4) are intended to address these problems.

### Existing Traffic Issues

Traffic conditions in Calaveras County are currently reaching or exceeding adopted standards during peak travel periods. Specifically, LOS standards are exceeded at the southern SR 4/SR 49 intersection. In addition, the following roadway segments were identified by the *Calaveras County Transportation Demand Model* to operate at LOS D or worse in 2002, thereby exceeding the Calaveras County LOS threshold:

- SR 49 between SR 12 (San Andreas) and Mountain Ranch Road – LOS D
- SR 49 between Brunner Hill Road and SR 4 Junction South (Angels Camp) – LOS D
- Mountain Ranch Road between SR 49 and Sheep Ranch Road – LOS D

Traffic congestion is exacerbated by a very limited number of local streets that provide alternate routes to the highways, this lack of alternate routes concentrates trips in the area on state highways. In large part, the regional roadway system has not been expanded in decades, though traffic demands have increased greatly. In particular, existing traffic capacity deficiencies were found at Angels Camp and Valley Springs. These capacity deficiencies have the effect of increasing congestion, leading to delay which in turn has a negative impact on air quality.

### Road Deficiencies

In addition to capacity deficiencies, the regional roadway network is also impacted by safety deficiencies. There is a lack of passing opportunities and adequate shoulders on many of the region's roadways. Combined usage of the narrow roadways by recreational vehicles, tour buses, and truck traffic for goods movement, can create unsafe driving conditions.

### Impacts of Future Development

Increases in population and economic development will also impact the transportation infrastructure in the future. According to California Department of Finance, population growth in Calaveras County is currently on the order of 2 percent per year. Between 2005 and 2025, the total Countywide population is forecast to increase by 44.5 percent. This can be expected to generate a corresponding increase in traffic congestion and transit needs. In addition, growth in adjacent counties may very well impact the County's local transportation system in the future. As an attractive and nearby recreational area, Calaveras County will be affected by the neighboring population growth. Specifically, the population of Stanislaus County is expected to increase by 38.6 percent over the next 20 years, and the population of San Joaquin County will increase by 69.8 percent. This "attractiveness" can be further extended to counties and cities in and around the Bay Area. This translates into a regional issue that requires regional cooperation for resolution. In other words, this issue is not the sole responsibility of Calaveras County to solve.

In order to mitigate the impacts of new developments on roadways, the County developed the following fee programs which are applied to new residential developments that will increase vehicle trips on state and County roadways: Road Impact Mitigation Fee (RIM), Valley Springs Benefit Basin, Copperopolis Benefit Basin, Bret Harte Benefit Basin, Warren Road Benefit Basin

and Mangilli Road Benefit Basin. Even with these funds, additional funding will still need to be secured to complete necessary roadway improvements. Additionally, the mitigation programs will not provide funding for existing road deficiencies and safety issues such as dead-end road that will be cumulatively affected by new development projects. As mentioned in Chapter 1, new development in Calaveras County is also a concern for truck traffic generators as well as adjacent RTPA's.

### Additional Transportation Issues

Table 15 presents a snapshot of important regional and local transportation issues in Calaveras County by transportation facility/elements along with potential solutions. In addition to reduced funding, substandard LOS on highways, and rapid development; other issues in the region include:

- Deferred maintenance on local and County roadways due to difficulty in obtaining state or federal funds for rehabilitation.
- Congestion in local communities due to on-street parking and numerous private driveway encroachments.
- Limited emergency (or secondary) access roads in wildfire threatened areas, particularly in Copperopolis, Arnold, and the SR 26 corridor.
- Difficulty meeting the mandatory farebox recovery percent for Calaveras Transit with the wide dispersion of the County's population and lack of financial support for interregional services from other counties.
- Much of the land surrounding the airport is privately owned or too steep for airport development. There is a need to protect land currently owned by the airport for future airport improvement projects.
- Regional highways have been developed at historic rural standards that are being increasingly stressed by the growth in traffic volumes. Improvements to state highway capacity, such as through development of controlled access roadways, could help to improve mobility on a regional basis.
- Lack of a consistent non-motorized network of bike paths and pedestrian facilities which could link communities to employment, shopping, social services, and visitor attractions. A more fluid connection of bike paths and pedestrian facilities with limited vehicle conflict is needed to encourage the use of alternative transportation modes.
- In 2006, Calaveras County was in non-attainment for the federal 8-hour ozone standard.

## GOALS, OBJECTIVES, PERFORMANCE MEASURES AND POLICIES

An important element of the regional transportation planning process is the development of valid and appropriate goals, objectives, performance measures, and policies. The RTP Guidelines define goals, objectives, performance measures, and policies as follows:

- A **goal** is general in nature and characterized by a sense of timelessness. It is something desirable to work toward, the end result of which effort is directed.

## *TABLE 15: Calaveras County Regional and Local Transportation Issues*

| Transportation Facility /Element | Issue | Potential Solution |
|---|---|---|
| **Roadway System** | | |
| State Highways | General issue of increasing traffic congestion and decreasing LOS on most state highways (in particular on SR 4) due to increased traffic volumes and lack of passing opportunities. | Construction of priority RTP projects. (Table 21) |
| Countywide | Lack of passing opportunities on state highways and inadequate right-of-way to meet minimum safety improvement criteria for projects. | Provide additional passing lanes where feasible and identify, map, and secure funding for dedication of future arterial, collector, and local rights -of-way to improve safety and circulation. (Table 21) |
| Countywide | Congestion resulting from land-use decisions. | Consider the "big picture" when evaluating traffic impacts of proposed developments. Continue to mitigate impacts through RIM fee and Benefit Basin programs. (Table 22, 25) |
| Countywide | Inequity in the distribution of state highway funds to rural counties based on population rather than number of roadway miles to maintain and improve. Large volumes of non-resident recreational traffic exacerbate the problem. | Continue work with the Rural Counties Task Force, CTC and Caltrans to create a more equitable distribution of funds. Seek other funding sources. |
| City of Angels | Unacceptable level of service (LOS F) at SR 4 and SR49 southern and northern intersection during the PM peak hour future conditions. | Improvements to SR 4/49 north and south intersections as well as the eastern bypass intersection with SR 4 |
| Copperopolis | Congestion on O'Byrnes Ferry Road and other collectors due to projected growth through 2025. | Continue Benefit Basin Program to mitigate traffic impacts. (Table 25) Replace the O'Byrnes Ferry Bridge (Table 15) |
| Ebbetts Pass Area | Congestion due to number of driveways (typically second homes) along SR 4. | Upgrade the highway in accordance with goals in the Ebbetts Pass National Scenic Byway Plan. Follow land use development guidelines in the Ebbetts Pass Highway Special Plan and Arnold Community Plan. |
| Arnold | Congestion on SR 4 that serves as "Main Street" to downtown. | Implementation of Arnold Community Plan (December 1998) that provides for a shift in planned development away from SR 4, limit on driveways along SR 4, and extension of several local streets. |
| Murphys | Congestion in downtown due to on-street parking. | Implementation of recommendations in Murphys Circulation, Pedestrian, Bicycling, and Parking Study, 2002 |
| Mokelumne Hill | Congestion due to on-street parking. | Follow guidelines of Mokelumne Hill Community Plan (June 1988) that requires new developments to provide adequate off-street parking facilities. |
| San Andreas | Congestion and traffic circulation along SR 49. | Implementation of San Andreas Community Plan (June 1988) that identifies improvements to the existing collector road system and priority location for new transportation facilities. |
| County Roads of Regional Significance | Deferred maintenance. | Investigate new sources of maintenance funding such as a local sales tax or street assessment. |
| Local Roads | Deferred maintenance and difficulty obtaining state or federal funding for local road rehabilitation. RIM fee and Benefit Basin mitigation programs only address future roadway needs, not existing needs. | Direct new Prop 1B funds toward existing deficiencies component of traffic impact fee programs for the County and local road maintenance for the City. Secure new local sources of maintenance funding such as sales tax initiatives. |
| Local Roads | Lack of sufficient emergency access roads throughout the County. | Implement emergency access requirements recommended in the updated Calaveras County Circulation Study. |
| **Goods Movement** | | |
| Countywide | Lack of shoulders, passing lanes and deferred maintenance on state highways and county roads cause longer truck travel times and unsafe driving conditions. | Implementation of STIP and SHOPP projects. Pursue Highway Safety Improvement Program (HSIP) funds for state or local roadways with accident history. |
| **Transit** | | |
| Calaveras Transit - Local Service | Use limited funding to improve transit frequency and quality of service while continuing to serve transit dependent riders in outlying areas. | Meet "unmet" needs as funding allows. |
| Calaveras Transit - Interregional Service | Costs for providing interregional transit service are not shared with adjacent counties. | Work with adjacent county RTPA's to implement cost-sharing arrangements for interregional transit services which benefit residents of both counties. |
| **Aviation** | | |
| Maury Rasmussen Field | Protect land around airport for future airport projects and maintain existing airport facilities in safe operating condition. | Work with neighboring land owners to acquire additional property for hangar expansion; Implement capital improvement projects when funding is available. |
| **Non-Motorized Facilities** | | |
| Bikepaths/ bikeways | Lack of a consistent network of bikepaths in Calaveras County communities. | Implement recommendations from the updated Calaveras County Bicyle Master Plan. Consider minimizing conflicts between bicyclists and vehicles and incorporating Bicycle Master Plan projects when new transportation projects are implemented. |
| Pedestrian Facilities | Lack of a consistent network of sidewalks and crosswalks throughout the County. | Implement sidewalks and crosswalks recommended in the Calaveras County Pedestrian Master Plan. Consider minimizing conflicts between pedestrians and vehicles and incorporating Pedestrian Master Plan projects when new transportation projects are implemented. |
| **Air Quality** | | |
| Environmental Impacts | In 2004, Calaveras County was in non-attainment for the state hourly ozone standard and federal 8 hour ozone standard. | Adopt and follow the strategies listed the 2007 Ozone State Implementation Plan (SIP) for Northern California. |

Source: Calaveras County

- An **objective** is a measurable point to be attained. They are capable of being quantified and realistically attained considering probable funding and political constraints. Objectives represent levels of achievement in movement toward a goal.

- A **policy** is a directional statement that guides decisions with specific actions.

- The scale by which the attainment of an objective is measured is defined as a **performance measure**. Performance measures involve examining the performance of the existing system, as well as forecasting the performance of the future (planned) system. By examining the performance of the existing system over time, Calaveras County can monitor trends and identify regional transportation needs that should be considered when updating the RTP. The purpose of performance measurements is to clarify the link between transportation decisions and eventual outcomes, thereby improving the discussion of planning options and communication with the general public. In addition, they can assist in determining which improvements provide the best means for maximizing the system's performance within the given budget and other constraints.

RTP program-level performance measures listed in Table 16 at the end of this chapter are consistent with the nine System Performance Measures defined in the *Final Draft California Transportation Plan 2025* (CTC, May 2004), as identified below:

- System Preservation
- Mobility/Accessibility
- Reliability
- Economic Well-Being
- Cost Effectiveness
- Environmental Quality
- Equity
- Customer Satisfaction
- Sustainability

This RTP sets forth policies that provide the framework to guide decision-makers, so that short-range actions and decisions are made toward implementation of the long-range plan. Some policies are specific by nature, while others provide guidance that is more general. CCOG established policies in this RTP that support implementation of its goals and objectives. These policies support each transportation mode to ensure the effectiveness of a comprehensive regional transportation system.

The goals, objectives, and policies provided below are consistent with the policy direction of the current Calaveras County General Plan Circulation Element, the Calaveras Council of Governments, and the City of Angels relative to the regional transportation system. After the update of the current Calaveras County General Plan, the RTP may be updated to reflect any significant revisions to land uses which then result in changes to the traffic model outputs. Table 16 identifies the RTP program-level performance measures associated with each objective.

**Regional Goals**

**Goal 1: Provide a high degree of mobility for people and goods in Calaveras County using intermodal solutions which preserve the rural character of the region.**

Objective 1 A: Increase accessibility to all modes of the transportation system.

*Policy 1.1*: Require connectivity between pedestrian, bicycle, transit, and road facilities.

*Policy 1.2:* Adopt land use designs that reduce the need to access the personal vehicle through provision of mixed uses, recreation outlets, transit facilities, and multi-use paths as part of the community layout.

*Policy 1.3*: Require land use patterns that provide for infill, are transit oriented, and utilize "smart growth" principles.

Objective 1 B: Provide adequate maintenance funding for all facets of the transportation system.

*Policy 1.4*: Place a high priority on acquiring funds for transit and non-motorized facility projects as well as acquiring funds for roadway and bridge maintenance projects.

Objective 1 C: Integrate land use decisions with the existing and future capacities of the transportation system.

*Policy 1.5*: Consider the existing and planned future capacity of the surrounding roadway system when evaluating major land use decisions, and make transportation capacity decisions consistent with demand for facilities associated with planned land use levels.

Objective 1 D: Maintain acceptable levels of service on all County roads and state highways.

*Policy 1.6*: Local jurisdictions should establish traffic study requirements for new development projects such as those stated in the *Proposed Calaveras Countywide Traffic Circulation Study.*

*Policy 1.7*: Continue to operate Benefit Basin and Road Impact Mitigation Fee programs that will support upgrade and reconstruction of existing and future roads.

Objective 1 E: Reduce the demand for travel by single-occupant vehicles through transportation demand management techniques.

*Policy 1.8*: Increase the mode share for public transit through operational improvements and increased bicycle, pedestrian, and park-and-ride facilities.

*Policy 1.9*: Continue to support a formal rideshare program and commuter database within the County.

*Policy 1.10*: Promote public awareness of Calaveras Transit and rideshare programs among residents and visitors through media and promotional events.

Objective 1F: Provide for truck travel on County facilities that can safely accommodate heavier vehicles.

*Policy 1.11*: Keep the trucking industry informed about truck impacts to County facilities and lessen the impact wherever possible.

*Policy 1.12*: Install passing lanes, turnouts, shoulders, designated routes, and other low-cost improvements to minimize adverse traffic impacts from truck traffic and improve goods movement.

*Policy 1.13*: Implement transportation projects which increase safety for trucks.

**Goal 2: Promote equity for all system users.**

Objective 2 A: Use cost-effective measures such as construction cost per new trip served to prioritize transportation projects.

*Policy 2.1:* Transportation decisions will focus on equitable access of the region's residents to the transportation system.

*Policy 2.2*: Public participation efforts will be implemented to include interested residents and other stakeholders in the decision-making process for transportation projects.

*Policy 2.3:* Include in project analysis the identification and mitigation of all impacts on all affected interest groups.

**Goal 3: Enhance sensitivity to the environment in all transportation decisions.**

Objective 3 A: Promote transportation policies and projects that support a sustainable environment, in particular the preservation of open space and agriculture.

*Policy 3.1*: Coordinate with federal and state agencies and local air management districts on matters related to the air quality conformity process specified in the Federal Clean Air Act for transportation projects.

Objective 3 B: Promote and design transportation projects that will reduce greenhouse gas emissions and thereby positively contribute to meeting statewide global warming emissions targets set in the Global Warming Solutions Act of 2006 (AB 32).

*Policy 3.2*: Give priority to ITS, non-motorized, demand management projects or other transportation improvement projects which will consolidate vehicle trips and reduce congestion in Calaveras County.

*Policy 3.3*: Adopt land use-transportation guidelines that encourage walking, biking, transit, carpooling, and other alternative modes of transportation outside of the personal automobile. Coordinate with County and City stakeholders to develop an integrated land use-transportation approach to future growth in the region and its affect on climate change.

*Policy 3.4*: Seek Transportation Planning Grant funding to implement and plan projects which provide awareness of and compliance with climate change guidelines and support development and implementation of the best practices in community and regional planning.

**Goal 4: Support balanced economic development of the region, emphasizing transit-oriented development strategy.**

Objective 4 A: Maintain and promote the desirability of the region by directing appropriate investment to the transportation infrastructure.

*Policy 4.1:* Plan transportation improvements in and around business districts and tourist attractions that will enhance traffic circulation and the character of the community.

*Policy 4.2*: Encourage responsible companies that provide "living wages" to locate in and employ Calaveras County residents.

**State Highways**

**Goal 5: Coordinate with Caltrans and other regional partners to identify and construct context sensitive state highway improvements that are needed to keep pace with increasing development and provide for public safety.**

Objective 5 A: Secure funding to reduce traffic congestion and improve safety on state highways.

*Policy 5.1*: CCOG will work with the County, Caltrans, and the City of Angels to identify funding to implement highway improvements necessary to prevent capacity deficiencies and to provide adequate levels of service on state highways in Calaveras County.

*Policy 5.2*: The CCOG will coordinate with Caltrans to fund safety projects that address the challenges described in the California Strategic Highway Safety Plan.

*Policy 5.3*: The CCOG will work with other regional public and private partners to maximize the benefits of transportation investments in the region.

**Goal 6: Enhance opportunities for safe pedestrian travel on and across state highways.**

Objective 6 A: Reduce pedestrian/vehicle fatality accidents by 25 percent from Year 2000 levels in accordance with the California Strategic Highway Safety Plan.

*Policy 6.1:* Local jurisdictions shall work with Caltrans to develop standards for crosswalks, signage, lighting, travel lanes, and speed limits that enhance pedestrian travel, and to provide pedestrian facilities and crosswalks along state highways as needed to improve safety and provide connectivity between commercial areas, residential areas, recreational areas, schools, and the transit system.

**Local Roadway System**

**Goal 7: Maintain a local road system to serve the public's need for mobility and access, and enhance local circulation off of arterial roadways.**

Objective 7 A: Accept new roads into the locally maintained road system only when they meet the criteria established by the County or City.

*Policy 7.1:* Access to new developments and to newly-created parcels shall meet County standards under any applicable Community Plan, Specific Plan, Special Plan, or Mixed Use/Master Project area, and the applicable jurisdictional road ordinances.

*Policy 7.2*: Require emergency access roads for new developments based on the relative fire danger of the area as stated in the *Proposed Calaveras Countywide Traffic Circulation Study*.

*Policy 7.3*: All roads to be accepted into either the County or City maintained mileage shall have provisions for ongoing maintenance other than relying solely on the road funds of the respective jurisdiction.

*Policy 7.4*: All new roads that are not accepted into the County or City maintained mileage system shall be required to implement a program for maintenance of their roadways in perpetuity. This maintenance program shall include ongoing funding, schedule of maintenance activities, and entity responsible for the program.

**Road Maintenance**

**Goal 8: Maintain local roads in a safe condition.**

Objective 8 A: Program projects which will reduce the "backlog" of deferred maintenance.

*Policy 8.1:* CCOG shall assist the County and the City of Angels in identifying maintenance funding such as sales tax initiatives or street assessments.

*Policy 8.2:* As much as feasible, provide funding for maintenance projects in a timely manner.

*Policy 8.3:* Pursue shoulder improvements and traffic calming strategies where appropriate to enhance pedestrian/non-motorized travel.

**Public Transit**

**Goal 9: Develop and maintain affordable, comprehensive and effective public and private transportation for County residents – especially disabled residents, elderly residents and others with specialized transportation needs.**

Objective 9 A: Monitor monthly management reports and performance measures for Calaveras Transit and adjust service and schedules accordingly.

*Policy 9.1*: Meet any unmet transit needs that are reasonable according to the criteria established by CCOG.

*Policy 9.2*: Reach the mandatory 10 percent farebox recovery ratio for rural public transportation.

Objective 9 B: Facilitate the use of public transit for residents and commuters in outlying areas by promoting Park and Ride lots and/or bike rack/locker facilities near transit stops.

*Policy 9.3:* Work to develop new sources of public transit funding such as cost sharing arrangements with other jurisdictions served by Calaveras Transit.

*Policy 9.4*: Fund the Calaveras Transit Bus Shelter Improvement Program

Objective 9 C: Incorporate the need to serve the growing elderly population in long-range Calaveras Transit plans.

**Aviation**

**Goal 10: Enhance, maintain, and improve the Calaveras County airport in order to support general aviation and disaster emergency services.**

Objective 10 A: Implement land use, zoning, and development policies of the Airport Special Plan.

*Policy 10.1:* Prevent new land uses and zoning surrounding the County airport from creating future land use conflicts.

*Policy 10.2:* Encourage policies that preserve land currently owned by the airport for airport uses.

**Goods Movement**

**Goal 11: Accommodate the continued and expanded use of trucking for the transport of suitable products and materials by integrating truck and bus transport requirements into all development and transportation planning. Consider the safety and desirability of local communities when making goods movement decisions.**

Objective 11 A: Install passing lanes, turnouts, shoulders, designate routes and other low-cost improvements to minimize adverse traffic impacts from truck traffic and to improve goods movement.

Objective 11 A: Promote efficient utilization of truck transport through transportation and land use decisions.

*Policy 11.1*: Require commercial developments to provide adequate ingress and egress, turning radius, stacking and off-loading areas for truck traffic.

Objective 11 B: Keep the trucking industry informed about truck impacts to County facilities and lessen the impact wherever possible.

**Non-Motorized Travel**

**Goal 12: Provide a comprehensive system of facilities and amenities to provide safe travel for bicycles and pedestrians on existing and proposed roads.**

Objective 12 A: Implement projects in the Calaveras County Bicycle Master Plan and the Calaveras County Pedestrian Master Plan as funding allows.

*Policy 12.1*: Design and fund improvements of transportation facilities with primary consideration to providing for the safety of school children and local residents on existing and proposed facilities.

*Policy 12.2*: Design and fund a comprehensive network of Class I, II, and III bicycle and pedestrian facilities that will encourage walking and bicycling for residents and visitors.

*Policy 12.3*: Require all new roads constructed as a part of a land division to include pedestrian and bicycle improvements.

*Policy 12.4*: Provide for maintenance of existing and new bicycle and pedestrian facilities.

*Policy 12.5:* Consider where appropriate the provision for other "low speed" travel modes both within and between communities, such as golf carts, equestrians, and cross-country skiing.

Objective 12 B: Increase bicycle trips to work, school, and recreational facilities to reduce vehicle congestion and improve air quality.

*Policy 12.5*: Provide connections to the bicycle network from all existing and future transit facilities, transfer stations and terminals in Calaveras County.

*Policy 12.6*: Provide bicycle support facilities such as bicycle racks and personal lockers at appropriate locations such as park and ride facilities, employment centers, schools, commercial centers, government services, and visitor points of interest.

**Management of the Transportation System**

**Goal 13: Minimize traffic congestion by increasing the efficiency of the existing transportation system through Transportation System Management (TSM) techniques.**

Objective 13 A: Work with Caltrans and County staff to periodically review traffic operations along state highways and major County roads through the use of updated traffic models and Geographical Information Systems (GIS) transportation-related data.

*Policy 13.1*: Promote signal timing, access management, transit priority treatments, accident scene management measures, and Intelligent Transportation Systems (ITS) improvement projects to help increase traffic flow.

