

San Andreas SR 49 Commercial Gateway Corridor Study

Existing Conditions Background Report

Prepared for:

**Calaveras Council of
Governments**

Prepared by:



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Calaveras Council of Governments

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TABLE OF CONTENTS

Introduction	1
Purpose	1
Study Area	1
Setting	5
Regional Setting	5
Transportation Setting	6
Demographic Setting	6
Economic Setting	6
Challenges and Opportunities.....	7
Challenges.....	7
Opportunities	7
Process	8
Project Schedule	8
Regulatory and Planning Framework.....	9
Demographics and Commute Trends	14
Population.....	14
Employment.....	14
Commute Trends.....	16
Employment in San Andreas	16
In-Bound Commute Trends	17
Out-Bound Commute Trends.....	18
Roadway Classification.....	20
Study Roadways.....	20
State Route 49 Corridor Characteristics	23
Northern Gateway	24
SR 12 to Gold Oak Road	24
Main Street Corridor	25

Gold Oak Road to Court Street.....	25
Court Street to Treat Avenue.....	26
Treat Avenue to Mountain Ranch Road	27
Commercial Gateway	28
Mountain Ranch Road.....	29
Calaveritas Road	30
Pool Station Road.....	30
Active Transportation & Complete Streets	31
Facility Classification	31
Existing Bicycle and Pedestrian Facilities	32
Proposed Bicycle and Pedestrian Facilities.....	36
Complete Streets.....	37
State Highway Main Streets	37
Transit Facilities.....	37
Analysis Policies and Methodologies	38
Level of Service Policy	38
Existing Traffic Conditions	40
Collision Summary	41
Collision Type and Severity	41
Collision Location & Severity	34
Collision Frequency	36
Safety Performance.....	37
Land Use and Market Analysis Summaries	38
Land Use Analysis.....	38
Environmental Conditions.....	39
Development Status	39
Water Supply & Sewer Services Summary	40
Market Analysis	40

LIST OF FIGURES

Figure 1 - Vicinity Map	3
Figure 2 - Study Area Map.....	4
Figure 3 - San Andreas Major Facilities Map.....	15
Figure 4 - In-Bound Commute Trends by City	17
Figure 5 - Out-Bound Commute Trends By City	18
Figure 6 - Existing Roadway Network.....	22
Figure 7 - Existing Bicycle Facilities.....	34
Figure 8 - Existing Pedestrian Facilities	35
Figure 9 - Access Points Along SR 49.....	33
Figure 10 - Collision Locations.....	34
Figure 11 - Collision Severity	34

LIST OF TABLES

Table 1 Local and Regional Planning Documents	12
Table 2 Demographic Attributes	14
Table 3 San Andreas and Calaveras County Labor Force Characteristics	14
Table 4 Majors Employers in San Andreas.....	14
Table 5 Where San Andreas Employees Live	17
Table 6 Where San Andreas Residents Work	18
Table 7 Travel Time to Work.....	19
Table 8 San Andreas Residents: Mode of Travel	19
Table 9 Roadway Classification in Various Documents.....	21
Table 10 Study Roadway Classification Table.....	21
Table 11 Existing Bicycle Facilities	32

Table 12 Proposed Bicycle Facilities	36
Table 13 Proposed Pedestrian Facilities	36
Table 14 LOS Standards	39
Table 15 Existing Intersection LOS.....	40
Table 16 Existing Average Daily Traffic (ADT)	40
Table 17 Collisions Severity By Study Roadway	41
Table 18 Collisions By Type	41
Table 19 Collisions Involving a Bicycle, Pedestrian, or heavy Truck	35
Table 20 Safety Performance: SR 49 and Mountain Ranch Road	37
Table 21 Study Area Land Use Designations	38
Table 22 Land Use Study Area: Development Status	40
Table 23 San Andreas 20-Year Development Projections: 2016 through 2035	41

APPENDIX

A: Land-Use Planning Issues & Opportunities Analysis

B: Focused Real Estate Market Analysis

Introduction

The County of Calaveras, in partnership with Calaveras Council of Governments, and California Department of Transportation, has retained Omni-Means to complete the *San Andreas State Route 49 Commercial Gateway Corridor Study*. This project is funded, in part, by a Caltrans Administered FHWA Strategic Partnership Transportation Planning Grant - CDA No. 20.505.

Purpose

The San Andreas community is concentrated along a one and one-third mile stretch of State Route 49 (SR 49), accommodating both local mobility with regional and statewide travel demands. While SR 49 functions as a Main Street through San Andreas, it lacks the facilities necessary to provide a safe space for community mobility and livability. Prior planning efforts have focused on revitalizing the town's historic core and improving multi-modal travel along SR 49 and throughout town. However, San Andreas continues to face challenges of high vehicular travel speeds, peak hour congestion, heavy truck volume, and a lack of adequate non-vehicular infrastructure. These challenges serve as an impediment to fulfilling a community vision that prioritizes economic vitality, and safe and accessible use for pedestrians, cyclists, and transit users.

Additionally, there are approximately 240 acres of vacant land along SR 49 in southern San Andreas. Within the context of this development potential, the community and leading planning agencies recognize opportunities for a new "Southern Gateway" into San Andreas, and its ability to establish a sense of arrival to northbound travelers on SR 49. This study will identify and compare alternative transportation and land use planning strategies that balance community circulation needs with development and revitalization opportunities in this potential growth area. Strategic transportation and land use planning within the potential growth area will further serve mobility and livability goals for the SR 49 Corridor as a whole.

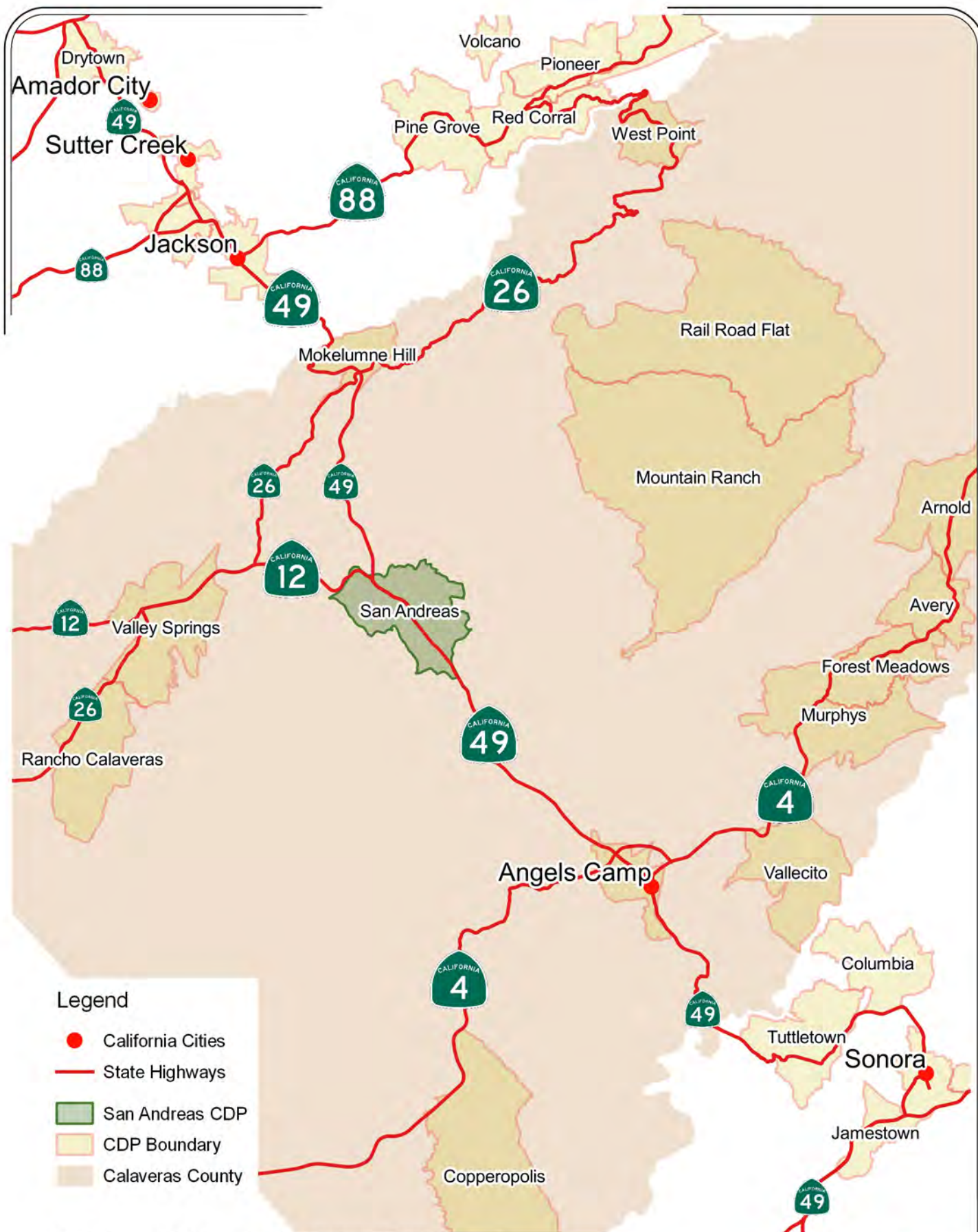
This study aims to create an actionable plan for the SR 49 Corridor, based on viable implementation strategies and supported by all partner agencies. Broad-based community and agency support for the projects identified in this Study are the key distinguishing elements that ensure projects can become successfully funded and constructed.