*Policy 13.2*: Promote off-street parking management strategies in community commercial centers to help decrease congestion while aiding the local economy.

**Program-Level Performance Measures**

Program-level performance measures reflect the goals and objectives adopted in the RTP. These performance measures are used to evaluate and select plan alternatives. Consistent with the RTP Guidelines, Caltrans identified four broad goals for performance measurement:

- To understand the role the transportation system plays in society.
- To focus on outcomes at the system level rather than projects and process.
- To build transportation system partner relationships with clearly defined roles, adequate communication channels, and accountability at all levels.
- To better illuminate and integrate transportation system impacts of non-transportation decisions.

The program-level performances selected for Calaveras County are presented in Table 16 and linked to each RTP objective.

## *TABLE 16: Linkage of Performance Measures to Objectives*

| Objective | RTP Performance Measure | Source |
|---|---|---|
| 1 A: Increase accessibility to all modes of the transportation system. | Minimum Acceptable LOS on average daily basis, higher ridership on Calaveras Transit, implement non-motorized transportation facilities. | Caltrans and County traffic volumes, Calaveras Transit ridership data, CCOG |
| 1 B: Provide adequate maintenance funding for all facets of the transportation system. | Number of maintenance projects completed on state highways, local and county roads, and non-motorized facilities. | Regional Transportation Plan, Regional Transportation Improvement Plan, Calaveras County DPW, CCOG |
| 1 C: Integrate land use decisions with the existing and future capacities of the transportation system. | Existing or forecast LOS along roadway corridors. Provide acceptable LOS in peak month by 2020. | Caltrans and County traffic volumes |
| 1 D: Maintain acceptable LOS on all County roads and state highways | Minimum roadway and intersection LOS | Caltrans and County traffic volumes, Calaveras County, City of Angels. |
| 1 E: Reduce the demand for travel by single-occupant vehicles through transportation demand management techniques. | Number of Foothill Rideshare registered users. | Foothill Rideshare |
| 1 F: Provide for truck travel on County facilities that can safely accommodate heavier vehicles. | Number of passing lanes, turnouts, and shoulders on state highways and County roads. | Caltrans, Calaveras County DPW, California Highway Patrol. |
| 2 A: Use cost-effective measures to prioritize transportation projects. | Construction cost per new trip served. | Traffic counts, traffic forecasts, cost estimates provided by Caltrans and/or the County. |
| 3 A: Promote transportation policies and projects that support a sustainable environment. | Avoid or minimize significant impacts. | Environmental thresholds or significance criteria adopted in the General Plan and/or independently for application in CEQA documents. |
| 3 B: Promote and design transportation projects that will reduce greenhouse gas emissions and thereby positively contribute to meeting statewide global warming emissions targets set in the Global Warming Solutions Act of 2006. | State GHG standards. | CARB |
| 4 A: Maintain and promote the desirability of the region by directing appropriate investment in the transportation infrastructure. | Minimum acceptable LOS on average daily basis, increased TOT and sales tax revenues. | Caltrans and County traffic volumes, Calaveras County, City of Angels. |
| 5 A: Secure funding to reduce traffic congestion and improve safety on state highways. | Number of maintenance projects completed on state highways. Number of accidents on state highways per 1,000,000 vehicle miles of travel. | Caltrans, Calaveras County DPW, California Highway Patrol. |
| 6 A: Reduce pedestrian/vehicle fatality accidents by 25 percent from Year 2000 levels in accordance with the California Strategic Highway Safety Plan. | Number of pedestrian/vehicle fatalities in 2000 compared to 2010. | Caltrans, Calaveras County DPW, California Highway Patrol. |
| 7 A: Accept new roads into the locally maintained road system only when they meet the criteria established by the County or city. | Consistent application of road standards designated in the Calaveras County Road Ordinance. | Calaveras County Road Ordinance. |
| 8 A: Program projects which reduce the "backlog" of deferred maintenance. | Number of maintenance projects completed and which improved LOS on local roadways by 2025. | Caltrans and County traffic volumes. Calaveras County DPW. |
| 9 A: Monitor monthly management reports and performance measures for Calaveras Transit and adjust service and schedules accordingly. | Increase in ridership over a five year period. On-board passenger surveys. | Monthly/quarterly transit operations reports. |
| 9 B: Facilitate the use of public transit for residents and commuters in outlying areas by promoting Park and Ride lots and/or bike rack/locker facilities near transit stops. | Increased boarding and alighting activity at transit stops in outlying areas. On-board passenger surveys. | Monthly/quarterly transit operations reports. |
| 9 C: Incorporate the need to serve the growing elderly population in long-range Calaveras Transit plans. | Comparison of Calaveras Transit passenger types to demographics of the County. | Calaveras Transit data, on-board surveys. |
| 10 A: Implement land use, zoning and development policies of the Airport Special Plan. | No new incompatible developments in the Airport Special Plan area. | Airport Special Plan. |
| 11 A: Promote the efficient utilization of truck transport through transportation and land use decisions. | Number of new commercial developments with truck circulation requirements. | CCOG |
| 11 B: Keep the trucking industry informed about truck impacts to County facilities and lessen the impact wherever possible. | Number of complaints logged by concerned citizens. | Community groups. |
| 12 A: Implement the priority projects in the updated Calaveras County Bicycle Master Plan and Calaveras County Pedestrian Master Plan as funding allows. | Number of bikeway projects constructed. | Calaveras County DPW, CCOG |
| 12 B: Increase bicycle trips to work, school and recreational facilities to reduce vehicle congestion and improve air quality. | Employee and school surveys. GHG emissions. | CCOG |
| 13 A: Work with Caltrans and County staff to periodically review traffic operations along state highways and major county roads. | Improved LOS on state highways, major roads, and major intersections. | Caltrans, Calaveras County DPW, Regional Transportation Plan. |

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# Chapter 4
# Action Element

This chapter addresses the needs and issues for each transportation mode, in accordance with the goals, objectives, and policies set forth in the Policy Element. It is within the Action Element that projects and programs are prioritized as either short-term (10 years), or long-term (20 years) improvements, consistent with the identified needs and policies. These plans are also based upon the forecasts for future conditions and travel needs.

## DATA FORECASTS

The RTP Action Element is based upon the forecasts regarding future conditions pertaining to population, housing, employment, income, land use, and traffic forecasts, discussed in the following sections. Data was obtained from state agency sources and the *Calaveras County Land Use Assumptions Memorandum* (Pacific Municipal Consultants [PMC], September 8, 2006). The Calaveras County Transportation Demand Model (Fehr & Peers) was used to estimate future traffic conditions. Although the *Calaveras County Land Use Assumptions Memorandum* is the foundation for the Calaveras County Transportation Demand Model, and should be used for Calaveras County forecasts where possible, data collected by the State of California is broader and allows for comparisons with other counties and at the state level. For this reason, both sources are presented in this RTP.

### Population

According to the California Department of Finance (DOF), the population of Calaveras County is expected to increase at a rate of 1.9 percent per year (4,513 residents) between 2005 and 2010, as shown in Table 17. Calaveras County's population is projected to increase by 20,048 residents from 2005 to 2025 or an annual increase of 1.9 percent per year. DOF also projects that nearly 30 percent of the 2025 population will be 65 years or older. This represents a significant increase over year 2000 conditions when approximately 18.3 percent of the population represented persons of retirement age. Over the next 20 years as "baby boomers" retire to their second homes in Calaveras County, it will become increasingly important to maintain and improve public transit and non-emergency medical transportation in the region, as well as to enhance the safety of traffic, walking, and bicycling conditions for the elderly.

The population forecasts of the surrounding counties are expected to increase by 2.1 percent from 2005 to 2025, with San Joaquin County having the largest annual percentage growth in population at 2.7 percent over the 20-year RTP plan period. As shown in the table, San Joaquin County's population is projected to increase by over 456,000 residents and Stanislaus County's population is projected to increase by over 194,000 residents. Calaveras County offers many recreational opportunities, therefore it can be expected that traffic volumes on Calaveras County roadways will increase along with the population in the neighboring Central Valley counties as well as increases of its own population.

The *Calaveras County Land Use Assumptions Memorandum* projects that the population of Calaveras County will reach 80,051 persons by 2025 by using County building permit data and Calaveras County Housing Element population projections. This figure represents an average annual population growth of 2.52 percent for the County, a larger growth rate assumption than the California Department of Finance's 20 year annual population growth rate of 1.9 percent.

***TABLE 17 : County Population Forecasts***

| County | Forecast Population 2005 | 2010 | 2025 | Annual Percent Change 2005-10 | 2010-25 | Total Change 2005-25 # | % |
|---|---|---|---|---|---|---|---|
| *Calaveras* | *45,086* | *49,599* | *65,134* | *1.9%* | *1.8%* | *20,048* | *44.5%* |
| Alpine | 1,262 | 1,377 | 1,427 | 1.8% | 0.2% | 165 | 13.1% |
| Amador | 37,574 | 39,287 | 43,331 | 0.9% | 0.7% | 5,757 | 15.3% |
| San Joaquin | 653,333 | 747,149 | 1,109,610 | 2.7% | 2.7% | 456,277 | 69.8% |
| Stanislaus | 504,482 | 559,051 | 699,220 | 2.1% | 1.5% | 194,738 | 38.6% |
| Tuolumne | 58,504 | 59,883 | 67,009 | 0.5% | 0.8% | 8,505 | 14.5% |
| *Total Adjacent Counties* | *1,255,155* | *1,406,747* | *1,920,596* | *2.3%* | *2.1%* | *665,441* | *53.0%* |

Source: California Department of Finance, Demographic Research Unit.

As discussed in the Policy Element (Chapter 3), the impact of proposed land uses is an important regional transportation issue in Calaveras County. The dwelling unit assumptions presented in the *Calaveras County Land Use Assumptions Memorandum* directly correspond to traffic volume projections in the Calaveras County Travel Demand Model and future conditions assumptions in this RTP. The methodology used by PMC to develop 2006 baseline residential unit projections was presented in Chapter 2. The following explains methodology used to prepare "buildout" residential dwelling unit projections:

- Remaining Capacity - Acreage of vacant and partially developed parcels (where the existing land use did not represent the full development potential as would be permitted under the existing zoning district) was multiplied by the allowed dwelling unit per acre as stated in the 1996 General Plan.

- Pipeline Projects - Residential development projects that were approved by the City and County Planning departments as of August 10, 2006 were reviewed and existing parcels were modified in the database to reflect increased density potential by these approved land divisions and zone changes.

- Secondary Dwelling Units - Certain zone districts allow a secondary dwelling unit where a single family residence is a permitted use, provided that the parcel is equal to or greater than one acre. These second dwelling units were incorporated into the calculations.

Remaining capacity, pipeline projects and secondary dwelling units were added to 2006 baseline dwelling units to project a total of 65,532 dwelling units at "buildout" of Calaveras County.

The next step was to determine the number of dwelling units in 2025. Calaveras County Housing Element projections, County building permit data, and the DOF estimate of 2.4 persons per household were used to project total new building permits issued from 2006 to 2025 (12,972 permits). Adding this figure to 2006 baseline dwelling unit projections totals 39,198 dwelling units by 2025, a 49.5 percent increase.

Although buildout in the *Calaveras County Land Use Assumptions Memorandum* assumes that all developable land in the County, including vacant parcels and partially developed parcels, are built to their maximum capacity, future zoning changes and density assumptions resulting from zoning amendments or general plan update could change the dwelling unit forecasts. However, the land use assumptions developed for the Travel Demand Model are considered by CCOG and the County to be a good representation of overall countywide future conditions, and are therefore assumed in this RTP.

The communities of Valley Springs, Copperopolis, Arnold, and Murphys are forecast to have the highest growth in residential units over the next 20 years. In fact, Valley Springs proposed projects alone will contribute to over 3,500 residential units. Several examples of development projects that are either approved or in the design phase both in and around Calaveras County are listed below along with potential affects these projects will have on the regional transportation system. Please note that this list is not inclusive of all new residential or commercial developments proposed in Calaveras County and therefore only provides a snapshot of the type of development occurring in the region.

Hogan Lake Estates North, Hogan Oaks I and Hogan Oaks II – These proposed developments would be located just south of Valley Springs and include a total of 211 single-family dwelling units. It is estimated that a total of 2,019 daily trips would be generated by these three developments, with potential future traffic impacts on roadways including SR 26, Vista del Lago Drive, Hogan Dam Road, and at key intersections (*Vista Del Lago Traffic Study*, Dowling Associates, Inc., September 2004).

Ponte Ranch – This 455-acre multi-use project in the Valley Springs region is still in the design phase and has not been approved. High, medium, and low density residential units, including multi-family residential, commercial properties, and a hotel/conference center site are proposed. The site may also include a fire station, a school, and a pedestrian and bicycle trail system. The project will be accessed from a new roadway, Spring Valley Parkway, which will connect Hogan Dam Road with Lime Creek Road near the intersection of South Petersburg Road.

Calaveras Oaks – This project proposes developing a 28-acre business park to the north of the County Government Center in San Andreas. Additionally, the 28-acre property adjacent to the business park could be developed into 28 single-family dwelling units. Potential future traffic generated by the proposed project could impact Mountain Ranch Road, Pope Street, and Government Center Road. Estimated project trip generation totals 4,209 trips for the business park and 210 trips for the potential residential development (*Traffic Impact Analysis for Calaveras Oaks*, kdAnderson Transportation Engineers, August 2004).

Oak Canyon Ranch Specific Plan – This 3,251-acre proposed project, to be located west of Copperopolis, consists of 2,275 single-family dwelling units, 1,570 acres of recreation and open space, and a mixed-use village consisting of residential, commercial, office, and resort land uses. Roadways potentially impacted by this development include SR 4, Little John Road, Copper Cove Drive, O'Byrnes Ferry Road, and Reed's Turnpike. At buildout (2023), the individual land uses proposed for the Oak Canyon Ranch development are expected to generate a total of 41,520 daily trips (*Final Supplement Environmental Impact Report for Oak Canyon Ranch Specific Plan*, Pacific Municipal Consultants, October 2003).

Tuscany Hills – The Tuscany Hills project proposes to encompass 1,113 acres along the north shore of Lake Tulloch near the communities of Copperopolis and Copper Cove. This project

development would include 335 single-family dwelling units, open and recreational space, an 18-hole private golf course, marina, and lakefront recreational uses. An estimated 2,747 daily trips would be generated by this project at buildout (2023). Traffic impacts may be present on SR 4, Little John Road, Copper Cove Drive, and O'Byrnes Ferry Road (*Tuscany Hills Revised Draft Environmental Impact Report*, Parsons Corporation, April 2006).

Copper Mill – The project proposes two scenarios: "Maximum Commercial" and "Maximum Residential." The commercial scenario proposes 193,477 square feet of commercial use and 39 residential units on 27.4 acres, while the residential scenario proposes 61,654 square feet of commercial use and 69 residential units. An estimated 7,974 daily trips would be generated by the commercial scenario and 3,375 daily trips would be generated by the residential scenario at buildout. The project is located at an existing "T" intersection of Little John Road, Reed's Turnpike, and the extension of Little John Road accessing SR 4. O'Byrnes Ferry Road and Copper Cove Drive may also be affected by the project (*Copper Mills Draft Environmental Impact Report*, September, 2005).

Mariposa Lakes in San Joaquin County – Applications have been submitted for a 3,800-acre development project southeast of Stockton. Specifically, the site is located south of SR 4, east of SR 99, and about 25 miles from the Calaveras County line. The Mariposa Lakes Project proposal includes over 1,000 acres of residentially-zoned land, which will accommodate approximately 5,600 housing units (about 4,700 single-family homes and 900 multi-family units), about 100 acres of land zoned for retail commercial uses, over 750 acres of industrially-zoned land, and additional acreage for schools, open space/parks, lakes, roadways, sites for public facilities, and other miscellaneous uses. Some planners estimate that the site may be home to approximately 25,000 people. This development will have an impact on Calaveras County's transportation system as the new residents of Mariposa Lakes will travel to Calaveras County for recreation or to visit the County's tourist attractions (Tourism Travel Patterns are discussed below).

Bear Valley Expansion in Alpine County

The EIR process has been started for a proposed ski area residential project in Bear Valley, just east of Calaveras County in Alpine County along SR 4. This project would eliminate the existing 53-room lodge and associated retail/restaurant space, and construct 491 multifamily residential units, 50 employee dormitory rooms and associated retail/restaurant/club uses served by a new lift to the Bear Valley Ski Area. As virtually all access to Bear Valley is through Calaveras County, this project would increase traffic levels in Calaveras County, particularly along SR 4 east of SR 49 and on Friday evenings (eastbound) and Sunday evenings (westbound).

These proposed developments, as well as other future projects, will increase travel demand on the roadway system within the County increasing the need for roadway maintenance and rehabilitation. The guiding principle in preparing this RTP update and the previous RTP update is to provide a better balance between multi-modal transportation system planning and land use planning. This approach will result in lower cost for improvements, increased operational efficiency of the existing transportation system, and a reduction in greenhouse gas emissions.

### Employment and Economy

The California Employment Development Department (EDD) projects employment by industry over a seven-year period. Total non-farm employment in Calaveras County is estimated to

increase by 2.2 percent annually, from 8,610 employed persons in 2001 to 10,050 by 2008. The EDD also projects that regional employment in other industries will increase at these varying rates: service producing employment is forecast to increase by 2.1 percent and government employment by 2.2 percent annually. The Calaveras County Land Use Assumptions Memorandum estimates 14,839 jobs in Calaveras County by 2025. This figure was calculated, as presented in the Memorandum, by applying the existing jobs to residential units ratio (38 percent or one job per 2.6 residential units) to forecast residential units. U.S. Census "Journey to Work" data referenced in Chapter 2 demonstrated that roughly 15 percent of Calaveras County employed residents commute to San Joaquin County alone. This RTP and the Land Use Assumptions Memorandum assume that there will continue to be a larger supply of jobs in neighboring counties than within Calaveras County.

### Income

Caltrans Division of Transportation Planning provides county-level economic forecasts. The 2005 and 2010 per capita incomes are forecast to be $24,160 and $25,198 respectively. Total personal income is forecast to be $556.3 million dollars in 2005, rising to $713.5 million dollars in 2010.

## Future Traffic Conditions

The following section details future (2025) traffic conditions in Calaveras County as estimated by the Calaveras County Transportation Demand Model. The Calaveras County Transportation Demand Model is a very useful means of evaluating future traffic conditions. A transportation network model is a computerized representation of the transportation system. A model is useful for comparing the impacts of various growth assumptions and for evaluating alternative transportation improvement programs. Computerized transportation models are also the best means by which to evaluate the interchange of traffic between various land uses, and to consider the effects of traffic congestion on travel times and driver route choices. This model represents the average summer weekday, as traffic volumes are highest during the summer in Calaveras County. The model assumes that the Angels Camp Bypass is operational.

### 2025 Traffic Volumes

Average daily 2025 traffic volumes per the Calaveras County Transportation Demand Model on major roadways are shown in Figure 7. The highest volumes are forecast to occur on SR 12 just east of the San Joaquin County line (21,500 daily trips), on SR 49 near the Amador County line (17,700 daily trips), on SR 49 north of Angels Camp (17,600 daily trips) and on SR 4 east of Murphys (17,500 daily trips). Other large traffic volumes will occur on SR 49 in San Andreas (16,500 daily trips), on SR 49 south of Angels Camp (16,200 daily trips) and SR 26 just before the San Joaquin County border (16,000 daily trips).

Putting traffic growth in Calaveras County into perspective, Table 18 presents 2002 and 2025 average summer weekday traffic volumes on specific roadway segments outside community centers on state highways and County roadways. The table indicates the greatest growth is forecast to occur on SR 12 at the western County border (14,962 daily trips) followed by SR 26 at the western County border (11,227 daily trips). If state highways are not included in the rankings, Murphys Grade Road is expected to see the largest volume increase between 2005 and 2025 (8,058 daily trips) followed by Burson Road in Valley Springs (7,401 daily trips).