Study Area

This Study addresses circulation needs in the context of development potential in southern San Andreas, and is therefore comprised of both a land use and circulation study area. The land use study area covers approximately 400 acres east and west of SR 49, south of the SR 49/Mountain Ranch Road intersection, and includes 240 acres of vacant land and 160 acres of underutilized land along SR 49 in southern San Andreas. The land use study area will be analyzed for its development potential in subsequent sections of this report.

While the land use study area borders major regional roadways (Mountain Ranch Road and SR 49), it lacks an adequate circulation network to accommodate any level of growth. Additionally, existing deficiencies in the San Andreas roadway network present challenges to new development in the land use study area. This Study will aim to address transportation deficiencies in the greater San Andreas community and will present strategies to align existing mobility needs with development opportunities in southern San Andreas. The circulation study area extends to the intersections of SR 49/SR 12 in the north, SR 49/Howell Road in the south, Pool Station Road/Church Hill Road in the west, and Mountain Ranch Road/Calaveritas Road in

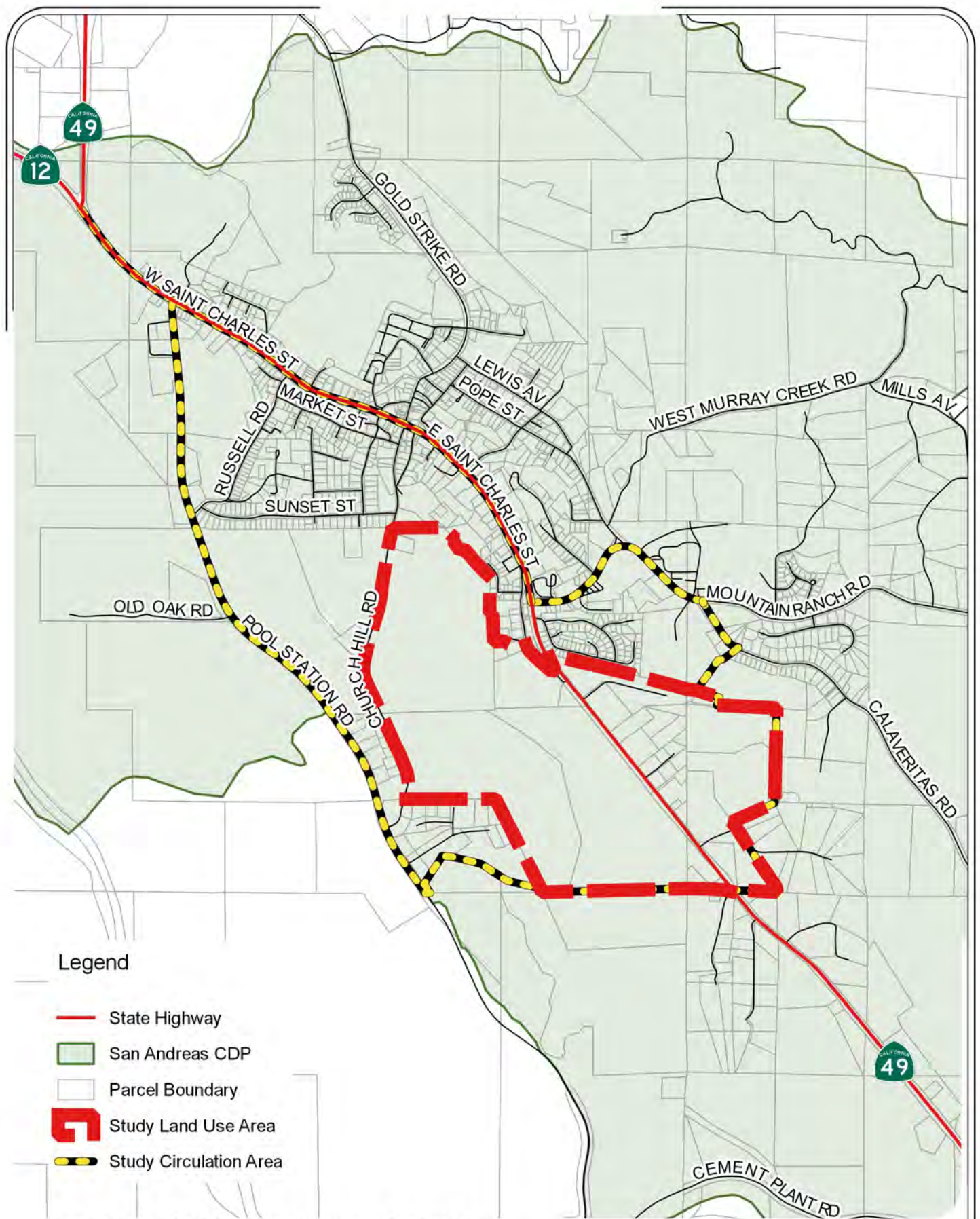
the east. A vicinity map placing San Andreas in its regional context is provided in **Figure 1**; study area boundaries are presented in **Figure 2**.



San Andreas SR 49 Commercial Gateway Corridor Study

San Andreas Community Boundary and Vicinity Map

Figure 1



Legend

- State Highway
- San Andreas CDP
- Parcel Boundary
- ⌂ Study Land Use Area
- Study Circulation Area

San Andreas SR 49 Commercial Gateway Corridor Study

San Andreas Circulation and Land Use Study Areas

Figure 2



Setting

The following section outlines the regional, transportation, demographic, and economic context and provides the framework for analysis throughout this Study.

Regional Setting

San Andreas is an unincorporated census-designated place (CDP) situated along State Route 49 in Calaveras County Supervisorial District 1, and Caltrans District 10. State Route (SR) 49 is a north-south arterial that runs through the Gold Country foothills in California, accommodating regional and interregional travel through Calaveras County and adjacent Tuolumne and Amador counties. Located just south of the SR 49/SR 12 intersection, the community of San Andreas is approximately 12 miles northwest of the City of Angels Camp and 15 miles south of Jackson. San Andreas is approximately 133 miles east of San Francisco, and 85 miles southeast of Sacramento.



Northern Gateway entrance sign, as seen from SR 49/Pool Station Road

San Andreas has served as the county seat of Calaveras County since 1863, establishing it as one of the major government and employment hubs of the region. The town hosts a number of government facilities and employment centers, including the County court house, Government Center, hospital, high school, sheriff's department, and jail. As a result, SR 49 through San



Facing West on Pool Station Road, with rolling hills in the background

Andreas accommodates high volumes of commuter travel from neighboring communities and counties. Additionally, as a community of the Gold Country foothills, San Andreas holds historical value attributed to its position as a settlement area for immigrants who were attracted to the area's natural resources and mining opportunities. Tourists exploring the foothills often pass through San Andreas, taking notice of its historical buildings, rural landscapes, and rolling hills, that has been preserved amidst community growth.