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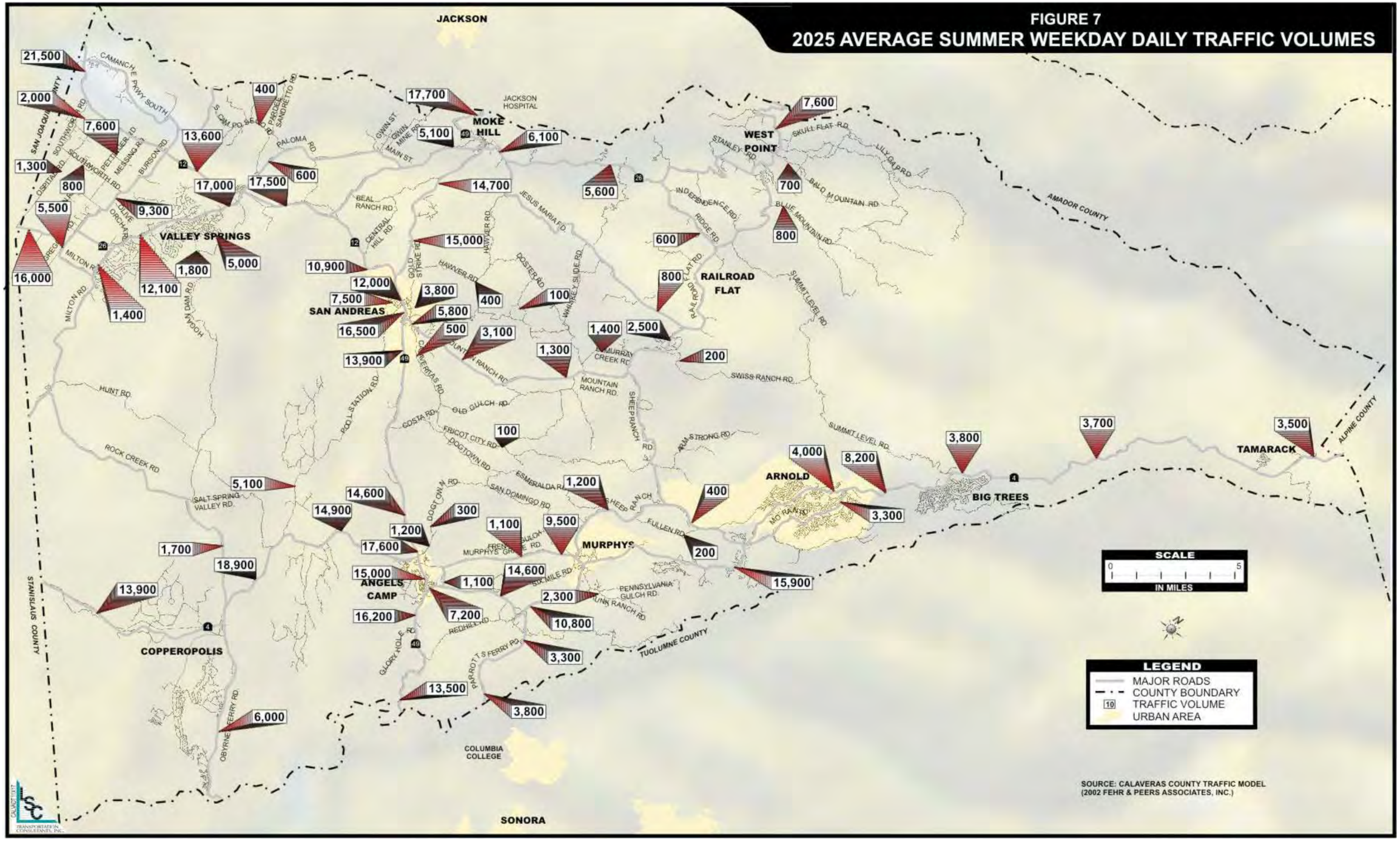
## FIGURE 7
## 2025 AVERAGE SUMMER WEEKDAY DAILY TRAFFIC VOLUMES



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## *Table 18: 2002 and 2025 Average Summer Weekday Traffic Volumes on Calaveras County Roadways*

| Roadway | Section/Cross Streets | 2002 ADT | 2025 ADT | Change in Volume | Percent Increase | Rank: Largest Volume Increase | Rank: Largest Volume Increase not Including State Highways |
|---|---|---|---|---|---|---|---|
| SR 49 South of San Andreas | Between Mountain Ranch Road and Fricot Road | 7,405 | 12,500 | 5,095 | 69% | 13 | — |
| SR 49 North of City of Angels | Between Fourth Crossing Road and Dogtown Road | 8,167 | 14,647 | 6,480 | 79% | 10 | — |
| SR 4 East of Murphys | Between Mt. Davis Road and Sheep Ranch Road | 8,157 | 17,738 | 9,581 | 117% | 3 | — |
| SR 4 East of Arnold | Between Moran Road and Summit Level Road | 2,073 | 7,778 | 5,705 | 275% | 12 | — |
| SR 12 West of Valley Springs | SR 12 between Pettinger and SR 26/Paloma | 6,372 | 13,611 | 7,239 | 114% | 7 | — |
| SR 12 at Western County Border | Near Camanche Parkway | 6,521 | 21,483 | 14,962 | 229% | 1 | — |
| SR 26 West of Valley Springs | Between Hogan Dam Road and Silver Rapids Road | 8,291 | 17,418 | 9,127 | 110% | 4 | — |
| SR 26 at Western County Border | Near Shelton Road | 4,680 | 15,907 | 11,227 | 240% | 2 | — |
| Mountain Ranch Road | Between Calaveritas Road and Michel Road | 1,513 | 2,442 | 929 | 61% | 18 | 10 |
| Murphys Grade Road | Between SR 4 Bypass and French Gulch Road | 2,715 | 10,773 | 8,058 | 297% | 5 | 1 |
| Pool Station Road | Between SR 4 and Demarest Mine Road | 887 | 5,103 | 4,216 | 475% | 14 | 6 |
| O'Byrnes Ferry Road | Between Copper Cove Drive and County Boundary | 3,642 | 10,416 | 6,774 | 186% | 9 | 4 |
| Sheep Ranch Road | Between Railroad Flat and Avery Sheep Ranch Road | 813 | 1,600 | 787 | 97% | 19 | 11 |
| Railroad Flat Road | Between Mountain Ranch Road and Jesus Maria Road | 1,093 | 2,369 | 1,276 | 117% | 16 | 8 |
| Avery Sheep Ranch Road | Between Sheep Ranch Road and SR 4 | 305 | 485 | 180 | 59% | 22 | 14 |
| Moran Road | From West of Arnold on SR 4 to East of Arnold on SR 4 | 690 | 1,690 | 1,000 | 145% | 17 | 9 |
| Ridge Road | From SR 26 to Railroad Flat Road | 450 | 693 | 243 | 54% | 21 | 13 |
| Jenny Lind Road | Between Milton Road and SR 26 | 1,634 | 3,780 | 2,146 | 131% | 15 | 7 |
| Burson Road | Between SR 26 and SR 12 | 1,877 | 9,278 | 7,401 | 394% | 6 | 2 |
| Pettinger Road | Between Southworth Road and SR 12 | 1,848 | 7,636 | 5,788 | 313% | 11 | 5 |
| Evergreen Road | Between Warren Road and Southworth Road | 271 | 591 | 320 | 118% | 20 | 12 |
| Olive Orchard Road | Between SR 26 and Burson Road | 1,628 | 8,489 | 6,861 | 421% | 8 | 3 |

Note: Analysis assumes that the Angels Camp Bypass is operational.

Source: Calaveras County 2002 Travel Demand Forecasting Model.

2025 Roadway Level of Service (LOS)

Table 19 compares 2025 PM peak hour traffic volumes in the peak direction on key roadway segments in the County to the LOS C capacity thresholds calculated with HIGHPLAN software. It should be noted that the SR 4 Angels Camp Bypass is included in the model and thus reflected in this analysis. In 2025, capacity is exceeded on all roadway segments evaluated, except the SR 49 corridor located between Mountain Ranch Road and Fourth Crossing Road.

2025 Intersection Level of Service

Although this traffic analysis primarily relied on the travel demand model for traffic forecasts, adjustments to the model-generated traffic volumes were made for the Intersection Level of Service analysis. Specifically, 2025 intersection volumes were estimated by adding the growth in traffic generated by the model to actual 2005 intersection counts conducted by All Traffic Data.

As the base case traffic model represents 2002 conditions, in order to estimate 2005 to 2025 growth, the growth between 2002 and 2025 was multiplied by the ratio of 20 years to 23 years. Table 20 displays the results, which indicate that the following intersections are forecast to operate below LOS C by 2025 on a summer weekday:

- SR 4/Main Street in Murphys
- SR 49/SR 26
- Pettinger Road/SR 12
- SR 49/Pool Station Road
- SR 49/Mountain Ranch Road
- Little John Road/SR 4
- SR 4 South/SR 49 (southern intersection)
- SR 4/Bret Harte Drive
- SR 4/Avery Sheep Ranch Road

Table 20 also presents potential mitigation measures which will improve LOS during the peak hour. Appendix E presents the traffic volumes used to develop LOS for both existing and future conditions. Additionally, the SR 12/26 intersection currently operates at LOS F. Barring improvements, poor LOS is expected to continue into the future due to population growth and increased recreational traffic in the area. The SR 12/26 signalization project and the Valley Springs Bypass project are intended to alleviate congestion at this intersection.

The reader should also note that LOS calculations using Calaveras Transportation Demand Model generated volumes indicate that, in 2025, the SR 49/SR 4 northern intersection is forecast to operate at LOS B, with the Angels Camp Bypass. Other LOS analysis performed by Caltrans shows that the SR 49/SR 4 northern intersection will operate at LOS F five years after the Bypass is operational, unless the intersection is upgraded to include two through lanes in each direction. The existing lane configuration has only one through lane with separate left and right turn lanes in each direction. Caltrans has indicated that these intersection improvements will not be included as part of the Angels Camp Bypass project, therefore adding through lanes to the SR 49/SR 4 northern intersection is proposed in this RTP as a potential project.

## *Table 19: Calaveras County 2025 Roadway Capacity Analysis*

| Roadway Segment | LOS C Capacity (vph in peak direction) | 2025 Traffic Volume (vph in peak direction) | LOS | LOS C Capacity Exceeded? |
|---|---|---|---|---|
| SR 49 between Amador County Line and SR 12 (San Andreas) | 320 | 869 | E | **YES** |
| SR 49 between SR 12 (San Andreas) and Mountain Ranch Road | 460 | 662 | E | **YES** |
| SR 49 between Mountain Ranch Road and Fourth Crossing Road | 590 | 501 | C | NO |
| SR 49 between Fourth Crossing Road and Brunner Hill Road (N. end of Angels Camp) | 470 | 677 | D | **YES** |
| SR 49 between Brunner Hill Road and SR 4 Jct. South (Angels Camp Downtown) | 420 | 755 | E | **YES** |
| SR 49 from SR 4 Jct. South (Angels Camp) to Tuolumne County Border | 510 | 729 | D | **YES** |
| SR 4 from Stanislaus County line to O'Byrnes Ferry Road (Copperopolis) | 470 | 763 | D | **YES** |
| SR 4 between O'Byrnes Ferry Road (Copperopolis) and SR 49 | 440 | 866 | E | **YES** |
| SR 4 between Angels Camp and Allen Street (just west of Murphys) | 420 | 702 | E | **YES** |
| SR 4 between Allen Street and Broadview Lane (Murphys Downtown) | 830 | 1,060 | D | **YES** |
| SR 4 between Broadview Lane (Murphys) and Valley View Drive (Arnold) | 550 | 1,029 | E | **YES** |
| SR 4 between Valley View Drive and Henry Road (Arnold Downtown) | 520 | 551 | D | **YES** |
| SR 4 between Henry Road (Arnold) and Alpine County line | 490 | 505 | D | **YES** |
| SR 12 between San Joaquin County line and Valley Springs | 420 | 1,080 | E | **YES** |
| SR 12 between Valley Springs and SR 26 East Jct. | 580 | 711 | D | **YES** |
| SR 26 between San Joaquin County line and Olive Orchard Road | 420 | 637 | D | **YES** |
| SR 26 between Olive Orchard Road and Lime Creek Rd (Valley Springs) | 830 | 913 | D | **YES** |
| SR 26 between SR 12 Jct East of Valley Springs and Mokelumne Hill | 330 | 348 | D | **YES** |
| SR 26 between Mokelumne Hill and West Point | 250 | 391 | D | **YES** |
| Murphys Grade Road between Angels Camp and Murphys | 260 | 609 | E | **YES** |
| Mountain Ranch Road between SR 49 and Sheep Ranch Road | 230 | 246 | D | **YES** |
| O'Byrnes Ferry Rd between SR 4 and Tuolumne County line | 440 | 490 | D | **YES** |

Note: Roadway capacities based upon Florida DOT's HIGHPLAN Software.

Source: Calaveras County Transportation Demand Model, 2002.

## Table 20: Calaveras County 2025 Summer Weekday Intersection LOS

| | Intersection | | Unmitigated[1] | | | Mitigated[3] | |
|---|---|---|---|---|---|---|---|
| Traffic Control | North/South | East/West | AM Peak-Hour LOS [2] | PM Peak-Hour LOS [2] | 2025 Potential Peak Hour Mitigation | AM Peak-Hour LOS [2] | PM Peak-Hour LOS [2] |
| Stop Controlled | Railroad Flat Road | SR 26 | A | B | | A | B |
| Stop Controlled | Ridge Road | SR 26 | B | B | | B | B |
| Stop Controlled | SR 4 (NB)/Blagen & Dunbar[3] | SR 4 (SB) | C | C | Realignment using Henry St. needed for safety considerations | C | C |
| Stop Controlled | Main Street(Murphys) | SR 4 | D | D | Add median or TWLTL for a two stage left turn | C | C |
| Stop Controlled | Parrotts Ferry Road | SR 4 | B | C | | B | C |
| Stop Controlled | SR 49 | SR 26 | F | F | Signalize + WBL turn lane and NBR turn lane | B | B |
| Stop Controlled | Pettinger Road | SR 12 | F | F | TWLTL with 1 veh storage + EBR turn lane. (May meet signal warrants) | C | D |
| Stop Controlled | SR 49 | Gold Strike Road | C | C | | C | C |
| Stop Controlled | SR 49 | Pool Station Road | F | F | Signalize + SBR turn lane | B | B |
| Stop Controlled | SR 49 | Mountain Ranch Road | E | F | Signalize (keep existing geometry) | B | B |
| Stop Controlled | Little John Road | SR 4 | F | F | | | |
| Signal | SR 49[4] | SR 4 (Northern Intersection) | B | B | | B | B |
| Signal | Murphys Grade Road/Demarest Street | SR 4 | B | C | | B | C |
| Stop Controlled | SR 49 (Southern Intersection) | SR 4 South | F | F | Change to 4 way stop, add NBR and SBL turn lanes | C | E |
| Stop Controlled | SR 49 (Southern Intersection) | SR 4 South | F | F | **Or** single lane roundabout (may meet signal warrants) | B | B |
| Stop Controlled | Bret Harte Drive | SR 4 | D | F | Add median or TWLTL for a two stage left turn | C | C |
| Stop Controlled | Avery Sheep Ranch Road | SR 4 | D | F | Add median or TWLTL for a two stage left turn | C | C |

Note 1: LOS with existing lane geometry and traffic control.
Note 2: Worst Approach LOS is reported for unsignalized intersections, while total intersection LOS is reported for signalized intersections.
Note 3: HCM is not able to analyze atypical intersections; therefore Blagen and Dunbar approaches were combined into a "T" intersection configuration.
Note 4: Assumes construction of Angels Camp Bypass.
Source: Calaveras County Transportation Demand Model

Summary

This future traffic conditions analysis shows that the large majority of state highway segments in Calaveras County will operate below the County LOS threshold of C by 2025. In particular, travel between the Valley Springs region and San Joaquin County will increase dramatically over the next 20 years, largely reflecting the flow of commuters between the two counties. Tourism and recreational vehicle travel will also increase traffic volumes throughout the region, prompting the need for passing lanes and wider shoulders. Traffic is anticipated to increase significantly on SR 4 east of Murphys due in part to the large number of second homes in Arnold and surrounding mountainous regions of the County. The Calaveras County Travel Demand Model projects that the greatest travel demand on the County roadway system in both 2002 and 2025 is generated by development in the Copperopolis region. Potential mitigation to correct these traffic issues are discussed in the *Calaveras County Circulation Study* and the Copperopolis and Valley Springs Benefit Basin reports. Proposed transportation projects resulting from these studies are included in this RTP.

Prevention or proper land use planning is one of the best methods of keeping future roadway LOS at acceptable levels. Traffic volumes in the Calaveras Travel Demand Model are based on the development of approved future projects, as well as the buildout of vacant or partially developed residential and non-residential parcels. If smart growth principles such as transit oriented development and mixed use projects are applied to development of the vacant parcels, future traffic volumes could be less than the model estimates.

**Parallel Capacity**

As evidenced above, population growth in Calaveras County and the resulting increase in through traffic volumes is forecast to cause LOS on many roadway segments to fall below the LOS C standard. In particular, a review of Table 19 indicates a total of 21 key roadway segments (19 on the state highway system) that will operate at LOS D or worse in 2025. While a preliminary review of this table indicates that some roadway segment deficiencies in the undeveloped portions of the County can be addressed through curve corrections or provision of passing lanes or climbing lanes, other segments located in developed areas would require either widening or provision of parallel roadways. Like the issues faced in many other rural areas with significant growth, Calaveras County is faced with finding an appropriate means to address this issue. Short of land use changes, one option is to provide parallel roadway capacity.

Parallel capacity is the idea of developing a roadway network that tends to distribute traffic activity, rather than concentrate it through the provision of new roadways. This tends to preserve the rural or small-town character of an area. Beyond the costs involved, the difficulty is in securing an alignment that meets transportation needs (i.e., provides new travel paths that serve local travel patterns) while resulting in acceptable impacts on adjacent property owners and the environment.

Where a feasible parallel alignment exists and where a lower LOS is not acceptable, the provision of parallel roadway capacity is a strategy that can attain Calaveras County's desire to maintain its rural/small-town character. The feasibility of this strategy, however, depends greatly on the specific travel patterns and geography of a local area, and must be evaluated on a case-by-case basis.

## ASSUMPTIONS

The RTP Guidelines state that each RTP should establish assumptions to be used in the development of projections and determination of needs. These assumptions form the basis upon which goals, policies, and objectives are based. This section summarizes assumptions for the 2007 Calaveras County RTP.

- The population of Calaveras County will increase at approximately 2.5 percent per year. Adjacent county populations will continue to grow at a rate generally consistent with the State Department of Finance estimates.

- Dwelling units are expected to increase to 39,198 by 2025.

- There will continue to be a strong commuting pattern of Calaveras County residents working in neighboring counties in the Central Valley.

- The developed areas of the County will continue to experience increased growth in housing stock consistent with *Calaveras County Land Use Memorandum* projections.

- The automobile will continue to be the primary mode of travel by residents of Calaveras County.

- Fuel prices will remain above $3.00 per gallon and may affect summer travel patterns. Vacationers may chose destinations closer to home.

- Project construction costs are anticipated to increase by 3.2 percent per year, based on the average annual change in the Engineering News Record Construction Cost Index from December 1996 to December 2006.

- Recreation-oriented travel and second home growth will continue to affect state highways and major County roads.

- Local road maintenance will continue to be a major issue, unless new local funding sources are secured.

- Average daily traffic generation (as measured by the number of trip-ends) will increase by 7.4 million from 2002 to 2025.

## ALTERNATIVES/STRATEGIES

An important step in the development of future plans, as well as a requirement in the RTP guidelines, is the evaluation of general alternative strategies. Based on data analysis, key issues, and assumptions addressed in this document, three general regional transportation alternatives are considered in this section. This RTP update does not discuss specific transportation alternatives, but rather provides different approaches to prioritizing regional transportation improvement projects.

### Maintenance Emphasis Alternative

This alternative focuses on funding and maintaining existing transportation programs. New roadways would not be considered under this alternative. As the Tri-County RTIP between Calaveras, Amador, and Alpine County includes new road construction projects (such as the SR 4 Angels Camp Bypass high priority project for which STIP funding has already been secured), this alternative would not be consistent with the RTIP or the goals and objectives of this RTP. Additionally, as Calaveras County's population and housing units are forecast to increase significantly over the planning period, implementing maintenance only projects would result in unacceptable traffic conditions.

### Capital Improvement Emphasis

This alternative would seek to maximize funding allocated to new roadways. As discussed above, short-term RTIP priorities include large capital improvement projects such as bypass construction. However, road rehabilitation and maintenance is considered a regional issue and is emphasized in the RTP goals and objectives. Therefore, focusing solely on new roadway or large capital projects ignores an important regional transportation need.

### Balanced Focus

The final approach to prioritizing regional transportation improvement projects is a "balanced alternative." This alternative would seek to achieve a balance between maintenance of existing programs and expanding capacity where warranted. As this alternative directs decision-makers to provide solutions to both existing road maintenance issues as well as decreasing LOS on County roadways and state highways, a balanced alternative is the logical choice in Calaveras County. This alternative would allow CCOG to pursue STIP funding for new roadway or large capital improvement projects, as well as pursue federal and state funding for much needed road maintenance projects. With a "balanced" focus, transportation projects that do not fit neatly into the two categories of capital or maintenance will also receive proper attention. Transportation projects such as roadway upgrades to minimum standards or intersection improvements that focus on safety or LOS improvements are equally important to an effective regional transportation system.

A "balanced" transportation system can also include the provision of non-motorized and transit facilities as well as transportation demand management techniques. These alternative forms of transportation reduce vehicle miles traveled on County highways and roadways and help to achieve other important goals. Implementing alternative transportation projects as funding becomes available could reduce the need for maintenance and new roadway construction. Data presented in the existing conditions section show the need for investment in alternative transportation projects. Roughly 12 percent of Calaveras County residents live below the poverty level. These residents are not likely to have a private vehicle available and therefore rely on friends or public transit to fulfill their mobility needs. Census data revealed that over 15 percent of Calaveras County workers (2,400 persons) commute to San Joaquin County for work. As development continues in Calaveras County, the number of vehicles traveling between western Calaveras County and San Joaquin County will increase. Transportation demand management strategies such as Foothill Rideshare should continue to be supported so as to reduce traffic congestion along SR 12.

Another important balanced approach to transportation planning is context sensitive solutions (CSS). The Federal Highway Administration (FHWA) defines CSS as “a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist." In other words, when individual project documentation and analysis is prepared, the effects of the project on the rural characteristics of the community or scenic vistas in the area should be reviewed along with how the project will improve traffic flow.

In recent years, roundabouts have gained increasing acceptance across California and the nation. Designed properly and in appropriate locations, modern roundabouts have a proven potential to reduce traffic delays, accidents, air pollutant emissions, traffic noise, and to lower travel speeds. Roundabouts should be seriously considered as an alternative to traffic signals, or to address poor LOS at Stop sign controlled intersection.

Another Calaveras County issue that should be reviewed when considering a balanced approach to transportation is reducing the region’s dependence on the state’s infrastructure for intra-County trips. As state highways tend to be better maintained than County roadways, motorists traveling between Calaveras County communities often choose the state highway route over the more direct County road route. The goal would not be to divert traffic from state highways but to prioritize County roadway projects that will reduce “out-of-direction” travel. Upgrading County roads so as to provide a more direct connection between communities could reduce overall vehicle miles of travel (VMT) and thereby reduce vehicle emissions.

## TRANSPORTATION SYSTEM IMPROVEMENTS

The following tables and text lists transportation improvement projects designed to alleviate existing transportation problems and accommodate future travel demand in accordance with area needs and policies. Projects are categorized by transportation element and priority levels. Short-term projects are expected to be implemented between FY 2006 and FY 2015. Short-term indicates programmed projects as well as projects with cost estimates available where funding has been identified but not secured. Long-term projects are not expected to be completed until the second half of the 20-year planning period (2016–2026). These long-term projects are in the preliminary planning phase, and funding has been identified but not secured. The *2003 RTP Evaluation* Report requires a list of financially unconstrained projects in addition to financially constrained projects. A financially unconstrained project is a regionally desired unfunded or “wish list” project that would be implemented if unanticipated funding sources were to become available.

Determining exact construction costs of transportation projects is difficult, especially for long-term projects. In recent years the price of raw materials used for transportation projects has risen resulting in actual costs much greater than those estimated in the planning phase of the project. In an effort to produce a realistic view of Calaveras County’s transportation needs, the cost estimates in the ensuing tables are presented in two ways: “2006 dollars” and “adjusted for inflation.” The Engineering News Record Construction Cost Index for San Francisco from December 1996 to December 2006 was reviewed to determine the average annual rate of inflation (3.2 percent) for construction costs. The majority of the projects in the following transportation improvement tables do not have construction years specified. Therefore, project

costs with unknown construction dates were inflated to represent construction in the middle of its planning period. For example, the short-term planning period is ten years so costs were multiplied by the average annual inflation rate for five years and long-term projects were multiplied by the average annual inflation rate for ten years. Estimated project costs cited in the text of this document represent "adjusted for inflation" costs.

**Roadways and Bridges**

State Highways

The Calaveras County region's 20-year vision improvement projects on state highways are identified in Table 21. Projects are separated by the two primary state highway funding sources (STIP and SHOPP). All STIP programmed and constrained projects are included in the Road Impact Mitigation (RIM) Fee program discussed below. Projects included in this RTP are consistent with projects in the ITIP. As shown in the table, the cost of all programmed STIP roadway and bridge projects located in Calaveras County is $27.6 million dollars. This figure does not include money spent or programmed in previous STIP cycles. STIP constrained projects total over $154 million dollars. Included in the constrained STIP projects is a 20 percent set aside of the estimated future STIP allocation for Calaveras County to local road rehabilitation. The 2006 Tri- County RTIP identified $50 million dollars in unfunded local road rehabilitation needs in the three counties. Costs of unconstrained state highway projects total $50.3 million dollars. SHOPP improvement projects total over $143.2 million dollars, SHOPP Minor A total to nearly $3.3 million dollars, and SHOPP Minor B total $425,000.