During the 2015 Butte Fire, 70,868 acres of land in Amador and Calaveras County burned, along with 549 homes and 368 outbuildings. San Andreas hosts the California Department of Forestry and Fire Protection (Cal Fire) Tuolumne-Calaveras Unit and the San Andreas Fire Department, as well as the American Red Cross and Federal Emergency Management Agency (FEMA), and the town served as the emergency and evacuation services center for Calaveras County during the fire. The community is still experiencing the effects of the fire, as heavy trucks travel on Mountain Ranch Road and SR 49 to remove debris from communities east of San Andreas. The potential for future fires within Calaveras County requires a review of the existing circulation system within the context of emergency preparedness.



Approaching State Route 49/State Route 12 Intersection

Transportation Setting

The community therefore integrally connected to the regional transportation system, and plays an importation role in commuter travel, goods movement, as well as tourist activity.

SR 49, known locally as St. Charles Street, serves as the 'backbone' of the community's transportation system, providing access to local commercial and residential areas, as well as links to the transportation system. However, the roadway presents challenges to safety and efficiency of local circulation, as San Andreas residents are forced to compete against large volumes of regional travel and drivers exceeding the speed limit. In addition, the high concentration of access points and driveways along SR 49 in San Andreas creates conflict between regional travel needs and local access needs.

Demographic Setting

The population of San Andreas is estimated at 2,812 residents, approximately 6 percent of the total Calaveras County population, and the census-designated place (CDP) boundary has a total area of approximately 8.4 square miles (5,376 acres). In 2010, San Andreas held approximately 1,146 households, with an average household size of 2.6 persons/household. The median age in San Andreas is 45.7, which is considerably older than the state average of 35.2.

The community of San Andreas hosts businesses and government centers that employ the largest share (6.5 percent) of the 19,264 employed residents within Calaveras County. The most prominent industries for employment within San Andreas are Public Administration and Health Care and Social Assistance. However, only 7 percent of the jobs within San Andreas are held by residents of San Andreas, resulting in a large number of employees commuting in from neighboring communities and counties, giving San Andreas its description of a 'commuter-town'.

Economic Setting

Although San Andreas is considered an employment hub of the region, it lacks "quality of life" factors (such as building stock, shopping opportunities, and recreation/cultural amenities), discouraging employees from residing near their place of work. Non-resident employees commute into San Andreas, establishing a 'commuter-town' with minimal increases in residential growth. While Calaveras County saw a sale of approximately 500 new homes from 2006 to 2015, San Andreas only experienced a sale of 7 new homes. In 2015, the average sale price of a home in San Andreas was \$189,000, compared to \$235,000 on average throughout the County.

The median household income in San Andreas is \$40,600. Approximately 55 percent of San Andreas households own their own home, while 45 percent are renters. Approximately 12.6 percent of housing units were vacant in 2010, which is higher than the state average of 8.1 percent.

Challenges and Opportunities

San Andreas' rural heritage is an important component of development for the community, which holds the motto: "Preserve our rural heritage", and has the vision to be "a small, thriving, vibrant foothill town" (*San Andreas Community Plan Report*, 2008). San Andreas currently faces the challenge of balancing local mobility needs with interregional travel demand along SR 49 and Mountain Ranch Road. With development potential along its southern SR 49 corridor, the *San Andreas SR 49 Commercial Gateway Corridor Study* presents the opportunity to employ this community vision while improving safety and connectivity throughout the community.

Challenges

Community members and property owners, along with Calaveras government agencies, have expressed interest to develop approximately 240 acres of land along the SR 49 corridor in southern San Andreas. However, challenges within the existing circulation network and a lack of coordinated plans for mobility, connectivity, and coordinated highway access within the development area present challenges to the overall success of potential development projects.