Programmed and constrained STIP projects listed in Table 21 are considered high priority or critical highway projects. The following discussion provides a brief description of each project's purpose and need.

SR 4 Angels Camp Bypass – The Angels Bypass is approximately 2.4 miles long, and is designed to re-route traffic around the City of Angels from north SR 4 at Frogtown Plaza to south SR 4 east of Rolleri Bypass Road**.** The discontinuity of SR 4 across the SR 49 corridor combined with local and regional traffic within the Angels Camp area and the constrained nature of the historic district often results in unacceptable levels of congestion. This congestion causes some motorists to divert to Murphys Grade Road, which currently acts as a natural bypass for SR 4. The increased traffic on this roadway results in congestion in the town of Murphys to the east.

The most recent challenge with the Angels Camp Bypass has been construction cost increases of approximately $12.8 million dollars beyond what was originally estimated. Funding delays and right of way acquisition have attributed to the cost increase. In March 2007, Proposition 1B Corridor Mobility Improvement Account (CMIA) funds were awarded to the project. These funds, combined with 2006 STIP Augmentation and Interregional Improvement Program (IIP) funds, will pay for the cost increases. The Angels Bypass is scheduled for construction in 2007 and is the final project of the Tri County MOU I.

SR 4 Wagon Trail - This improvement project will provide a faster and safer alignment for a five-mile portion of Highway 4 between Copperopolis and Angels Camp. The existing alignment between O'Byrnes Ferry Road and SR 49 severely limits the capacity of this roadway and is forecast to operate at LOS E by 2025. Projected growth of traffic along this corridor, which is a primary east-west link to the Central Valley, will require improvements that enhance roadway

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## *Table 21: Caltrans State Highway Projects 20-Year Vision*

| Route | Specific Location (Post Miles) | Proposed Project Description | Implementation Period [1] Short Term | Implementation Period [1] Long Term | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [3] | Primary Funding Source |
|---|---|---|---|---|---|---|---|
| **STIP - Programmed (Calaveras)** | | | | | | | |
| SR 4 | Angels Camp Bypass (Calaveras County)[2] | Road Construction | X | | $ 24,396 | $ 24,396 | STIP/ CMIA / RIM |
| SR 4 | Wagon Trail Project (PA & ED Phase)[2] | Road Reconstruction/ Re-Alignment | X | | $ 3,230 | $ 3,230 | STIP/ PLH/ RIM |
| | | | *Subtotal STIP Programmed* | | *$ 27,626* | *$ 27,626* | |
| **STIP Constrained** | | | | | | | |
| SR 4/49 | Angels Camp Bridges and Intersection | Bridge and Intersection Improvements | X | | $ 10,000 | $ 11,722 | STIP |
| SR 12/SR 26 | Intersection[2] | Install Traffic Signal/ Widen Approach/ LTL, RTL | X | | $ 1,219 | $ 1,429 | STIP/ RIM/ CMAQ |
| SR 4 | Wagon Trail Project (Final Phases)[2] | Road Reconstruction/ Re-Alignment | X | | $ 40,000 | $ 46,886 | STIP/ RIM |
| SR 12 | Valley Springs Bypass[2] | Road Construction | | X | $ 60,000 | $ 82,436 | STIP/ RIM/ Benefit Basin |
| SR 4 | Stanislaus County Line to west of Reeds Turnpike[2] | Road Reconstruction - Passing Lanes | | X | $ 2,400 | $ 3,297 | RIM Fee/ Other |
| SR 12 | West Jct. SR 26 to SR 49[2] | Road Reconstruction - Passing Lanes, Widen Road | | X | $ 4,305 | $ 5,915 | RIM Fee/ Other |
| -- | Local Road Rehabilitation | Road Rehabilitation | | X | $ 2,000 | $ 2,748 | STIP |
| | | | | *Subtotal STIP Constrained* | *$ 119,924* | *$ 154,433* | |
| **STIP - Unconstrained** | | | | | | | |
| SR 4 | Bridge 30-0036 - PM 14.7 | 2 lane Expressway | | X | N/A | N/A | STIP |
| SR 49/ SR 4 | SE SR 49 Bypass | New roadway - extend the funded bypass past the fairgrounds | | X | $ 36,632 | $ 50,330 | STIP |
| SR 4 | Angels Camp Bypass Intersection at Dogtown Rd | Roundabout | | X | N/A | N/A | STIP |
| | | | | *Subtotal STIP Unconstrained* | *$ 36,632* | *$ 50,330* | |
| **SHOPP** | | | | | | | |
| SR 4 | Arnold Curve Correction - On SR 4 near Arnold at PM 42.8 to 43.6 | Curve Correction | X | | $ 7,900 | $ 8,418 | SHOPP |
| SR 4 | Big Trees CAPM - SR 4 from Moran Rd, east of Arnold to Meko Dr at Camp Connell Maintenance Station | Roadway Rehabilitation | X | | $ 2,370 | $ 2,370 | SHOPP |
| SR 4 | Big Trees Curve Correction - SR 4 near entrance to Big Trees State Park | Curve Correction | X | | $ 3,000 | $ 3,097 | SHOPP |
| SR 4 | Big Trees State Park Wall - On SR 4 between 2 km north of White Pine and Big Trees | Construct Wall for Sediment Control | X | | $ 2,500 | $ 2,750 | SHOPP |
| SR 4 | Between Murphys and Hathaway Pines | Construct Two Sand Storage Facilities | X | | $ 1,200 | $ 1,407 | SHOPP |
| SR 4 | Foundry Lane/ Angels Oaks Rd Connection to SR 4 | Caltrans Oversight on City PSR Project | X | | N/A | N/A | SHOPP |
| SR 4 | Pool Station Intersection - At SR 4 and Pool Station Intersection | New Intersection | X | | $ 5,000 | $ 5,161 | SHOPP |
| SR 4/49 | Angels Creek Bridges on SR 4 and SR 49 | Rail Upgrade and Widening | X | | $ 2,000 | $ 2,200 | SHOPP |
| SR 12 | Burson Rehabilitation - Near Wallace from 0.8 km east of Southworth Rd to 0.3 km east of SR 26 | Structural Section Repair | X | | $ 7,900 | $ 8,418 | SHOPP |
| SR 26 | Savage Way Rehabilitation - Near Valley Springs, SJ County line to Savage Way | Road Rehabilitation and Improvements | X | | $ 9,300 | $ 9,600 | SHOPP |
| **2005 SHOPP 10 - Year Plan** | | | | | | | |
| Mobility | | | | | | | |
| SR 4 | PM 8.14 - 8.16 - Junction SR 4 / O'Byrnes Ferry Rd | Intersection Improvement | | X | $ 900 | $ 1,237 | SHOPP |
| SR 4 | PM 29.1 - 29.6 - Murphys 0.1 km east of Pennsylvania Gulch Intersection | Construct a Continuous Left Turn Lane | X | | $ 1,600 | $ 1,875 | SHOPP |
| SR 4 | PM 32.20- 32.5 - Near Murphys | Extend existing E/B turnout | X | | $ 800 | $ 968 | SHOPP |
| SR 12 | PM 9.92 - 10.30 - In Valley Springs at the SR12/SR26 intersection | Intersection Improvement and Install Signal | | X | $ 1,600 | $ 2,198 | SHOPP |
| SR 26 | PM 5.04-5.51- East of Garner/Olive Rd to 0.16 km w/o Hagen Dr | Curve improvement and shoulder widening | X | | $ 1,500 | $ 1,874 | SHOPP |
| SR 26 | PM 8.99 - 9.5 from San Andreas Rd to .5 km east | Curve Improvement | X | | $ 1,350 | $ 1,533 | SHOPP |
| Bridges | | | | | | | |
| | Various state highway bridges in Amador, Calaveras, Tuolumne Counties | Repair scour damage | | X | $ 3,000 | $ 4,122 | SHOPP |
| | Various state highway bridges in Amador, Calaveras, Tuolumne Counties | Seismic Retrofit | | X | $ 7,000 | $ 9,618 | SHOPP |
| Roadway Preservation | | | | | | | |
| SR 4 | PM 0.0 - 10.3, 16.4 - 42.7 | Roadway Rehabilitation | | X | $ 25,620 | $ 35,200 | SHOPP |
| SR 26 | PM 19.7 - 38.3 | Roadway Rehabilitation | | X | $ 13,020 | $ 17,889 | SHOPP |
| SR 49 | PM R4.0 - 10.0 | Roadway Rehabilitation | | X | $ 4,200 | $ 5,771 | SHOPP |
| SR 49 | PM 4.00 - 10.00 | Pavement Rehabilitation | X | | $ 3,000 | $ 3,406 | SHOPP |
| | Various areas | Repair and Replace Culverts | X | | $ 12,000 | $ 14,066 | SHOPP |
| Roadside Preservation | | | | | | | |
| SR 4 | PM 42.6 - 61.3 | Maintenance Vehicle Pullouts | X | | $ 50 | $ 59 | SHOPP |
| | | | | *Subtotal SHOPP* | *$ 116,810* | *$ 143,236* | |
| **SHOPP Minor A** | | | | | | | |
| SR 4 | PM 8.1/8.4 at Intersection of O'Byrnes Ferry Rd | Extend WB L/T on SR 4 in Copperopolis | X | | $ 450 | $ 450 | SHOPP Minor A |
| SR 4 | PM 32.2/32.2 - Murphys | Construct Turnout/Chain Control Facility | X | | $ 165 | $ 165 | SHOPP Minor A |
| SR 4 | PM 37.3 - Moran Intersection | Construct Left Turn Lane | X | | $ 750 | $ 750 | SHOPP Minor A |
| SR 4 | PM 40.1/40.6 From Meadowmont Way to 0.43 km east of Country Club Dr | Widen and Construct Left Turn Lane | X | | $ 712 | $ 712 | SHOPP Minor A |
| SR 4 | PM 46.9/47.1 - In Dorrington | Construct Left Turn Channelization, Acceleration Ln/ Chain Installation | X | | $ 550 | $ 550 | SHOPP Minor A |
| SR 12 | PM 14.1/14.5 - From 0.2 km east of SR 26 to 0.2 km east of Double Springs Rd | Construct Left Turn Channelization, Acceleration Ln and Shoulder Widening | X | | $ 710 | $ 710 | SHOPP Minor A |
| | | | | *Subtotal SHOPP Minor A* | *$ 3,337* | *$ 3,337* | |
| **SHOPP Minor B** | | | | | | | |
| SR 4 | Various Locations | Upgrade Drainage System | X | | $ 110 | $ 129 | SHOPP Minor B |
| SR 4 | PM 19.9/25 Angels Camp | Flashing ambers for advisory radio | X | | $ 30 | $ 35 | SHOPP Minor B |
| SR 26 | PM 9.9/13.9 west and east SR 12/26 junctions | Install traffic count stations | X | | $ 70 | $ 82 | SHOPP Minor B |
| SR 26 | PM 18 - Near Mokelumne Hill at SR 26/49 junction | Modify existing intersection lighting | X | | $ 15 | $ 15 | SHOPP Minor B |
| SR 26 | PM 19.1/32.7 From 0.6 km w/of Jesus Maria Rd to Sandy Gulch Rd | Replace culverts | X | | $ 70 | $ 82 | SHOPP Minor B |
| SR 26 | PM 25 - East of Mokelumne Hill | Construct EB Chain Installation | X | | $ 70 | $ 82 | SHOPP Minor B |
| | | | | *Subtotal SHOPP Minor B* | *$ 365* | *$ 425* | |
| | | | | **Total Cost of Constrained Projects** | **$ 268,062** | **$ 329,057** | |
| | | | | **Total Cost of Unconstrained Projects** | **$ 36,632** | **$ 50,330** | |

Note 1: Short Term 2006-2015; Long Term 2016-2026.

Note 2: Project is part of the RIM Fee Program.

Note 3: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

Source: 2006 STIP, 2005 SHOPP, 2005 10-Year SHOPP, Caltrans, CCOG.

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capacity and decrease delay. Traffic volumes are projected to increase by 14,000 ADT from 2002 to 2025 on this segment of SR 4. The project has been scoped in two ways: as a new alignment with 65 mph design speed, or as an improved route with a 55 mph design speed. Federal earmarked money has been acquired for this project. The CCOG is currently working with Caltrans to finalize the Request for Qualifications (RFQ), to advertise the RFQ, and then select a consulting firm to prepare preliminary engineering documents. The Wagon Trail Project will be constructed in phases as funding becomes available. This project may also become part of a second Tri-County MOU.

SR 4/49 Angels Camp Bridges and Intersection – This project was developed because of SR 4 Angels Camp cooperative agreements with the City of Angels and Calaveras County. It was agreed that the portion of SR 4 from the SR 49 intersection to the new Angels Camp Bypass intersection would not be relinquished to the City and County until improvements were made to the skewed intersection, as long as the environmental portion of the improvements began within seven years of the adoption of the project study report (PSR). The PSR was completed in 2003. Therefore, the project approval (PA) and environmental documentation (ED) must begin in 2010.

SR 12/26 Intersection - A four-way stop and numerous commercial driveways at the intersection of SR 12 and SR 26 in Valley Springs currently cause congestion. In fact, the intersection itself operates at LOS F, while the roadway segments leading into the intersection operate at LOS C and D. The proposed project will install a traffic signal, widen the approach, and construct left and right turn lanes. This project is in the County's Road Impact Mitigation Fee Program and has been assigned as the top priority project in the County. The intersection modifications will relieve congestion and air quality will be improved. Therefore, in addition to RIM funding, CCOG will be seeking CMAQ funds for the SR 12/26 intersection project.

SR 12 Valley Springs Bypass – The purpose of this project is to provide an acceptable LOS on SR 12, SR 26, and at the SR12/26 intersection, and meet demands of the increase in traffic due to planned growth in Valley Springs. At present, both SR 12 and SR 26 are two-lane conventional highways which begin in the Central Valley region and terminate in the western Sierras. In addition to acting as the primary roadway for the rapidly growing community of Valley Springs, both highways serve as the access route to recreational areas such as New Hogan Reservoir and other highly visited attractions in Calaveras County for Central Valley residents. SR 12 is also important for goods movement, as truck traffic constitutes 4.8 percent of ADT, and for Calaveras County commuters who work in San Joaquin County. As stated above, traffic congestion is exacerbated by numerous commercial driveways at the intersection of SR 12 and SR 26.

Proposed alternatives include a two-lane (ultimate four-lane) expressway connector on a new SR 12 alignment to bypass Valley Springs or widen the existing highway from two lanes to four lanes with a painted median or raised curb island. The proposed SR 12 alignment will lie to the south of the existing highway with exact intersection locations with the old highway to be determined.

County Roadway and Bridge Projects

The County's 20-year vision of roadway and bridge improvement projects and their implementation status are presented in Tables 22 to 25. In an effort to respond accurately to regional transportation needs, each improvement project in Tables 22 to 25 is linked to a

## *Table 22: Calaveras County Transportation System Improvement Projects, 20-Year Vision - RIM Fee Nexus Study Projects*

*This list is in alphabetical order and is not in order of priority. Projects will be implemented as funding becomes available.*

| Specific Location | Proposed Project Description | Implementation Period [1] Short Term | Implementation Period [1] Long Term | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [2] | Primary Funding Source | Corresponding Goal(s) |
|---|---|---|---|---|---|---|---|
| **Local Roads of Regional Significance** | | | | | | | |
| Avery Sheep Ranch Road - 4.75 miles between SR 4 and Sheep Ranch Road | Road Reconstruction | | X | $ 2,709 | $ 3,722 | RIM Fee/ Other | 1,7,8 |
| Burson Road | Upgrade to Minimum County Standard | | X | $ 6,074 | $ 8,346 | RIM Fee/ Other | 1,7,8 |
| Jenny Lind Road | Upgrade to Minimum County Standard | | X | $ 549 | $ 754 | RIM Fee/ Other | 1,7,8 |
| Milton Road | Upgrade to Minimum County Standard | | X | $ 3,876 | $ 5,325 | RIM Fee/ Other | 1,7,8 |
| Moran Road - 24 foot section for 5.402 mi. | Upgrade to Minimum County Standard | | X | $ 1,994 | $ 2,740 | RIM Fee/ Other | 1,7,8 |
| Mountain Ranch Road - 10.2 miles between SR 49 to Sheep Ranch Road | Road Reconstruction | X | | $ 4,207 | $ 4,931 | RIM Fee/ Other | 1,7,8 |
| Murphys Grade Road | Upgrade to Minimum County Standard | | X | $ 2,096 | $ 2,880 | RIM Fee/ Other | 1,7,8 |
| Paloma Road - 7.9 miles between SR 26 to Rose Street | Road Reconstruction | | X | $ 1,012 | $ 1,391 | RIM Fee/ Other | 1,7,8 |
| Paloma Road | Upgrade to Minimum County Standard | | X | $ 4,531 | $ 6,226 | RIM Fee/ Other | 1,7,8 |
| Pool Station Road | Upgrade to Minimum County Standard | | X | $ 25,469 | $ 34,993 | RIM Fee/ Other | 1,7,8 |
| Railroad Flat Road - Jesus Maria Road to Ridge Road | Upgrade to Minimum County Standard | | X | $ 2,836 | $ 3,896 | RIM Fee/ Other | 1,7,8 |
| Railroad Flat Road - Licking Fork Bridge to Blizzard Mine Road | Upgrade to Minimum County Standard | | X | $ 1,078 | $ 1,481 | RIM Fee/ Other | 1,7,8 |
| Ridge Road | Upgrade to Minimum County Standard | | X | $ 690 | $ 948 | RIM Fee/ Other | 1,7,8 |
| Rolleri Bypass Road | Intersection Realignment, Driveway Relocation, Maintenance | | X | $ 122 | $ 168 | RIM Fee/ Other | 1,7,8 |
| Sheep Ranch Road - 24 ft section for 3.5 mi. | Upgrade to Minimum County Standard | | X | $ 1,293 | $ 1,776 | RIM Fee/ Other | 1,7,8 |
| Sheep Ranch Road - 24 ft section for 9.9 mi. | Upgrade to Minimum County Standard | | X | $ 3,655 | $ 5,021 | RIM Fee/ Other | 1,7,8 |
| | | | *Local Roads Subtotal* | *$ 62,190* | *$ 84,596* | | |
| **County Roads, Regional** | | | | | | | |
| Murphys Grade Road - 5 mi. between SR 4 and French Gulch Road | Road Reconstruction- Widen and Realign | | X | $ 5,306 | $ 7,290 | RIM Fee/ Other | 1,7,8 |
| | | | *County Roads Subtotal* | *$ 5,306* | *$ 7,290* | | |
| | | | **Total Improvements** | **$ 67,496** | **$ 91,886** | | |

Note 1: Short Term 2006-2015; Long Term 2016-2026.

Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

Source: RIM Fee Nexus Study, April 2004

## *Table 23: Calaveras County Transportation System Improvement Projects, 20-Year Vision - Local Road Projects*

*This list is in alphabetical order and is not in order of priority. Projects will be implemented as funding becomes available.*

| Specific Location | Proposed Project Description | Implementation Period [1] | | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [2] | Primary Funding Source | Corresponding Goal(s) |
|---|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | | | |
| **Other Locally Funded County Road Projects** | | | | | | | |
| Bald Mountain Rd | Upgrade to 24 ft section (1.5 miles) | | X | $ 836 | $ 1,148 | Local | 1,7,8 |
| Bernett St | Extend through to the north as development necessitates | | X | $ 442 | $ 607 | Local | 1,7,8 |
| Blue Mountain Rd | Upgrade to county minimum road standards - 24 ft section for 1.5 miles | | X | $ 576 | $ 792 | Local | 1,7,8 |
| Campo Seco Rd | Reconstruct roadway Comanche Pkwy (south) to Paloma Rd (4.1 mi) | | X | $ 293 | $ 402 | Local | 1,7,8 |
| Copper Cove Dr | Upgrade to county minimum road standards | | X | $ 1,767 | $ 2,427 | Local | 1,7,8 |
| Dogtown Rd | Upgrade to 24 ft section (1.1 miles) | | X | $ 223 | $ 306 | Local | 1,7,8 |
| Dogtown Rd | Upgrade to minimum standards Lakeside Dr to San Domingo Cr. Bridge | | X | $ 508 | $ 698 | Local | 1,7,8 |
| Doster Rd | Upgrade to 24-foot section (1.0 mile) | | X | $ 385 | $ 529 | Local | 1,7,8 |
| East Murray Creek | Upgrade 24 ft section (2.39 mi) | | X | $ 931 | $ 1,279 | Local | 1,7,8 |
| French Gulch Rd | Upgrade 24 ft section (0.53 mi) | | X | $ 204 | $ 281 | Local | 1,7,8 |
| Fullen Rd | Upgrade to 24-foot section (3.1 mile) | | X | $ 1,026 | $ 1,409 | Local | 1,7,8 |
| Hunt Rd | Upgrade to 24 ft section (14.5 miles) | | X | $ 2,949 | $ 4,052 | Local | 1,7,8 |
| Jesus Maria Road | Reconstruct roadway SR 26 to Railroad Flat Rd (12.9 mi) | | X | $ 4,313 | $ 5,925 | Local | 1,7,8 |
| Mountain Ranch Road | Safety Project | X | | N/A | N/A | Federal Grant | 1,7,8 |
| O'Byrnes Ferry Road | Construct road/shoulder improvements and passing lanes for 8 miles | | X | $ 12,686 | $ 17,430 | Local | 1,7,8 |
| Ospital Road | Upgrade full length | | X | $ 1,250 | $ 1,717 | Local | 1,7,8 |
| Pennsylvania Gulch Road | Upgrade to county minimum road standards - 24 ft section for 4.3 miles | | X | $ 1,635 | $ 2,247 | Local | 1,7,8 |
| Rock Creek Road | Upgrade to 24 ft section (14.4 miles) | | X | $ 2,926 | $ 4,020 | Local | 1,7,8 |
| Silver Rapids Road | Upgrade to county minimum road standards | | X | $ 150 | $ 206 | Local | 1,7,8 |
| Six Mile Road | Upgrade to county minimum road standards - 24 ft section for 1.0 miles | | X | $ 384 | $ 528 | Local | 1,7,8 |
| Swiss Ranch Road | Upgrade to 24-foot section (1.0 mile) | | X | $ 517 | $ 710 | Local | 1,7,8 |
| Various upaved roadways | Sealing of unpaved roads | X | | $ 1,000 | $ 1,172 | Federal Grant | 1,7,8 |
| Vista del Lago | Upgrade to county minimum road standards | | X | $ 976 | $ 1,341 | Local | 1,7,8 |
| Whiskey Slide Road | Upgrade 24 ft section (4.9 mi) | | X | $ 1,882 | $ 2,586 | Local | 1,7,8 |
| | | | | **$ 37,858** | **$ 51,812** | | |

Note 1: Short Term 2006-2015; Long Term 2016-2026.

Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1995 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

## *Table 24: Calaveras County Bridge Improvement Projects, 20-Year Vision*

| Bridge No. | Facility Name | Specific Location | Proposed Project Description | Implementation Period [1] Short Term | Implementation Period [1] Long Term | Total Cost (1,000s) 2006 Dollars | Total Cost Adjusted for Inflation [2] | Funding Source | Corresponding Goal(s) |
|---|---|---|---|---|---|---|---|---|---|
| #32C-07 | O'Byrnes Ferry Road | Stanislaus River | Bridge replacement, widen shoulders | x | | $ 9,000 | $ 10,549 | HBP | 1 |
| #30C-67 | Warren Road | Warren Creek | Bridge replacement | | x | $ 654 | $ 898 | HBP | 1 |
| | | | | | **Total Estimated Cost** | **$ 9,654** | **$ 11,448** | | |

Note 1: Short Term 2006-2015; Long Term 2016-2026.

Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1995 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

## *Table 25: Calaveras County Benefit Basin Projects, 20-Year Vision*

| Specific Location | Proposed Project Description | Implementation Period [1] Short Term | Implementation Period [1] Long Term | Total Cost (1000s) *2006 Dollars* | Total Cost Adjusted for Inflation [2] | Primary Funding Source | Corresponding Goal(s) |
|---|---|---|---|---|---|---|---|
| **Copperopolis Benefit Basin** | | | | | | | |
| New Roadway | | | | | | | |
| North South Connector/SR 4 | New roadway connection the southern end of Little John Road to SR 4 - Minor Collector Classification | | X | $ 37,221 | $ 51,139 | Benefit Basin/Local | 1,4,7,8 |
| Roadway Improvements | | | | | | | |
| O'Byrnes Ferry Road Bridge | Full Reconstruction - Replacement Option D | X | | $ 1,035 | $ 1,213 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road in Calaveras County | Upgrade to Minor Collector | X | | $ 9,879 | $ 11,580 | Benefit Basin/Local | 1,4,7,8 |
| Little John Road | Upgrade to Minor Collector | X | | $ 3,888 | $ 4,557 | Benefit Basin/Local | 1,4,7,8 |
| Reeds Turnpike | Upgrade to Minor Collector | X | | $ 1,341 | $ 1,572 | Benefit Basin/Local | 1,4,7,8 |
| SR 4 through Study Area | Widen to 4 Lanes | X | | N/A | N/A | Benefit Basin/Local | 1,4,7,8 |
| Little John Road Immediately South of Copper Cove Drive | Upgrade to Minor Collector | X | | $ 3,083 | $ 3,851 | Benefit Basin/Local | 1,4,7,8 |
| Copper Cove Drive Between O'Byrnes Ferry Road and Quail Hill Road | Upgrade to Minor Collector Cross Section | X | | $ 3,044 | $ 3,925 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road Approaching Tulloch Reservoir Bridge | Straighten 25 Mile Per Hour Curves | | X | $ 2,593 | $ 4,311 | Benefit Basin/Local | 1,4,7,8 |
| Intersection Improvements | | | | | | Benefit Basin/Local | 1,4,7,8 |
| SR 4/Rock Creek Road/Main Street | Construct Traffic Signal | | X | $ 342 | $ 470 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road/Copper Cove Drive | Construct NBL and Improve Sight Distance to the North | X | | $ 346 | $ 613 | Benefit Basin/Local | 1,4,7,8 |
| Main Street/Reeds Turnpike | Limit Parking on Main Street to Improve Sight Distance | X | | $ 32 | $ 38 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road/SR 108 | Construct Traffic Signal | X | | $ 903 | $ 1,058 | Benefit Basin/Local | 1,4,7,8 |
| Rock Creek Road/Main Street/SR 4 | Construct EBR | X | | $ 321 | $ 376 | Benefit Basin/Local | 1,4,7,8 |
| Main Street/Reeds Turnpike | Add NBL | X | | $ 323 | $ 430 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road/Copper Cove Drive | Construct Traffic Signal | | X | $ 279 | $ 383 | Benefit Basin/Local | 1,4,7,8 |
| Little John Road/SR 4 | Construct Traffic Signal | X | | $ 375 | $ 454 | Benefit Basin/Local | 1,4,7,8 |
| Little John Road/Reeds Turnpike | Construct Traffic Signal and Add EBL (Total = EBL and EBL/T/R), NBT/L, NBR (Remove NBL/T/R) | | X | $ 605 | $ 831 | Benefit Basin/Local | 1,4,7,8 |
| North South Connector/SR 4 | Construct Traffic Signal | | X | $ 890 | $ 1,223 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road/Copper Meadows Road | Construct SBL, NBR, and SBR | | X | $ 107 | $ 162 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road/Connors Estates Drive | Construct NBL and SBR | | X | $ 76 | $ 115 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road/Poker Flat Road | Construct NBL and SBR | | X | $ 343 | $ 518 | Benefit Basin/Local | 1,4,7,8 |
| O'Byrnes Ferry Road/Duchess Drive | Construct NBL and SBR | | X | $ 333 | $ 503 | Benefit Basin/Local | 1,4,7,8 |
| | | | *Subtotal Copperopolis* | *$ 67,359* | *$ 89,322* | | |
| **Valley Springs Benefit Basin** | | | | | | | |
| SR 26, Olive Orchard Road/Garner Place | Two-way Left Turn Pocket | X | | $ 1,000 | $ 1,172 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Baldwin Lane/Baldwin Street | Two-way Left Turn Pocket | X | | $ 300 | $ 352 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Vista Del Lago | Two-way Left Turn Pocket | X | | $ 200 | $ 234 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Hogan Dam Road | Reconfigure Intersection | | X | $ 1,150 | $ 1,580 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Warren Road | Left-turn Pocket | | X | $ 210 | $ 289 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Burson Road | Reconfigure Intersection and Curve Realignment | | X | $ 300 | $ 412 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Milton Road | Reconfigure Intersection and Curve Realignment | | X | $ 300 | $ 412 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Hagen Drive | One-way Left-turn Pocket (Close Driver Road) | | X | $ 210 | $ 289 | Benefit Basin/Local | 1,4,7,8 |
| SR 26, Farris Drive/ Farris Lane | Two-way Left Turn Pocket | | X | $ 300 | $ 412 | Benefit Basin/Local | 1,4,7,8 |
| SR 12, Pettinger Road | One-way Left-turn Pocket | X | | $ 690 | $ 809 | Benefit Basin/Local | 1,4,7,8 |
| SR 12, Burson Road | Two-way Left Turn Pocket | X | | $ 1,150 | $ 1,348 | Benefit Basin/Local | 1,4,7,8 |
| SR 12, Southworth Road | Two-way Left Turn Pocket | | X | $ 300 | $ 412 | Benefit Basin/Local | 1,4,7,8 |
| SR 12, Messing Road | One-way Left Turn Pocket | | X | $ 210 | $ 289 | Benefit Basin/Local | 1,4,7,8 |
| SR 12, Toreno Way/Saharan Road | Two-way Left Turn Pocket | | X | $ 300 | $ 412 | Benefit Basin/Local | 1,4,7,8 |
| Hogan Dam Rd | Upgrade to county minimum road standards | | X | $ 5,523 | $ 7,588 | Benefit Basin/Local | 1,4,7,8 |
| Olive Orchard | Upgrade full length | | X | $ 1,179 | $ 1,620 | Benefit Basin/Local | 1,4,7,8 |
| Southworth Rd | Upgrade to county minimum road standards | | X | $ 2,463 | $ 3,384 | Benefit Basin/Local | 1,4,7,8 |
| | | | *Subtotal Valley Springs* | *$ 15,785* | *$ 21,014* | | |
| | | | **Total Benefit Basin Project Costs** | **$ 83,144** | **$ 110,335** | | |

Note 1: Short Term 2006-2015; Long Term 2016-2026.
Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.
Source: Copperopolis Benefit Basin Traffic Analysis, November 2006; Calaveras County DPW Valley Springs Benefit Basin Memo, October 2004.

corresponding RTP goal or goals. The total cost estimate for all County roadway and bridge projects over the 20-year planning period is approximately $266 million dollars with $50.2 over the short-term and $215.8 over the long-term.

*RIM Fee Program*

In 2004, the Calaveras County Board of Supervisors determined that future development within unincorporated Calaveras County would result in substantial traffic congestion with unacceptable LOS by 2025 and that existing funding sources would be inadequate to construct the regional transportation projects needed to avoid adverse impacts from developments. As a result, Calaveras County added Chapter 12.10 to the County Code establishing a Road Impact Mitigation Fee Program. Under this program, all new development in unincorporated parts of the County are assessed a fee based on the proportion of impact the project will have on the Regional Transportation Network as defined in Chapter 12.10. The *Road Impact Mitigation Fee Nexus Study* (April 2004) was prepared to determine what transportation improvement projects would be necessary to maintain safe, acceptable traffic conditions, as well as determine what portion of the cost of these projects should be carried by the new developments. The RIM Fee Capital projects on local and County roadways (listed in Table 22) are consistent with those listed in the *Road Impact Mitigation Fee Nexus Study* and will be implemented when adequate funding is available from both the RIM fee program and other state funding sources. Total costs for all improvements equal roughly $91.8 million dollars when adjusted for inflation. Approximately $84.6 million dollars will be required for improvements on local roads of regional significance and $7.3 million dollars will be necessary for County road improvements. Developer fees will only pay for approximately 24 percent of total improvement costs for state highway, County and local road projects. Please note that state highway RIM projects were incorporated into Table 21.

*Local Road Projects*

Table 23 presents County road projects primarily funded by local funding sources. Several of these projects consist of upgrading local roadways to County minimum standards and two projects will use Federal safety funds for safety roadway and intersection improvements. Total estimated cost of these projects is $52 million dollars.

*County Bridge Projects*

Two Highway Bridge Program (HBP) replacement projects are included in Calaveras County's transportation improvements. As shown in Table 24, total cost of these projects will be over $11.4 million dollars. Bridges that are identified by Caltrans as "structurally deficient" (SD) or "functionally obsolete" (FO) and have a sufficiency rating of less than or equal to 80 are considered deficient by FHWA and are eligible for HBP funding. 20 County bridges, in addition to the bridges listed in Table 24, fit into this category:

- Cosgrove Creek – 30C0013, 30C0021
- Mokelumne River – 30C0016, 30F003
- Youngs Creek – 30C0018
- Cosgrove Creek – 30C0020
- Calaveritas Creek – 30C0024, 30F004
- O'Neil Creek – 30C0040
- Esperanza Creek – 30C0044

- French Gulch – 30C0048
- San Domingo Creek – 30C0049, 30C0054
- Indian Creek – 30C0050, 30C0051
- San Antonio Creek – 30C0055, 30C0063, 30F001
- Jesus Maria Creek – 30C0062
- Forest Creek – 30C0084

These bridges should be reviewed for possible rehabilitation or replacement projects for the next RTP update.

*Copperopolis Benefit Basin*

The formation of a benefit basin provides the means by which the cost of road improvements necessitated by development may be spread fairly on the basis of projected trips generated by each new development. The Copperopolis Benefit Basin was formed as part of mitigation measures for the Saddle Creek development. According to the Calaveras County Travel Demand Model, total daily one-way vehicle-trips within the Copperopolis region are expected to increase by over 26,000 from 2002 to 2025. In order to reduce congestion caused by the new trip ends, a new roadway will be required to connect the southern end of Little John Road (south of the Copper Cove Subdivision) to SR 4 through Tugg Way and Horseshoe Drive. This "North South Connector" would be roughly 5.5 miles in length and would be designated a major collector. With construction of this roadway, secondary access could be provided for the residential communities of Oak Canyon Ranch, Tuscany Hills, and Copper Cove Drive. Table 25 lists the North South Connector as well as other roadway and intersection improvements needed to address the traffic impacts of new development in the Copperopolis region. Total costs of the Copperopolis Benefit Basin Capital Improvement Plan are $89.3 million dollars.

The boundary of the Benefit Basin includes only those properties reasonably served by Benefit Basin improvement projects. Only undeveloped parcels within the boundary of the Benefit Basin are subject to the basin fee. The fee is based on the number of vehicle trip-ends generated by the new development. Additional state and federal funding will be required to complete the projects listed in Table 25.

*Valley Springs Benefit Basin*

The Valley Springs area is another hot spot for new development. The Valley Springs Benefit Basin was established to offset the cost of public roadway improvements necessary to partially mitigate traffic impacts associated with new development. All new development projects within this area are subject to the basin fee. Table 25 displays capital projects associated with new development in the Valley Springs area. At the time of this writing, the Valley Springs capital improvement projects list had not been finalized. Projects listed in Table 25 represent projects identified in a 2004 Calaveras County Department of Public Works Memorandum. Valley Springs Benefit Basin projects are estimated to cost $21.0 million dollars.

*City of Angels*

Table 26 displays roadway and bridge improvement projects for the City of Angels. This list of projects is divided into short- and long-term priorities. Total estimated cost of the City of Angels transportation improvement projects is $48.5 million dollars. Short-term capital improvement program projects total $19.4 million dollars and long-term capital improvement priority projects total $29.0 million dollars. City of Angels projects in Table 26 are linked to RTP goals.

***Table 26: City of Angels Transportation System Improvement Projects***

*This list is in alphabetical order and is not in order of priority. Projects will be implemented as funding becomes available.*

| Specific Location | Proposed Project Description | Total Cost (1,000s) 2006 Dollars | Total Cost Adjusted for Inflation (1) | Primary Funding Source | Corresponding Goal(s) |
|---|---|---|---|---|---|
| **Short-Range Capital Improvement Program (0-10 years)** | | | | | |
| Booster Way | From SR 4 to Booster Way Bridge - widen, realign and reconstruct 300 ft. section | $ 391 | $ 458 | HES/Local | 7,8 |
| Citywide | Street rehabilitation (deferred maintenance) | $ 941 | $ 1,104 | Local | 7,8 |
| Dogtown Road | Realignment | $ 1,367 | $ 1,602 | Local | 7,8 |
| Finnegan Lane | Construct 60 ft of retaining wall | $ 111 | $ 130 | HES/Local | 7,8 |
| Gardner Lane north of Murphys Grade Road | Construct 1,500 ft of curb, gutter, sidewalk, storm drain and widen | $ 480 | $ 563 | HES/Local | 7,8 |
| Rolleri Bypass Road, Murphys Grade Road | Realign intersection relocate PG&E driveway, install 450 ft. of drain, and resurface | $ 260 | $ 305 | HES/Local | 7,8 |
| Sonora Street | From Martina St. to 300 feet north - construct 275 ft. of retaining wall and install 300 feet of guardrail | $ 466 | $ 546 | HES/Local | 7,8 |
| SR 4 Bypass/SR 4 | Intersection improvement that provides for grade separation instead of T | $ 408 | $ 478 | RIP/Local | 7,8 |
| SR 4/SR 49 South Intersection | Reconstruct Bridge | $ 11,240 | $ 13,175 | Local | 7,8 |
| Various Location | Install traffic signals at major intersections | $ 923 | $ 1,082 | Local | 7,8 |
| | *Subtotal* | *$ 16,588* | *$ 19,444* | | |
| **Long-Range Capital Improvement Program (11-20 years)** | | | | | |
| Angel Oaks Drive to SR 49 | Angel Oaks Drive extension north | $ 5,926 | $ 8,142 | Local | 7,8 |
| Bennett Street | Extend Bennett Street through to the North as development necessitates | $ 521 | $ 716 | Local | 7,8 |
| Gold Cliff to Greenhorn Creek Road | New roadway | $ 585 | $ 804 | Local | 7,8 |
| Greenhorn Creek Road to SR 49 | Greenhorn Creek Rd. extension south | $ 9,726 | $ 13,362 | Local | 7,8 |
| Kurt Drive | Extend Kurt Drive to Murphys Grade Road | $ 2,656 | $ 3,649 | Local | 7,8 |
| SR 4 to Angel Oaks Drive Extension North | Foundry Road North Extension | $ 1,292 | $ 1,775 | Local | 7,8 |
| SR 49/ Murphys Grade Road | Reconstruct intersection | $ 462 | $ 635 | HES/Local | 1,7,8 |
| | *Subtotal* | *$ 21,169* | *$ 29,084* | | |
| | **Total Estimated Cost** | **$ 37,757** | **$ 48,528** | | |

Note 1: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1995 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

Source: City of Angels.

## *Countywide Traffic Circulation*

CCOG is in the process of developing a Calaveras Countywide Traffic Circulation Study to guide the improvement of roadway facilities in the County. This study is intended primarily to address deficiencies in the roadway network, improve fire access throughout the County, and improve pedestrian and bicycle facilities. While circulation elements of the County's major communities have been completed, to date there has not been a detailed evaluation of circulation issues in the remainder of the County. At the time of this writing, a Draft Circulation Plan had not been developed; however Working Paper Three of this study identifies several major roadway improvement projects which were not currently included in the RTP priority project lists. As the Circulation Study is not complete, the supplemental projects listed below are suggestions and will be included in the next RTP update if the Circulation Study is adopted.

- Central County Connector Route – A key finding of the circulation study was that the most crucial existing deficiency in Calaveras County with regard to inter-community travel is the lack of a high quality public road connection for San Andreas on the west with the Arnold/ Avery area on the east. The analysis of out-of-direction travel indicates that a high-standard roadway between the two areas would eliminate a substantial amount of existing out-of-direction travel between the Arnold/Avery area and San Andreas/Points west. Accordingly, an important recommendation of this study is to develop a "Central County Connector Route" using the existing roads of Mountain Ranch Road from SR 49 east to Sheep Ranch Road, Sheep Ranch Road in Mountain Ranch south to Avery/Sheep Ranch Road, and

Avery/Sheep Ranch Road east from Sheep Ranch Road to SR 4 in Avery. While improvements to these roadway segments are already included in the County Regional Impact Fee program, particular emphasis should be placed on developing these improvements as a cohesive corridor.

- Valley Springs Area Western Connector – A combination of upgrades to existing roads, as well as new roadway segments, is recommended to provide a "western connector" roadway in the growing Valley Springs area. The upgrades will include a corridor stretching from SR 26 near Rancho Calaveras to the Wallace/Burson area via Olive Orchard Road and Pettinger Road, as well as a mile-long section of new alignment. This improvement will help address the growth in traffic in the Valley Springs area, which is forecast to increase traffic volumes in the area by over 100 percent in the next 20 years.

- Additional Improvements Along the SR 4 Corridor - Passing improvements between Angels Camp and Murphys totaling 6 miles of passing lanes. Passing/climbing lanes totaling 4.4 miles between Murphys and Arnold.

- SR 49 between SR 26 and Amador County Line – Provision of two additional passing/climbing lanes in each direction.

In an effort to improve circulation and safety in the community of San Andreas, the Citizens for San Andreas have drafted a *Suggested Alternative Alignment – Government Center to Highway 49, July 27, 2007*. This document is currently being reviewed by CCOG and the County.

*Other Potential Roadway Improvement Projects*

It was noted in the *2025 Intersection Level of Service* section that Caltrans forecasts poor level of service (LOS) at the SR 4 /SR 49 northern intersection five years after the Angels Camp Bypass opens, unless substantial improvements are made to the intersection. In contrast, LOS analysis performed using volumes generated from the Calaveras Transportation Demand Model forecasts LOS B at this intersection in 2025 with the existing lane configuration (one through lane in each direction of travel). The addition of one through lane in each direction to the SR 4 /SR 49 northern intersection is proposed in this RTP as a potential future roadway project. The STIP "Unconstrained" Roundabout with Dogtown Road and the SR 4 Angels Camp Bypass project in Table 21 has also been proposed as a solution to the LOS problem at the SR 4/SR 49 northern intersection.

## Aviation

The Calaveras County airport (Maury Rasmussen Field) currently has a Basic Utility Stage II runway of approximately 3,600 feet in length. If the County wishes to lengthen the runway to greater than 4,000 feet to accommodate larger aircraft, it would place Maury Rasmussen Field in a different airport class level. In this case, the Federal Aviation Administration (FAA) would require additional modifications to the airport such as a wider runway, more space between the runway and the taxiway as well as a wider taxiway. As the airport is located on a ridge and surrounded by private property, airport staff have found it difficult, if not impossible, to acquire the additional land needed to widen the runway.

The Capital Improvement Plan for the Maury Rasmussen Field airport (Table 27) includes improvement projects that lengthen the runway to its maximum of 4,000 feet, add hangar space,

and maintain and improve existing taxiways and ramps. Estimated airport capital improvement costs total $3.1 million dollars over the next 20 years. Except for re-sealing and paving of ramp and parking areas, all projects are short-term priority.

***Table 27: Calaveras County Aviation Capital Improvement Plan Projects (Maury Rasmussen Field), 20 Year Vision***

| Proposed Project Description | Project Priority Period [1] Short Term | Long Term | Total Cost (1000s) *2006 Dollars* | Total Cost Adjusted for Inflation [2] | Primary Funding Source | Corresponding Goal(s) |
|---|---|---|---|---|---|---|
| Install above ground 12,000 gallon aviation fuel tank. | x | | $ 75 | $ 88 | County | 10 |
| Construct 0.6 mile access road to north ramp | x | | $ 316 | $ 370 | FAA | 10 |
| Rehabilitate apron and construct ramp | x | | $ 615 | $ 615 | FAA | 10 |
| Security Fencing - Lower access road to north ramp | x | | $ 20 | $ 21 | FAA | 10 |
| Construct 22 unit t-hangar | x | | $ 510 | $ 598 | County/State loan | 10 |
| Airport Land Use Compatibility Plan | x | | $ 50 | $ 50 | FAA | 10 |
| Remodel administrative building to comply with ADA requirements (built in 1981) | x | | $ 150 | $ 160 | FAA | 10 |
| Extend runway and taxiway 400 ft. and resurface existing runway and taxiway | x | | $ 612 | $ 717 | FAA | 10 |
| Slurry seal ramp and parking areas | | x | $ 357 | $ 490 | FAA | 10 |
| **Total Estimated Costs** | | | **$ 2,705** | **$ 3,110** | | |

Note 1: Short Term 2006-2015; Long Term 2016-2026.

Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

Source: Calaveras County Airport.

## Public Transit

The Calaveras County Department of Public Works identified transit improvement needs, as shown in Table 28. Short-term projects total $7.0 million dollars with $4.3 in long-term projects identified. Planned improvements include transfer facilities in the Angels Camp area, vehicle replacement program and a Countywide bus shelter program. Implementing the intermodal transfer facility in Angels Camp would also increase opportunities for non-motorized transportation.

## Non-Motorized Facilities (Bikeway and Pedestrian)

The current bikeway and pedestrian system in Calaveras County does not provide a continuous network of facilities, which would encourage the use of alternative transportation modes. As Calaveras County's population is expected to grow at around 2.5 percent per year and tourism is not expected to decline, the need for wider bicycle-friendly shoulders and safe pedestrian highway crossings will increase. In 2007, CCOG prepared a *Draft Calaveras County Bicycle*

*Master Plan Update* and a *Draft Calaveras County Pedestrian Master Plan.* Tables 29 to 33 list proposed Calaveras County non-motorized facility improvement projects and conceptual construction costs. Appendix F displays a map of existing and proposed bicycle facilities in the Draft Master Plan as well as proposed intersection improvements designed to encourage pedestrian use.

***Table 28: Calaveras Transit Improvement Projects 20-Year Vision***

| Proposed Project | Location | Project Priority Period | | Total Cost (1000s) *2006 Dollars* | Total Cost Adjusted for Inflation [2] | Corresponding Goal(s) |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | | |
| Transfer Facility - Angels Camp Phase 1 | Save Mart Shopping Center, Angels Camp | x | | $3 | $4 | 9 |
| Transfer Facility - Angels Camp Phase 2 | Save Mart Shopping Center, Angels Camp | x | | $15 | $18 | 9 |
| Angels Bypass Intermodal Transit Facility | Angels Bypass SR 4 at Old SR 4 | x | | $3,060 | $3,587 | 9 |
| Countywide Transit Bench and Shelter Program | San Andreas - Post Office,<br>San Andreas - Treats Market,<br>San Andreas - Government Center,<br>Valley Springs - Valley Oak Center,<br>Mokelumne Hill - Sierra Trading Post,<br>Angels Camp - Frog Jump Plaza,<br>Murphys - Pharmacy,<br>Murphys - Scott Street<br>Murphys - Taylor | x | | $204 | $239 | 9 |
| Transit Vehicle Replacement | 19 buses to be replaced over the short-term (2015) | x | | $2,746 | $3,218 | 9 |
| Transit Vehicle Replacement | 22 buses to be replaced over the long-term. Approximately 2 buses per year. | | x | $3,179 | $4,368 | 9 |
| | **Total Estimated Cost** | | | **$9,207** | **$11,433** | |

Note: Projects are listed in order of projected project start date; however projects will be implemented as funding becomes available. Short Term 2006-2015; Long Term 2016-2026.

Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

Source: Calaveras County Department of Public Works.

## Bicycle Improvement Projects

Because of the expense involved with construction of bicycle pathways and bike lanes, prioritization, phasing and alternate funding strategies are critical to eventual implementation of bicycle projects. Bicycle projects are assigned A, B, and C priorities. These priorities are based on a number of factors including Bicycle Master Plan Steering Committee input, public input, and an analysis of the number of users served, connectivity needs based on existing conditions, and the feasibility and availability of funding through various sources. Generally, bicycle projects that can be folded into an upcoming roadway improvement project or planned development project will be implemented first. All other bicycle projects will be constructed as funding becomes available, as Bicycle Transportation Account funding is extremely competitive. Priority B and C projects listed in Tables 29 to 32 are considered financially unconstrained.

Table 29 presents Class I bikeways proposed in Calaveras County. Total estimated cost of these projects (adjusted for inflation) is $9.6 million dollars. Total estimated cost of Class II bikeway projects is $403,000 (Table 30). Class III bike routes are divided in to two categories: rural road improvement projects (Table 31) and signage only projects (Table 32). Rural road

## *Table 29: Proposed Calaveras County Class I Bikeways*

| Segment Name | From | To | Community | Length (Feet) | Length (Miles) | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [(1)] | Priority |
|---|---|---|---|---|---|---|---|---|
| Sidepath Along SR 4 | Blagen Road | Country Club Drive | Arnold | 6,434 | 1.2 | $770 | $902 | A |
| Copper Cove Drive Pathway | Black Creek Drive | O'Byrnes Ferry Road | Copperopolis | 4,752 | 0.9 | $557 | $653 | A |
| Multi-Use Pathway | Steeplechase Road | O'Byrnes Ferry Road | Copperopolis | 2,907 | 0.6 | $949 | $1,112 | A |
| Cosgrove Corridor | Hogan Dam Road | South Petersburg Road | Valley Springs | 18,105 | 3.4 | $2,181 | $2,556 | A |
| Cosgrove SR 26 Spur | South Petersburg Road | Silver Springs Rapid Road | Valley Springs | 7,267 | 1.4 | $898 | $1,052 | A |
| Multi-Use Pathway | Henry Street | Vallecito Day School | Arnold | 2,928 | 0.6 | $385 | $529 | B |
| O'Byrnes Ferry Road Pathway | Copper Cove Drive | Spangler Lane | Copperopolis | 1,107 | 0.2 | $128 | $176 | B |
| Ironstone Pathway | Main Street | Ironstone Vineyards | Murphys | 7,803 | 1.5 | $962 | $1,322 | B |
| SA Creek-Elm Sch Pthwy | Gold Hunter Road | East End Existing Pathway | San Andreas | 325 | 0.1 | $64 | $88 | B |
| SA Creek-Elm Sch Pthwy | Lewis Avenue | Pope Street | San Andreas | 1,605 | 0.3 | $192 | $264 | B |
| SA Creek-Elm Sch Pthwy | Pope Street | Govt Center Road | San Andreas | 1,130 | 0.2 | $128 | $176 | B |
| SA Creek-Elm Sch Pthwy | Pope Street | California | San Andreas | 2,123 | 0.4 | $257 | $352 | B |
| Multi-Use Pathway | Green Meadow Court | Cedar Lane | Arnold | 1,803 | 0.3 | $192 | $264 | C |
| Multi-Use Pathway | Willow Street | Oak Circle | Arnold | 610 | 0.1 | $64 | $88 | C |
| Multi-Use Pathway | Oak Court | Pine Drive | Arnold | 630 | 0.1 | $64 | $88 | C |
| | | | **Total Proposed Class I** | **59,529** | **11.3** | **$7,791** | **$9,624** | |

Note 1: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Priority A project costs were increased to reflect 5 years of inflation and Priority B and C project costs were increased to reflect 10 years of inflation.

*Source: Calaveras County Bicycle Master Plan, July 2007.*

## *Table 30: Proposed Calaveras County Class II Bikeways*

| Segment Name | From | To | Community | Length (Feet) | Length (Miles) | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [1] | Priority |
|---|---|---|---|---|---|---|---|---|
| Main St. SR 49 | SR 4 | SR 4 | Angels Camp | 12,618 | 2.4 | $114 | $133.91 | A |
| Little John Road | Kiva Drive | Reeds Turnpike Road | Copperopolis | 28,090 | 5.32 | $93 | $109.48 | A |
| SR 4 | Pennsylvania Gulch Road | Tom Bell Road | Murphys | 1,901 | 0.4 | $7 | $8.21 | A |
| SR 49 | Pool Station Road | Mountain Ranch Road | San Andreas | 7,145 | 1.4 | $25 | $28.83 | A |
| SR 12 | Lime Creek Road | Pine Street | Valley Springs | 3,257 | 0.6 | $11 | $14.43 | A |
| SR 26/104 | Snead Road | Railroad Flat Road | West Point | 10,040 | 1.9 | $33 | $45.75 | A |
| SR 26 | SR 12 | Hogan Dam Road | Valley Springs | 2,517 | 0.5 | $9 | $11.95 | B |
| Main Street | SR 26/104 | Pine Street | West Point | 1,803 | 0.3 | $5 | $7.14 | B |
| Stanislaus Ave | San Joaquin | Gold Cliff | Angels Camp | 1,145 | 0.2 | $10 | $13.08 | C |
| Reeds Turnpike Road | Little John Road | O'Byrnes Ferry Road | Copperopolis | 6,653 | 1.26 | $22 | $30.36 | C |
| | | | **Total Proposed Class II** | **75,169** | **14.28** | **$329** | **$403** | |

Note 1: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Priority A project costs were increased to reflect 5 years of inflation and Priority B and C project costs were increased to reflect 10 years of inflation.

*Source: Calaveras County Bicycle Master Plan, July 2007.*

## *Table 31: Proposed Calaveras County Class III Bikeways - Rural Road Improvements*

| Segment Name | From | To | Community | Length (Miles) | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [1] | Priority | Improvement Required |
|---|---|---|---|---|---|---|---|---|
| Glory Hole Road | SR 49 | Campground | A.C../ By Frogtown | 2.12 | $216 | $253 | A | MODERATE |
| SR 4 | Rolleri Bypass Road | Murphy's Grade Road | A.C./ Murphys | 7.22 | $1,334 | $1,563 | A | MODERATE |
| SR 49 | Glory Hole Road | City Limits | Angels Camp | 0.98 | $156 | $183 | A | MAJOR |
| SR 26 | Garner Pl. | Baldwin Road | Jenny Lind | 3.38 | $345 | $404 | A | MODERATE |
| SR 26 | Baldwin Road | SR 12 | Valley Springs | 4.6 | $469 | $550 | A | MODERATE |
| Murphy's Grade Rd | City Limits | Main Street (Murphys) | A.C../Murphys | 6.27 | $1,961 | $2,695 | B | MAJOR |
| Murphy's Grade Road | SR 49 | City Limits | Angels Camp | 0.32 | $51 | $70 | B | MAJOR |
| Copper Cove Drive | Little John Road | Black Creek Drive | Copperopolis | 1.65 | $263 | $362 | B | MAJOR |
| O'Byrnes Ferry Road | Copper Cove Drive | SR 4 | Copperopolis | 3.87 | $1,212 | $1,666 | B | MAJOR |
| SR 26 | Jenny Lind Road | Garner Pl. | Jenny Lind | 0.56 | $58 | $79 | B | MODERATE |
| SR 4 | Murphy's Grade Road | Blagen Road | Pines | 12.07 | $3,775 | $5,187 | B | MAJOR |
| SR 49 | Pool Station Road | San Andreas | San Andreas | 3.7 | $684 | $939 | B | MODERATE |
| SR 49 | Pool Station Road | SR 26 | San Andreas | 7.26 | $1,341 | $1,842 | B | MODERATE |
| SR 12 | Burson Rd | SR 26 | Valley Springs | 3.66 | $583 | $801 | B | MAJOR |
| SR 4 | Pool Station Road | City Limits | Angels Camp | 5.69 | $1,780 | $2,445 | C | MAJOR |
| SR 4 | O'Byrnes Ferry Road | Salt Spring Valley Road | Copperopolis | 3.99 | $1,249 | $1,715 | C | MAJOR |
| SR 4 | Salt Spring Valley Road | Pool Station Road | Copperopolis | 0.86 | $269 | $370 | C | MAJOR |
| Dogtown Road | City Limits | San Domingo Road | Dogtown | 5.3 | $1,657 | $2,276 | C | MAJOR |
| Jesus Maria Road | SR 26 | Rail Road Flat Road | M Hill/ Mountain Ranch | 5.96 | $1,864 | $2,561 | C | MAJOR |
| Dogtown Road | San Domingo Road | Calaveritas Road | Murphys/Dogtown | 5.25 | $1,644 | $2,259 | C | MAJOR |
| SR 49 | San Andreas | Angels Camp | San Andreas | 9.29 | $2,908 | $3,995 | C | MAJOR |
| Calaveritas Road | San Andreas | Dogtown | San Andreas/Dogtown | 0.88 | $274 | $376 | C | MAJOR |
| SR 12 | Valley Springs | SR 49 | Valley Springs | 7.9 | $14 | $20 | C | MAJOR |
| | | **Total Rural Road Improvement Projects** | | **102.78** | **$24,107** | **$32,613** | | |

Note 1: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Priority A project costs were increased to reflect 5 years of inflation and Priority B and C project costs were increased to reflect 10 years of inflation.

*Source: Calaveras County Bicycle Master Plan, July 2007.*

## *Table 32: Proposed Calaveras County Class III Bikeways - Signage Only Projects*

| Segment Name | From | To | Community | Length (Miles) | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [1] | Priority |
|---|---|---|---|---|---|---|---|
| Avery Hotel Road | SR 4 | Moran Road | Arnold | 0.13 | $0.2 | $0.2 | A |
| Cedar Lane | Pine Drive | SR 4 | Arnold | 0.25 | $0.4 | $0.5 | A |
| Fir Street | Willow Street | Dunbar Road | Arnold | 0.15 | $0.2 | $0.2 | A |
| Lakemont Drive | Lakewood Drive | End | Arnold | 1.05 | $2 | $2.1 | A |
| Sequoia Street/Stagg Drive | Willow Street | Manual Road | Arnold | 0.17 | $0.3 | $0.4 | A |
| Black Creek Drive | Copper Cove Drive | High School | Copperopolis | 0.23 | $6 | $7 | A |
| O'Byrnes Ferry Road | Copper Cove Drive | SR 4 | Copperopolis | 3.87 | $7 | $8 | A |
| SR 4 | O'Byrnes Ferry Road | Salt Spring Valley Road | Copperopolis | 3.99 | $7 | $8 | A |
| Main Street (Murphy's) | Murphy's Grade Road | SR 4 | Murphys | 0.5 | $1 | $1 | A |
| Scott Street | Six Mile Road | Main Street (Murphys) | Murphys | 0.5 | $1 | $1 | A |
| Rolleri Bypass Road | SR 4 | City Limits | Angels Camp | 0.66 | $1 | $2 | B |
| SR 4 | Pool Station Road | City Limits | Angels Camp | 5.69 | $10 | $14 | B |
| Dunbar Road | Hazel Fisher | Fir Street | Arnold | 0.61 | $1 | $1 | B |
| Pine Drive | Henry Street Connector | Lakewood Drive | Arnold | 1.27 | $2 | $3 | B |
| SR 4 | Blagen Road | Dorrington | Arnold | 5.57 | $10 | $14 | B |
| Copper Cove Drive | Little John Road | Copper Crest Drive | Copperopolis | 2.39 | $65 | $89 | B |
| Little John Road | SR 4 | Copper Cove Drive | Copperopolis | 5.77 | $156 | $215 | B |
| O'Byrnes Ferry Road | Tulloch Res. | Copper Cove Drive | Copperopolis | 4.06 | $7 | $10 | B |
| SR 4 | Salt Spring Valley Road | Pool Station Road | Copperopolis | 0.86 | $2 | $2 | B |
| Six Mile Road | Algiers St | Vallecito Bluffs Road | Murphys | 2 | $4 | $5 | B |
| Skunk Ranch Road | Pennsylvania Gulch | Vineyard Terrace | Murphys | 0.4 | $1 | $1 | B |
| SR 49 | New Melones Res. | Glory Hole Road | Angels Camp | 4.1 | $111 | $153 | C |
| Whittle Road | SR 49 | County Line | Angels Camp | 0.46 | $13 | $17 | C |
| Dunbar Road | Henry Street Connector | Linebaugh Road | Arnold | 0.07 | $0.1 | $0.1 | C |
| Henry Street | Henry Street Connector | SR 4 | Arnold | 0.06 | $0.1 | $0.1 | C |
| Rock Creek Road | SR 4 | Salt Spring Valley Road | Copperopolis | 5.96 | $11 | $15 | C |
| Salt Springs Valley Road | Rock Creek Road | SR 4 | Copperopolis | 5.76 | $10 | $14 | C |
| SR 4 | O'Byrnes Ferry Road | Stanislaus County | Copperopolis | 8.1 | $15 | $20 | C |
| Algiers Street | Main Street (Murphys) | Six Mile Road | Murphys | 0.5 | $1 | $1 | C |
| Pennsylvania Gulch Road | SR 4 | Skunk Ranch Road | Murphys | 1.21 | $2 | $3 | C |
| SR 49 | Pool Station Road | San Andreas | San Andreas | 3.7 | $7 | $9 | C |
| SR 12 | Valley Springs | SR 49 | Valley Springs | 7.9 | $14 | $20 | C |
| SR 26 | West Point | North County Line | West Point | 2.7 | $5 | $7 | C |
| | | | **Total Signage Only Projects** | **80.6** | **$472** | **$643** | |

Note 1: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Priority A project costs were increased to reflect 5 years of inflation and Priority B and C project costs were increased to reflect 10 years of inflation.

*Source: Calaveras County Bicycle Master Plan, July 2007.*

## *Table 33: Proposed Sidewalk Segments in Calaveras County*

| Segment Name | From | To | Community | Length (Feet) | Length (Miles) | Total CoStreet (1000s) 2006 Dollars | Total CoStreet AdjuStreeted for Inflation (1) | Priority |
|---|---|---|---|---|---|---|---|---|
| Hwy 4 Sidepath | Blagen Road | Country Club Drive | Arnold | 6,434 | 1.2 | $770 | $903 | A |
| Avenuery Hotel Road | Hwy 4 | Moran Road | Avenuery | 643 | 0.1 | $10 | $11 | A |
| Sanders Lane | Moran Road | Avenuery Middle School | Avenuery | 490 | 0.1 | $7 | $9 | A |
| Main Street-Angels | Dogtown Road | Hwy 4 | City of Angels | 11,492 | 2.2 | $172 | $202 | A |
| Copper Cove Dr Multi-Use Pathway | Black Creek Drive | O'Byrnes Ferry Road | Copperopolis | 4,729 | 0.9 | $57 | $67 | A |
| O'Byrnes Ferry Road Sidewalk | Spangler Lane | Cosmic Court | Copperopolis | 378 | 0.1 | $6 | $7 | A |
| Hwy 4 | Tom Bell | Michelson Elementary | Murphys | 1,890 | 0.4 | $28 | $33 | A |
| Main Street | Jones Street | Big Trees Market | Murphys | 705 | 0.1 | $11 | $12 | A |
| Hwy 49 | San Andreas | San Joaquin Avenue | San Andreas | 3,217 | 0.6 | $48 | $57 | A |
| Hwy 49 Sidewalk | San Andreas | San Joaquin Avenue | San Andreas | 3,217 | 0.6 | $482 | $565 | A |
| Cosgrove Corridor Pathway | Hogan Dam Road | South Petersburg Road | Valley Springs | 18,105 | 3.4 | $2,180 | $2,555 | A |
| Bald Mountain Road/Pine Street Sidewalk | West Street Point Elementary School | Main Street | WeStreet Point | 1,165 | 0.22 | $17 | $20 | A |
| Vallecito Pathway | Henry Street | Vallecito Day School | Arnold | 2,928 | 0.6 | $385 | $529 | B |
| Streetanislaus Avenuenue | Main Street | San Joaquin Avenue | City of Angels | 490 | 0.1 | $7 | $10 | B |
| O'Byrnes Ferry Road Multi-Use Pathway | Copper Cove Drive | Spangler Lane | Copperopolis | 1,107 | 0.2 | $128 | $176 | B |
| Big Trees Road | Jones Street | Hwy 4 | Murphys | 1,370 | 0.3 | $21 | $28 | B |
| Elementary School Multi-Use Pathway | Gold Hunter Road | East Street End Exit Streeting Pathway | San Andreas | 325 | 0.1 | $64 | $88 | B |
| Elementary School Multi-Use Pathway | Lewis Avenue | Pope Street | San Andreas | 1,605 | 0.3 | $192 | $264 | B |
| Elementary School Multi-Use Pathway | Pope Street | Government Center Road | San Andreas | 1,130 | 0.2 | $128 | $176 | B |
| Elementary School Multi-Use Pathway | Pope Street | California | San Andreas | 2,123 | 0.4 | $256 | $352 | B |
| High School Street | High School Street | Hwy 49 | San Andreas | 450 | 0.1 | $7 | $9 | B |
| Lewis Avenue | Gold Streetrike Road | Pope Street | San Andreas | 2,378 | 0.5 | $36 | $49 | B |
| Lewis Avenue | California | Gold Streetrike Road | San Andreas | 220 | 0.04 | $3 | $5 | B |
| Cosgrove Pathway Hwy 26 Spur | South Petersburg Road | Silver Springs Rapid Road | Valley Springs | 7,267 | 1.4 | $898 | $1,234 | B |
| Hwy 26 Sidewalks (both sides) | Hwy 12 | Shopping Centers | Valley Springs | 402 | 0.08 | $6 | $8 | B |
| Cowell Creek Pathway | Green Meadow Court | Cedar Lane | Arnold | 1,803 | 0.3 | $192 | $264 | C |
| Cowell Creek Pathway | Willow Street | Oak Circle | Arnold | 610 | 0.1 | $64 | $88 | C |
| Cowell Creek Pathway | Oak Court | Pine Drive | Arnold | 630 | 0.1 | $64 | $88 | C |
| IronStreetone Pathway | Main Street | Iron Streetone Vineyard Roads | Murphys | 7,803 | 1.5 | $962 | $1,322 | C |
| | | | **Total Proposed Sidewalks** | **85,106** | **16.24** | **$7,201** | **$9,129** | |

Note 1: An annual growth rate of 3.2% was applied to conStreetruction coStreets to account for inflation. The rate is based on the growth of the Engineering News RecoRoad's ConStreetruction CoStreet Index for San Francisco from December 1996 to December 2006. Priority A project coStreets were increased to reflect 5 years of inflation and Priority B and C project coStreets were increased to reflect 10 years of inflation.

*Source: CalAvenueras County PedeStreetrian MaStreeter Plan, July 2007.*

improvement bicycle projects may consist of signage, shoulder widening, re-striping, and turnouts. They are usually located on rural roads which have right-of-way opportunities for widening and connectivity between communities, and are also popular recreational routes. Signage only projects will not require capital improvements. Total cost of Class III rural road improvements bicycle projects is $32.6 million dollars, and Class III signage only costs are approximately $643 thousand dollars. These project lists may be amended as the update process is finalized.

The *Draft Calaveras County Bicycle Draft Master Plan* provides the estimated bicycle demand and benefits resulting from an increase in bicycle trips as a result of implementation of countywide bicycle projects. It is estimated that by improving non-motorized facilities, an additional 241 persons will commute via bicycle which will decrease future vehicle trips by 351 trips per weekday. The plan also estimates that the combined vehicle miles saved from current and future bicycle commuters could reduce $CO_2$ emissions by 455,488 kilograms per weekday.

Pedestrian Improvement Projects

The *Draft Calaveras County Pedestrian Master Plan* proposes 16.24 miles of new sidewalk segments to assist with safe, non-motorized circulation in the region (Table 33). These improvements will cost approximately $8.9 million. Appendix F identifies $457,900 in crosswalk and intersection improvements that will encourage pedestrian activity. Pedestrian projects were prioritized in the same manner as bicycle projects.

City of Angels Non-Motorized Facilities Projects

Table 34 presents the City of Angels Long-Range Bicycle and Pedestrian Capital Improvement Program 20-Year Vision. Projects range from restroom facilities to Class II bikeways. Total estimated costs of this program are $9.8 million.

Transportation Enhancement (TE) Projects

Table 35 presents Calaveras County Transportation Enhancement (TE) Projects over the next 20 years. Just over $1 million dollars in TE funds have been acquired for four of the projects and an additional $196,000 has been acquired from project applicants. It should be noted that these are “recommended” funding amounts and subject to change by CCOG. Table 34 also presents inflation adjusted costs for the short-term TE projects. An additional $211,000 in funding may be needed as construction costs rise over time.

**Intelligent Transportation Systems**

ITS is the integration of computerized, electronic, and communication technologies designed to reduce traffic congestion, improve traveler mobility, collect and disseminate real-time traveler information, reduce costs, and improve the operation and efficiency of the transportation network by integrating both technological components and management strategies to improve circulation. Implementation of ITS, with its emphasis on improving traveler mobility, has become a priority for the federal government and the U.S. Department of Transportation.

In California, Caltrans’ New Technology and Research Program has led an effort to develop Strategic Deployment Plans for a number of regions (combined counties) throughout the state.

### *Table 34: City of Angels Long-Range Bicycle and Pedestrian Capital Improvement Program 20-Year Vision*

*This list is not in order of priority. Projects will be implemented as funding becomes available.*

| Location | Project Description | Implementation Period [1] | | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [2] | Primary Funding Source |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | | |
| Altaville School | Construct 260 sq. ft. public restroom facilities and 5,000 sq ft. of landscaping | | X | $ 64 | $ 88 | Local |
| Finnegan Lane | Construct Angels Camp Bikeway at Angels Creek | | X | $ 265 | $ 364 | Local |
| Finnegan Lane | From Spreadboroughs south to future pump house widen roadway; construct rock wall for flood control, install two-way traffic and parking; construct foot bridge over creek and restore old Mill | | X | $ 565 | $ 776 | Local |
| Hardscrabble/Raspberry to SR 4/SR 49 North | Sidewalks | | X | $ 5,343 | $ 7,341 | Local |
| SR 4 - 21.42 | Construct Class II Bikeway from Tryon Park to Booster Way | | X | $ 151 | $ 207 | TE |
| SR 49 | Rehabilitate old rock walkway and upgrade existing walkway on SR 49 from Angels Creek to | | X | $ 528 | $ 725 | Local |
| SR 49 South | Construct 400 ft. long pedestrian way at southerly intersection | | X | $ 197 | $ 271 | TE |
| Tyron Park | Construct 260 sq. ft. public restroom facilities and 5,000 sq ft. of landscaping | | X | $ 64 | $ 88 | Local |
| | | **Total Estimated Costs** | | **$ 7,177** | **$ 9,861** | |

Note 1: Short Term 2006-2015; Long Term 2016-2026.

Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 2005 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

Source: City of Angels.

### *Table 35: Calaveras County Transportation Enhancement Projects 20-Year Vision*

*This list is not in order of priority. Projects will be implemented as funding becomes available.*

| Location | Proposed Project Description | Implementation Period [1] | | TE Funds | Matching Funds from Applicant | Total Cost (1000s) 2006 Dollars | Total Cost Adjusted for Inflation [2] | Primary Funding Source |
|---|---|---|---|---|---|---|---|---|
| | | Short-Term | Unconstrained | | | | | |
| City of Angels | New sidewalks on SR 49 at various locations | X | | $ 465 | $ 110 | $ 565 | $ 662 | TE |
| Mokelumne Hill Veterans District | Main Street sidewalk enhancement | X | | $ 176 | $ 24 | $ 200 | $ 234 | TE |
| Foothill Community Parks and Recreation (Valley Springs) | Cosgrove Creek Bicycle Path | X | | $ 300 | $ 50 | $ 350 | $ 410 | TE |
| Friends of Sierra Nevada Logging Museum | Shay Locomotive restoration | X | | $ 100 | $ 12 | $ 112 | $ 131 | TE |
| Cowell Creek | Pathways and on-street routes between Arnold and White Pines | | X | No TE funding at this time | | | | TE |
| Ebbetts Pass Rivers and Trails Alliance | Arnold Bicycle Trails | | X | No TE funding at this time | | | | TE |
| Save the Romaggi Adobe Association | Restoration of historic stage stop and home | | X | No TE funding at this time | | | | TE |
| Calaveras County Historical Society | New building to house transportation items | | X | No TE funding at this time | | | | TE |
| | | **Total Cost Estimates** | | **$ 1,041** | **$ 196** | **$ 1,227** | **$ 1,438** | |

Note 1: Short Term 2005-2015; Long Term 2016-2025.

Note 2: An annual growth rate of 3.2% was applied to construction costs to account for inflation. The rate is based on the growth of the Engineering News Record's Construction Cost Index for San Francisco from December 1996 to December 2006. Short-term project costs were increased to reflect 5 years of inflation and long-term project costs were increased to reflect 10 years of inflation.

Source: CCOG and City of Angels.

The Sierra Nevada Region includes the counties of Alpine, Amador, Calaveras, Tuolumne, Mariposa, Inyo, and Mono. In 2002, the seven counties developed the Sierra Nevada ITS Strategic Deployment Plan. Table 36 lists Calaveras County ITS projects found in this plan. They include implementation of speed detection and dynamic warning systems, enhanced wireless communication, traffic signal coordination, and road weather information systems.

***Table 36: Caltrans ITS Improvement Projects - Calaveras County***

| Location | Project Description |
|---|---|
| San Andreas and Angels Camp Areas[(1)] | Enhanced Wireless Communications Network/Infrastructure |
| San Andreas and Angels Camp Areas[(1)] | Traffic Signal Coordination/Pedestrian or Bicyclist Street Crossing Enhancements |
| SR 4, SR 12[(1)] | Road Weather Information Systems (RWIS) Applications |

Note 1: Exact locations will be determined by stakeholders at a later date.

Source: Booz Allen Hamilton, Sierra Nevada ITS Strategic Deployment Plan, June 2002.

## Transportation Demand Management

Transportation Demand Management (TDM) is a general term for strategies that result in more efficient use of transportation resources. TDM projects can vary from bikeway improvements to ridesharing. Encouraging alternative transportation modes and reducing vehicle use is an important goal for CCOG. As discussed in Chapter 2, U.S. Census Journey to Work data show that 15 percent of Calaveras County employed residents commute to San Joaquin County. This data confirms the need to maintain the existing rideshare program in Calaveras County. Foothill Commuter Services staff indicated that the program is gaining momentum and is funded for another year. In addition to maintaining the Foothill Rideshare website, Foothill Commuter Services intends to increase marketing efforts and work closely with staff from each of the three counties to increase awareness of the program. Another transportation demand management strategy that would reduce commute trips is encouraging telecommuting.

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# Chapter 5
# Financial Element

The Financial Element is fundamental to the development and implementation of the Regional Transportation Plan. The Financial Element identifies the current and anticipated revenue sources and financing techniques available to fund the planned transportation improvements and maintenance expenses identified in the Action Element. The intent of this chapter is to provide a realistic assessment of financing constraints and opportunities that will be used in planning for future transportation system improvements. This information is used by decision-makers to fund existing and future transportation infrastructure needs. The financial element is consistent with goal, objective and policy statements in Chapter 3.

It is important to note that there are different funding sources for different types of projects. The County is bound by strict rules in obtaining and using transportation funds. Some funding sources are "discretionary," meaning they can be used for general operations and maintenance not tied to a specific project or type of project. However, even discretionary funds must be used to directly benefit the transportation system for which they are collected. For example, funds derived from gasoline taxes can only be spent on roads, and taxes on aviation fuel must be spent on airports. State and federal grant funding is even more specific. There are several sources of grant funds each designated to a specific type of facility (e.g., bridges or state highways), and/or for a specific type of project (e.g., reconstruction or storm damage). This funding system makes it crucial for the County to pursue various funding sources for various projects simultaneously, and to have the flexibility to implement projects as funding becomes available.

The following is a summary of the federal, state, and local funding sources and programs available to Calaveras County for transportation system improvements.

## FEDERAL FUNDING SOURCES

### Federal Aviation Administration (FAA)

Airport Improvement Program (AIP) – The AIP provides funding of specific airport improvements and projects, and requires a 5 percent local match that is provided by the State AIP Match Program and results in a 0.25 percent total project local match.

### Federal Highway Administration (FHWA) Programs

The Transportation Equity Act for the 21st Century (TEA-21), administered by the Federal Highway Administration was enacted in June 1998. TEA-21 authorized federal surface transportation programs for highways, highway safety, and transit for the six-year period between 1998 and 2003. This Act provided greater flexibility for the state and local jurisdictions in deciding how federal dollars could be spent. TEA-21 expired September 30, 2003. On May 14, 2003, President Bush unveiled his reauthorization proposal entitled "Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003" (SAFETEA). The President authorized six extensions of the SAFETEA with the latest expiring May 31, 2005. On August 10, 2005, President Bush signed the Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU), providing $286.4 billion dollars in guaranteed funding for

federal surface transportation programs over six years through FY 2009, including $52.6 billion dollars for federal transit programs. A summary of key federal programs is provided below.

Surface Transportation Program (STP) – The STP is the most flexible of all federal-aid programs, allowing use for the widest array of transportation projects, including construction, reconstruction, resurfacing, restoration, rehabilitation, and operational improvements for highways and bridges (not classified as local or rural minor collectors), transit, safety improvements and hazard elimination, bicycle and pedestrian facilities, and parking. Projects that mitigate the environmental effects of transportation projects can also be funded. The authorization of SAFETEA-LU expanded STP eligibility to include advanced truck stop electrification systems, high accident/congestion intersections, environmental restoration and pollution abatement, control of noxious weeds, and establishment of native species. Funds are distributed among the states based on lane-miles of federal-aid highways, total vehicle-miles traveled on those highways, and estimated contributions to the State Highway Account (SHA).

Regional Surface Transportation Program (RSTP) – The RSTP program guarantees counties 110 percent of their allocation under the old Federal Aid Urban/Federal Aid Secondary (FAU/FAS) programs. These federal dollars can be exchanged for SHA funds via a process known as “RSTP Exchange,” and is advantageous to RTPAs as federal funds have more stringent requirements including a 20 percent local match, while state funds do not require any local match. The state also provides additional state funds to the County as a match to the exchanged federal dollars.

Transportation Enhancement (TE) – TE funds represent 10 percent of the statewide STP funds. Projects eligible for TE funding include acquisition of scenic easements, scenic or historic highway programs, landscaping, rehabilitation of historic transportation buildings, preservation of existing and abandoned railway corridors, pedestrian/bikeway improvements, the acquisition of abandoned right-of-way for conversion to pedestrian/ bicycle trails, and safety education activities for pedestrians and bicyclists. As of August 2003, TE funds are programmed through the State Transportation Improvement Program (STIP) and administered through the Caltrans Local Assistance Office.

Highway Bridge Program (HBP) – The HBP program provides funding for bridge replacement and rehabilitation of highway bridges and for seismic retrofitting of bridges located on any public road. The federal government allocates 88.5 percent of the funds and the remaining 11.5 percent must come from state and local sources. Under the enactment of SAFETEA-LU, the HBP was broadened in scope to include systematic preventative maintenance and freed from the requirement that bridges must be considered “significantly important.”

Federal Lands Highway Program (FLH) – The FLH program provides funding for roadway improvements and transit facilities to and within public lands, national parks, and Native American reservations. Additionally, this program funds improvements to federally-owned public roads providing access to or within a National Forest System. Under SAFETEA-LU new eligible uses include maintenance of Forest Highways.

Hazard Elimination Safety Program (HES) – This program provides funding for highway safety improvement projects on the federal-aid system, including rural minor collectors and local roads. Projects must be approved in the Federal Transportation Improvement Program. This program was discontinued in 2006 and replaced by the new Highway Safety Improvement Program (HSIP).

Highway Safety Improvement Program (HSIP) – The HSIP program authorizes a new core federal-aid funding program which began in FY 2006. The focus of this program is to achieve significant reductions in traffic fatalities and serious injuries on all public roads. Once railway-highway crossing and infrastructure safety needs are met, states with a Strategic Highway Safety Plan (SHSP) can use HSIP funds for additional safety programs such as education, enforcement, and emergency medical services. States with no SHSP are only eligible to use HSIP money for railway-highway crossing and hazard elimination projects that were in effect prior to the enactment of SAFETEA-LU. HSIP also includes state apportionments for construction and operational improvements on high-risk rural roads, which are defined as rural major or minor collectors or rural local roads with fatal and incapacitating injury crash rates above the statewide average or likely to experience an increase in traffic volume that leads to a crash rate in excess of the statewide average. Eligible HSIP projects that are relevant to safety issues in Calaveras County include widening or improving shoulder width, in-pavement lighted crosswalks, sight distance improvement, and new traffic signals. Projects with an accident history or a high potential for accidents receive priority.

Emergency Relief Program (ER) – ER funds are provided to assist local agencies with repairs to federal-aid highways that have been heavily damaged in federal- or state-declared natural disasters.

Emergency Relief for Federally-Owned Roads (ERFO) –These funds are provided to assist local agencies with repairs to Forest Highways (FH) that have been heavily damaged in federal- or state-declared natural disasters.

Congestion Mitigation and Air Quality Program (CMAQ) – CMAQ funds are available to those areas that are not in compliance with the federal ozone and carbon monoxide standards. Funds are allocated for transportation-related projects that help improve air quality. Calaveras County became eligible for CMAQ funds in FY 2005-2006. In FY 2007-2008 Calaveras County will receive approximately $415,000 in CMAQ funds.

Transportation Community and System Preservation Program (TCSPP) - $270 million dollars nationally over five years (2006-2011) is reserved for transit oriented development, traffic calming, and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services, and trade centers.

In addition, federal SAFETEA-LU funds are available for the National Scenic Byways Program, the Recreational Trails Program, for Bicycle Transportation and Pedestrian Walkways, the State and Community Highway Safety Grants program, and for transit operations and capital assistance.

Secure Rural Schools and Community Self-Determination Act (Federal Forest Reserve Program) (S1608/HR2389) – This Federal Forest Reserve Program was enacted in 2001 to restore the stability and predictability of annual funds to counties with National Forest system lands that were impacted by reductions in timber receipts due to changes in legislation. The funds were distributed in the following apportionments: 40-42.5 percent toward roads, 40-42.5 percent toward schools and 15-20 percent for community, forests and the US Treasury.

This program expired at the end of 2006, amid controversy regarding the sale of public lands to continue funding for the program. As of this writing, the re-authorization or replacement of the program is uncertain.

**Federal Transit Administration (FTA) Programs**

The FTA provides the following funding sources for transit capital and operational expenses in rural counties.

FTA Section 5309 Capital Program Grants – These grants are split into three categories: New Starts, Fixed Guideway Modernization, and Bus, and Bus Facilities. Typically, an intensive lobbying effort is necessary to receive a Section 5309 earmark. The "Small Starts" component of the New Starts program, which provides funding and oversight for projects seeking less than $75 million dollars in New Starts funds, is authorized for separate funding beginning in FY 2007 under SAFETEA-LU.

FTA Section 5310 Capital for Elderly and Disabled Transportation – Under this program, funds are available to assist nonprofit organizations and local government jurisdictions in the purchase of vehicles and related equipment to provide transportation services that meet the special needs of persons that are elderly or disabled. This funding source is apportioned by a formula based on the number of elderly and disabled persons in each state as identified by U.S. Census data. Under SAFETEA-LU, projects funded through Section 5310 must be included in a "Coordinated Human Services Transportation Plan."

FTA Section 5311 Public Transportation for Rural Areas – Federal transit funding for rural areas is currently provided through the Public Transportation for Rural Areas program for non-urbanized areas. A 20 percent local match is required for capital programs and a 50 percent match for operating expenditures. These funds are segmented into "apportioned" and "discretionary" programs. The bulk of the funds are apportioned directly to rural counties based on population levels.

FTA Section 5316 Job Access and Reverse Commute Program – The list of eligible applicants for this program, funded through SAFETEA-LU, includes states, metropolitan planning organizations, and public transit agencies among others. Although the program has an emphasis on using funds to provide transportation in rural areas currently having little or no transit service, it is not limited to such areas. A 50 percent non-DOT match is required; however, other (non-DOT) federal funds may be used as part of the match. FTA gives high priority to applications that address the transportation needs of areas that are not served or under served by public transportation. As of FY 2006, the Job Access and Reverse Commute (JARC) program has been administered as a formula program. Under SAFETEA-LU, projects funded through JARC must be included in a "Coordinated Human Services Transportation Plan."

FTA Section 5317 – New Freedom Program – This new program under SAFETEA-LU provides formula funding for expanded public transportation services beyond those required by the ADA for persons with disabilities. The idea behind the program is to help communities provide transportation services beyond those required by the ADA and to help people with disabilities participate more fully in the workforce and in community life. It is apportioned to the individual states based upon the disabled population, and only 20 percent is available to non-urbanized areas. At this time regulations and guidelines have not been set for this program. The "Coordinated Human Services Transportation Plan" requirement is also attached to this funding source.

Rural Transit Assistance Program (RTAP) – As part of the FTA Section 5311 grant program, RTAP provides funding for technical and training materials, management workshops, peer

networking, and scholarship assistance. The California Association for Coordinated Transportation, Inc. (CalACT) administers the RTAP program.

## STATE FUNDING SOURCES

### Aviation

State of California Aid to Airports Program (CAAP) – The CAAP makes grant funds available for airport development and operations. Three types of state financial aid to publicly-owned airports are available through the CAAP:

- *Annual grants* for up to $10,000 per airport per year. These funds can be used to match federal programs, but not state programs.

- *Acquisition Development Grants* provide funds for up to 90 percent of the cost of qualified airport developments on a matching basis, to the extent that state funds are available.

- *Airport Improvement Program (AIP) Matching Grants* provide 5 percent of the federal grants made to local agencies for funding of specific airport improvements and projects. The resultant local match is one-quarter of 1 percent.

In addition, loans of 100 percent, under the *California Airport Loan Program,* are available for projects with self-amortizing improvements. This will be a continuing source of funds for hangar construction at airports.

State law requires that local governments provide the necessary local matching funds from non-federal sources for any CAAP funds. These matching funds will be provided by the Airport Enterprise Fund. Grants are allocated based on a complex project rating methodology used by the state, with a similar methodology used for the AIP. The highest rated projects are those that relate to safety and standards.

Capital Improvement Program (CIP) – The Capital Improvement Program is a ten-year list of public-use airport projects divided into two five-year phases. Funds are allocated by the California Transportation Commission on a discretionary basis.

### Roadway

State Transportation Improvement Program (STIP) – Funding for this program is provided through state and federal fuel tax revenues administered through the State Highway Account. The STIP program constitutes the planned commitments of state and federal transportation dollars. Each RTPA receives a designated amount of funding in each two-year STIP cycle to use on eligible city and county roads in their jurisdiction. Projects are nominated by local RTPAs and submitted to their Caltrans district office where they are combined and sent to the California Transportation Commission for program approval. The federal portion of the STIP funding can only be used on major collectors, major and minor arterials, and state highways. However, "state-only" STIP funding can be used on local roads and minor collectors or as a match for other federal funding programs, such as HBP. The STIP consists of the following two discretionary fund programs:

The Regional Improvement Program (RIP), funded by 75 percent of the STIP, is available to Regional Transportation Planning Agencies (RTPAs). RIP funds are used for local capital

improvement projects including roads, public transit, pedestrian and bicycle facilities, intercity rail, grade separations, transportation system management, transportation demand management, sound walls, intermodal facilities, and safety.

- Caltrans oversees the Interregional Improvement Program (IIP), which is funded by 25 percent of the STIP. IIP projects focus on interregional highways that serve people and goods movement between regions.

State Highway Operations and Protection Program (SHOPP) – The purpose of the SHOPP program is to maintain the integrity of the state highway system. Funding for this program is provided through fuel tax revenues. Projects are nominated within each Caltrans district office and sent to Caltrans Headquarters for programming on a competitive basis statewide. Final project determinations are subject for review by the California Transportation Commission. Individual districts are not guaranteed any minimum level of funding. SHOPP projects are based on statewide priorities within each Caltrans district and program category (i.e., safety, rehabilitation, and operations). SHOPP funds cannot be used for capacity-enhancing projects, nor can they be used off the state highway system.

Minor Program – The Minor A Program is a Caltrans district-discretionary funding program based on annual statewide/district allocations. This program provides some level of discretion to Caltrans district offices in funding projects up to $1 million dollars. Minor B funds are used for projects up to $117,000. The advantage of the program is the streamlined nature of the funding process and the local nature of the decision-making. Funding is competitive within the funds allocated to a given Caltrans district.

Environment Enhancement and Mitigation (EEM) Program – Similar to TE, the EEM provides funding to remedy environmental impacts of new or improved transportation facilities. Mitigation can include highway landscapes and urban forestry or development of roadside recreational facilities such as rest stops, trails, scenic overlooks, trail heads, parks, and snow parks. While this grant program is managed by the State Resources Agency, the RTPA makes final funding decisions. The application process is competitive and is open to governmental and non-profit entities.

Traffic Congestion Relief Program/Proposition 42/AB 687 Tribal Casino Bonds – The Traffic Congestion Relief Act of 2000 (AB 2928) was to provide $6.8 billion dollars, derived from the state's sales tax on gasoline, to fund transportation projects chosen by the legislature over a six-year period. Since the Act's inception, funds have been borrowed back for the General Fund, and subsequent sales tax transfers have been postponed or suspended. In 2002, Proposition 42 was passed with a 69 percent affirmative vote. This proposition is a legislative constitutional amendment that permanently dedicates the revenues from sales tax on gasoline (an estimated $1.1 billion dollars annually) to transportation infrastructure needs. However, the protections of Proposition 42 were quickly set aside the first year (FY 2003-2004) they came into effect, and revenues were allocated to the General Fund. The passage of AB 687 (tribal casino bonds to repay loans) in 2004 dedicated $1.5 billion dollars in FY 2004-2005 to the repayment of transportation program loans to the General Fund. Essentially, AB 687 was a replacement to the suspended Proposition 42 transfer. However, due to a lawsuit filed in September 2004, no funds have been allocated as the bonds cannot be sold. Therefore, in recent years TCRP has been funded through the Governor's budget. In FY 2007-2008, it is anticipated that the TCRP program will be allotted $683 million dollars, with lesser amounts for following years, until TCRP projects are complete.

Proposition 1A - Proposition 1A was passed in the November 7, 2006, election. This legislation solidifies the stipulations of Proposition 42 by prohibiting state sales tax on motor vehicle fuels from being used for any purpose other than transportation improvements, authorizing loans of these funds only in the case of severe state fiscal hardship, requiring loans of revenues from state sales tax on motor vehicle fuels to be fully repaid within three years, and restricting loans to no more than twice in any 10-year period.

Proposition 1B - The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters as Proposition 1B on November 7, 2006, authorized nearly $20 billion dollars in general obligation bond proceeds to be available for a series of transportation programs. Calaveras County will receive funds through the Corridor Mobility Improvement Account, STIP Augmentation, and the Local Streets and Roads programs. Refer to Chapter 3 for a more in-depth discussion of Proposition 1B programs.

Air Quality Improvement Grants (AB 2766) – Assembly Bill 2766 established grants for projects that will assist in the attainment of the State PM10 Standard. Air Quality Improvement Grants are administered by the local Air Quality Improvement District. Pursuant to California Health and Safety Code 44220, *et seq*, the District has established a program to reduce PM10 air pollution from motor vehicles and for related planning, monitoring, enforcement, and technical studies necessary for the implementation of the California Clean Air Act of 1998. AB 2766 projects implementation of one or more of the transportation control measures or land use measures described in the District's PM10 Attainment Plan. These measures include surfacing unpaved roads.

State Highway User Taxes – The State of California returns a portion of the statewide gas tax revenues to each jurisdiction for the purpose of maintaining roadways. These funds are distributed to the city or county road fund exclusively for use on roads, as required by the State Constitution. Funds are accrued on an annual basis. The formula for determining the amount of allocation to each local jurisdiction is complex, and is based upon the number of registered vehicles, miles of roadways maintained by the jurisdiction, assessed property valuation, and population. The Calaveras County Road and Bridge Program receives a large portion of its revenues from this state source.

Motor Vehicle In-Lieu Fees (VLF) – The Motor Vehicle In-Lieu Fees or Vehicle License Fees are motor vehicle registration funds returned to the county from the state based on a jurisdiction's population. These funds are General Fund revenues and are not restricted for roadway use. The Calaveras County Road and Bridge Program receives a significant portion of its revenue from this funding source.

Environmental Justice: Context Sensitive Planning Grants – This Caltrans administered Transportation Planning Program funds planning activities that assist low-income, minority, and Native American communities in becoming active participants in transportation planning and project development. Grants are available to transit districts, cities, counties, and tribal governments. This program is funded by the State Highway Account at $1.5 million dollars annually statewide. Grants are capped at $250,000.

Community Based Transportation Planning Grants (CBTP) - Also part of the Caltrans Transportation Planning Grant package, the Community-Based Transportation Planning Grant Program funds coordinated transportation and land use planning projects that encourage

community involvement and partnership. Projects should support livable community concepts with transportation or mobility objectives and promote community identity and quality of life. Examples of projects include the following studies/plans:

- long-term sustainable community/economic development growth
- safe, innovative, and complete pedestrian/bicycle/transit linkage
- community to school linkage
- jobs and affordable housing proximity
- transit oriented/adjacent development or "transit village"
- community transit facility/infrastructure
- mixed-land use development
- form-based or smart code development

Metropolitan Planning Organizations (MPOs), RTPAs, cities, counties, and transit districts may apply for this grant program directly. A 20 percent local match is required and the grant maximum is $300,000.

CCOG recently received a $100,000 CBTP grant for the Arnold Rural Livable Community Based Transportation Plan and submitted an application for a CBTP grant for San Andreas.

**Public Transit**

Transportation Development Act Funds (TDA) – A mainstay of funding for transit programs in California is provided by the TDA. The TDA provides two major sources of funding for public transportation:

- Local Transportation Fund (LTF), which has been in existence since 1972
- State Transit Assistance (STA) fund, which was established in 1980

Local Transportation Fund (LTF) – The majority of TDA funds are provided through the LTF. These funds are generated by a one-quarter cent statewide sales tax, and returned to the county of origin. The returned funds must be spent for the following purposes.

- 2 percent may be provided for bicycle facilities.
- The remaining funds must be spent for transit and paratransit purposes, unless a finding is made by CCOG that no unmet transit needs exist that can be reasonably met.

If no reasonable unmet needs are found, the remaining funds can be spent on roadway construction and maintenance purposes.

State Transit Assistance (STA) - In addition to LTF funding, the TDA includes the STA funding mechanism. The funds are for transportation planning and mass transportation purposes as specified by the legislature. Funds for the program are derived from a statewide sales tax on gasoline and diesel fuel.

**Non-Motorized Facility**

Bicycle Transportation Account (BTA) Program – This program provides funding for projects that improve safety and convenience. Local jurisdictions must have an adopted "Bicycle Transportation Plan" approved by Caltrans to be eligible for funding. Projects must conform to the requirements of Caltrans' *Highway Design Manual*, Chapter 1000. Commuter bikeways are eligible.

Safe Routes To School (SRTS) – This funding program was originally a capital improvement program funded by state legislation. With the passage of SAFETEA-LU in 2005, Federal Safe Routes to School funds were made available to states nationwide. For this reason, current statutes will be revised to reflect SAFETEA-LU provisions as the state program is phased-out. Eligible projects must fall under the category of infrastructure (capital) or non-infrastructure (education and encouragement). Infrastructure projects are capital improvements that involve the planning, design, and construction of facilities that will substantially improve the ability of students to walk and bicycle to school. Projects must serve children in grades K-8 and be located within a radius of two miles from a school. Non-infrastructure projects, on the other hand, are education and encouragement activities intended to change community behavior, attitudes, and social norms to make it safer for children in grades K-8 to walk and bicycle to school.

Mello-Roos Community Facilities Act – The Mello-Roos Community Facilities Act allows any county, city, special district, school district or joint powers authority to establish a Community Facility District (CFD) for the purpose of selling tax-exempt bonds to fund public improvements within the district. CFDs must be approved by two-thirds of the voters in the district. A property tax is assessed to pay for the bonds.

## LOCAL FUNDING SOURCES

At present, there are several local sources available for ongoing transportation costs other than those passed through from state or federal programs. The following funding programs have been implemented in Calaveras County.

Road Impact Mitigation Fee Program (RIM) – In February of 2004, the Calaveras County Board of Supervisors adopted a RIM Fee Program ordinance. The intent of the program is to provide funding for transportation and transit improvements that mitigate impacts from new developments. All new developments within the unincorporated areas of the County are subject to the RIM fee based on the proportion of impact caused on the Regional Transportation Network. The RIM Fee Nexus Study identified a list of "RIM Fee Capital Projects" and estimated the proportion of the total project cost which could be attributed to new developments. Of the total cost share in each project that can be attributed to new development, 88 percent of costs for projects not marked as state highway projects are allocated to the RIM program. For projects marked as state highway projects, 25 percent of costs that can be attributed to development are allocated to the RIM program. It is important to note that funding accumulated through the RIM Fee Program will only pay for a portion of RIM Fee capital project costs. Therefore, additional

funding will be required to complete RIM projects. Table 22 in the Action Element lists RIM projects that are not located on state highways and Table 21 includes RIM projects located on state highways.

Copperopolis Benefit Basin – Much like the RIM Fee Program, benefit basins impose fees on new developments to help pay for transportation costs associated with that development, except when a benefit basin is specific to the area served by the new transportation improvements. All undeveloped parcels within the basin boundary are subject to the basin fee upon development. This fee is calculated by determining the number of trip ends generated by each type of development proposed within the boundary. The Institute of Transportation Engineers (ITE) trip generation rates of 7.5 trips per dwelling unit and 121 trips per acre of commercial use were used. The number of trips generated for both residential and commercial uses is summed to provide a total number of trips for the basin. The total cost of improvements is then divided by total trips in the basin to provide a cost in the form of dollars per trip. The fair share cost of each project is determined by multiplying the ITE generation rate trip by dollars per trip.

Valley Springs Benefit Basin – The Valley Springs Benefit Basin program established a funding mechanism for roadway improvements needed as a result of new development in Valley Springs. All new development with the basin boundary will be assessed a per trip fee of $170 or $1,275 per equivalent dwelling unit. The basin program must be used in conjunction with other funding sources to complete the needed transportation improvements. The Valley Springs Benefit Basin project list is currently being updated.

Other funding sources which could be incorporated in the Calaveras County region are discussed below.

Optional Local Sales Tax – A county-created taxing authority may levy up to $0.01 additional sales tax with the funds allocated for improvements to the regional transportation system, as authorized under the Local Transportation Authority Act, Division 19, Public Utilities Code Section 18000. Any new tax or tax increase requires a two-thirds majority vote of the affected electorate.

Benefit Assessment Act of 1982 – The Benefit Assessment Act of 1982 allowed for the development of County-wide assessments for drainage, flood control, and street lighting. A 1989 amendment to the Act added street maintenance assessments. To date, very few cities or counties have instituted this assessment for street maintenance. Approval of an assessment would require a two-thirds majority vote by the affected electorate.

## COUNTY ROAD AND BRIDGE MAINTENANCE FUNDING SOURCES

In addition to the major capital projects recommended in this transportation plan, Calaveras County has ongoing operations and maintenance needs. Historically, the County has spent approximately $5 million dollars per year in maintenance funding, and currently has a backlog of deferred maintenance. Road fund revenues are typically generated from the following sources:

- State sources such as highway gas taxes and VLF (52 percent)
- Local sources such as Transit Occupancy Tax and property taxes (31 percent)
- Federal sources such as HBP and RSTP (15 percent)

A small amount of revenue is derived from interest and permits. Approximately 31 percent of road fund revenues are spent on routine road and bridge maintenance. Even though road fund revenues are often unstable, maintenance is the number one priority for the County Road and Bridges Program.

## REVENUE PROJECTIONS

Projecting revenues over a 20-year period is difficult in that funding levels can quickly change or even be eliminated by alterations in legislation and policy, as has been the case in the past with the state's financial crisis. This is true for both recurring discretionary funds for maintenance and grant funding from various sources. Despite these uncertainties, revenues for roadway, aviation, and transit purposes were forecasted over the next 20 years by using a variety of methods[1], as shown in Table 37. All revenue projections represent 2006 dollars, unadjusted for an estimate of the future rate of inflation. As shown in Table 37, regional roadway and bridge revenues (STIP, SHOPP, RSTP and federal funding sources) total an estimated $317 million dollars over the 20-year planning period. The following assumptions were made in projecting regional roadway and bridge revenues:

- STIP and TE revenues were based on the CTC's STIP fund estimate and CCOG projections. Due to the fluctuations of this funding source in the past, a flat growth rate was assumed.

- SHOPP and Minor Program revenues through FY 2015-2016 were based on project lists. Estimates for FY 2016-2017 and beyond were based on the average of FY 2006-2007 through 2010-2011.

- Highway Bridge Program revenues were based on proposed projects. SAFETEA-LU revenues represent anticipated grant funding over the next three years. As these funding sources are discretionary grants attached to specific projects, no long-term projections were made.

- RSTP funds (RTPA share) are primarily used for planning purposes. Estimations were provided by CCOG. As allocation of this funding source is based on population, revenue projections were increased by 2 percent per year (consistent with the forecast rate of population growth).

Table 37 also identifies revenues for the local transit program. Transit revenue projections were provided by Calaveras County Department of Public Works. As shown, the greatest revenue source is from Local Transportation Funds, providing 76.5 percent (or roughly $21.6 million dollars) of the total projected $28 million dollars in revenues over the 20-year planning horizon. The remaining federal and state programs are anticipated to provide nearly $4.9 million dollars in revenues, with local revenues (including farebox revenues) making up the balance.

Local airports are also an important element of the regional transportation system. Federal Aviation Administration revenue projections total $3.3 million dollars over the plan period. State CAAP revenues are projected at $234,000 and local airport revenues which are derived from

1 Non-motorized facility revenues were not projected at this time as these funding programs are very competitive and involve a rigorous application process that requires extensive documentation of project need, cost, and benefit.

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## *Table 37: Revenue Projections, 20-Year Vision*

| Program | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fiscal Years (All Figures In 1000s 2006 Dollars) | | | | | | | | | | | | | | | | | | | | |
| **Regional Roadway and Bridge Revenues** | | | | | | | | | | | | | | | | | | | | | |
| STIP - RIP[1] | $26,883 | $0 | $2,335 | $0 | $0 | $5,000 | $0 | $5,000 | $0 | $5,000 | $0 | $5,000 | $0 | $5,000 | $0 | $5,000 | $0 | $5,000 | $0 | $5,000 | **$69,218** |
| STIP - IIP[1] | $3,200 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$3,200** |
| STIP PPM (Calaveras) | $85 | $85 | $85 | $85 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | $90 | **$1,780** |
| Transportation Enhancement (TE) | $995 | $192 | $369 | $484 | $367 | $0 | $0 | $0 | $0 | $2,500 | $0 | $0 | $0 | $0 | $2,500 | $0 | $0 | $0 | $0 | $2,500 | **$9,907** |
| SHOPP[2] | $3,570 | $ 17,300 | $15,800 | $4,500 | $0 | $ 4,350 | $ 13,650 | $ 2,300 | $ 7,200 | $ 53,740 | $ 8,234 | $ 8,234 | $ 8,234 | $ 8,234 | $ 8,234 | $ 8,234 | $ 8,234 | $ 8,234 | $ 8,234 | $ 8,234 | **$204,750** |
| Minor Program[2] | $3,352 | $0 | $0 | $350 | $0 | $0 | $0 | $0 | $0 | $0 | $740 | $740 | $740 | $740 | $740 | $740 | $740 | $740 | $740 | $740 | **$11,106** |
| Highway Bridge Program (HBP) | $250 | $250 | $250 | $250 | $9,000 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$10,000** |
| Other Federal SAFETEA-LU Programs (PLH, HPP, CMAQ) | $1,570 | $1,000 | $250 | $250 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$3,070** |
| Regional Surface Transportation Program (RSTP) (RTPA share) | $171 | $174 | $178 | $181 | $185 | $189 | $193 | $196 | $200 | $204 | $208 | $213 | $217 | $221 | $226 | $230 | $235 | $239 | $244 | $249 | **$4,155** |
| *Subtotal* | *$40,076* | *$19,001* | *$19,267* | *$6,100* | *$9,642* | *$9,629* | *$13,933* | *$7,586* | *$7,490* | *$61,534* | *$9,273* | *$14,277* | *$9,281* | *$14,286* | *$11,790* | *$14,295* | *$9,299* | *$14,304* | *$9,309* | *$16,814* | **$317,186** |
| **Transit Revenues[3]** | | | | | | | | | | | | | | | | | | | | | |
| FTA Section 5311 | $110 | $110 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | $130 | **$2,560** |
| Local Transportation Fund | $764 | $895 | $1,000 | $1,000 | $1,000 | $1,024 | $1,049 | $1,088 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | $1,155 | **$21,684** |
| State Transit Assistance | $90 | $97 | $104 | $107 | $111 | $114 | $118 | $121 | $125 | $125 | $125 | $125 | $125 | $125 | $125 | $125 | $125 | $125 | $125 | $125 | **$2,360** |
| Passenger Revenues | $47 | $51 | $56 | $62 | $68 | $69 | $70 | $70 | $71 | $71 | $71 | $71 | $71 | $71 | $71 | $71 | $71 | $71 | $71 | $71 | **$1,344** |
| Other | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | $20 | **$400** |
| *Subtotal* | *$1,030* | *$1,173* | *$1,310* | *$1,319* | *$1,329* | *$1,358* | *$1,386* | *$1,429* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | *$1,501* | ***$28,348*** |
| **Aviation Revenues[4]** | | | | | | | | | | | | | | | | | | | | | |
| FAA AIP | $584 | $161 | $0 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | $150 | **$3,295** |
| State CAAP | $60 | $4 | $0 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | $10 | **$234** |
| County/ State Loan | $500 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | **$500** |
| Local Airport Revenues | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | $271 | **$5,420** |
| *Subtotal* | *$1,415* | *$436* | *$271* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | *$431* | ***$9,449*** |
| **Local Transportation Funding Sources[5]** | | | | | | | | | | | | | | | | | | | | | |
| Road Impact Mitigation Fee (RIM) | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | **$50,000** |
| Valley Springs Benefit Basin | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | $210 | **$4,200** |
| Copperopolis Benefit Basin | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | $285 | **$5,700** |
| State Highway User Tax | $2,020 | $2,060 | $2,102 | $2,144 | $2,187 | $2,230 | $2,275 | $2,320 | $2,367 | $2,414 | $2,462 | $2,512 | $2,562 | $2,613 | $2,665 | $2,719 | $2,773 | $2,828 | $2,885 | $2,943 | **$49,081** |
| Regional Surface Transportation Program (RSTP) (County Share) | $342 | $349 | $356 | $363 | $370 | $378 | $385 | $393 | $401 | $409 | $417 | $425 | $434 | $442 | $451 | $460 | $469 | $479 | $488 | $498 | **$8,310** |
| State Gas Sales Tax (AB2928/ Prop 42) | $550 | $561 | $572 | $584 | $595 | $607 | $619 | $632 | $644 | $657 | $670 | $684 | $698 | $711 | $726 | $740 | $755 | $770 | $786 | $801 | **$13,364** |
| Vehicle License Fees | $65 | $66 | $68 | $69 | $70 | $72 | $73 | $75 | $76 | $78 | $79 | $81 | $82 | $84 | $86 | $87 | $89 | $91 | $93 | $95 | **$1,579** |
| Proposition 1B | $0 | $1,300 | $500 | $500 | $500 | $500 | $500 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 $0 | **$3,800** |
| *Subtotal* | *$5,972* | *$7,332* | *$6,592* | *$6,654* | *$6,717* | *$6,782* | *$6,848* | *$6,415* | *$6,483* | *$6,553* | *$6,624* | *$6,697* | *$6,771* | *$6,846* | *$6,923* | *$7,002* | *$7,082* | *$7,164* | *$7,247* | *$7,332* | ***$136,033*** |
| **Total Estimated Transportation Revenue** | **$ 48,493** | **$ 27,942** | **$ 27,440** | **$ 14,505** | **$ 18,119** | **$ 18,199** | **$ 22,597** | **$ 15,861** | **$ 15,905** | **$ 70,019** | **$ 17,829** | **$ 22,906** | **$ 17,984** | **$23,064** | **$ 20,645** | **$ 23,228** | **$ 18,313** | **$ 23,399** | **$18,488** | **$26,078** | **$491,016** |

Note 1: Short-term STIP fund estimates based on 2006 STIP Augmentation Tri-County RTIP (includes CMIA funds). Long-term STIP revenues based on CCOG estimates of Calaveras future RIP shares. Short-term TE estimates based on 2006 STIP Staff Recommendation. Long-term TE estimates based on 2006 STIP Fund Estimate.

Note 2: SHOPP and Minor Program through FY 2015-16 based on project lists. FY 2016-17 and forward based on average of FY 2006-07 through 2010-11. Minor projects with no construction year were assumed to be FY 09-10.

Note 3: Transit revenues based on County estimates for the entire 20-year planning horizon.

Note 4: FAA AIP, State CAAP and Local CAAP based on project lists until 2012-2013, then flat growth thereafter. Local airport revenues based on flat growth rate.

Note 5: Local revenues based on DPW estimates. RSTP, VLF, state highway user tax and Prop 42 revenues were increased by 2 % per year to account for population growth. Prop 1B estimates provided by California Association of Counties.

Source: CCOG, Calaveras County, Caltrans, RIM Fee Nexus Study

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tie-down receipts, and airport rents and leases are projected to total $5.4 million dollars over the planning period. FAA AIP, State CAAP and Local CAAP revenues were based on project lists through 2012-2013. As airport revenues are not a factor of population, flat revenue growth is assumed beyond that date.

Local transportation funding sources, which include RIM fees, Benefit Basin fees, Proposition 1B allocations at the local level, highway user taxes, RSTP, state gas sales tax (Proposition 42) revenues, and vehicle license fees are anticipated to total $136 million dollars. The following assumptions were made about local transportation revenue projections:

- RIM, benefit basin, highway users tax, RSTP, VLF, and state gas sales tax revenue projections are based on Calaveras County Department of Public Works estimates. RSTP, VLF, highway user tax, and state gas sales tax projections were adjusted to reflect population growth.

- Proposition 1B estimates were provided by the California State Association of Counties. It should be noted that these estimates have not been finalized by the State Legislature.

Revenue projections for funding sources specific to the City of Angels were not available.

## TRANSPORTATION REVENUE TO COST COMPARISON

Table 38 presents a comparison of projected revenues and future transportation expenditures as identified in the Action Element for the short- and long-term planning periods. As shown, state highway and bridge projects are funded through the short-term, but a deficit of $43.9 million dollars is expected by the end of the 20-year planning period. If financially unconstrained projects are included in the comparison, a deficit of $94.2 million dollars over the entire planning period is projected. Similarly, local County road projects which include RIM, Benefit Basin, and other projects located on County roadways are funded in the short-term, but a deficit of $118 million dollars is forecasted over the long-term planning period. City transportation revenues are unknown at this time. Transit and aviation projects appear to be fully funded over the RTP planning period.

These comparisons can be deceiving for several reasons. As very few long-term transit and aviation projects are proposed in this RTP, there is a surplus of funding for these transportation facility elements. The RTP must be updated every five years, so it is probable that additional projects will be included in future RTP updates. On the other hand, as some funding sources require reauthorization, certain funding sources could be terminated or new sources could be authorized. What Table 38 does clearly show, however, is that with the current funding situation there are insufficient funds available for state highway and local roadway projects over the long-term.

### Funding Outlook and Strategy

The only Calaveras County STIP projects slated over the next four-year period (FY 2006-2007 to 2009-2010) are the Angels Camp Bypass and Phase I of the Wagon Trail project. Through a combination of STIP, RIP, IIP, CMIA funds, and federal grants, sufficient funding has been acquired for both projects. Therefore, the first four years of the Financial Element are consistent with the 2006 STIP Fund Estimate adopted by CTC. In fact, with the STIP 2006 augmentation funds, the Tri-County STIP balance will begin at zero for the 2008 cycle. CCOG intends to fund

future STIP projects in accordance with RTP goals, policies, and the balanced alternative. The region should pursue the following funding strategies in order to complete the transportation improvement projects contained in this RTP:

- There exists a significant backlog of local maintenance projects in the region with limited "maintenance specific" funding sources available. The Tri-County 2006 RTIP proposes a 20 percent funding set-aside of each county's regional STIP share for local road rehabilitation. CCOG should follow this guideline when programming projects for the 2008 RTIP.

- The region should identify and seek federal HSIP funds for safety related improvement projects such as shoulder improvements, in-pavement lighted crosswalks, sight distance improvements, and new traffic signals.

- Calaveras County should continue to support the Benefit Basin and RIM fee programs in order to offset some of the infrastructure costs associated with rapid new developments in the region. Once Proposition 1B funds are obtained, they should be directed toward the "existing deficiencies" component in the County traffic impact fee programs.

- The region could consider pursuing a sales tax initiative or street maintenance assessment to provide the necessary maintenance funding.

- The region should aggressively seek BTA and Safe Routes to Schools funding for bicycle facility projects, and continue to update the Calaveras County Bicycle and Pedestrian Master Plan as necessary. In addition to providing a balanced transportation system, this funding strategy will reduce vehicle miles traveled and traffic congestion.

- The region should continue to pursue Community Based Transportation Planning grants for transportation planning studies, to help better integrate land use and transportation planning while involving non-traditional participation in the transportation decision making process.

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