Additionally, residential and employment activity in northern San Andreas is concentrated along SR 49 and Mountain Ranch Road, which operate as key roadways for locals and employees within San Andreas, serving a mixture of community mobility needs. However, with little differentiating the interregional State route from the rural town's Main Street Corridor, San Andreas is subject to issues of excessive speeds, congestion, and safety.

Opportunities

- *Due to the regional significance of SR 49, and the volume of commuter and tourist travel absorbed by the San Andreas community, the SR 49 Commercial Gateway Corridor Study holds opportunities for improved corridor safety, access, aesthetics, and mobility.*
- *This Study will identify and evaluate alternative growth scenarios for underutilized and vacant lands in ways that boost the community's economic vitality.*
- *Through coordinated land use and transportation strategies, the SR 49 Gateway Corridor area will serve to reduce impacts to currently congested intersections while enhancing access into the community.*
- *The Study will identify improvements and strategies to create a 'sense of arrival' into San Andreas, through the use of attractive gateway entrance monuments, signage, and aesthetic improvements.*
- *As part of the streetscape concepts that will be prepared for the Commercial Gateway Corridor, a "Complete Street" cross section will be developed for SR 49 through the Study area that provides these active transportation facilities for safe alternative travel.*

Process

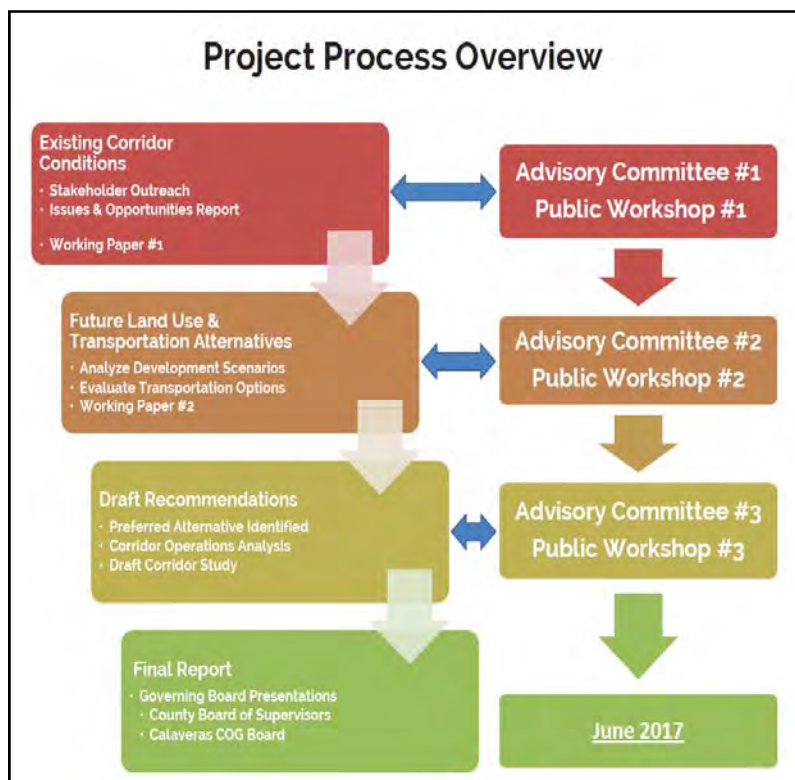
This Study represents a partnership opportunity between Calaveras County, CCOG, and Caltrans, who, along with a team of consultants lead by Omni-Means, comprise the Project Team. The consultants will provide expertise on the areas of transportation, market conditions, and environmental and land use factors affecting the study areas. The Project Team will leverage community input in the form of an established Advisory Committee made up of local community officials and leaders, and will invite public review and comment.

San Andreas SR 49 Commercial Gateway Corridor Study - Project Team



Project Schedule

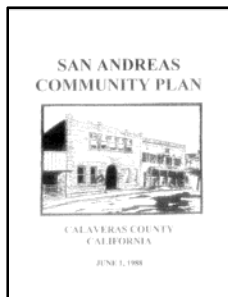
This report satisfies the Existing Corridor Conditions portion of the Study, and will set the stage for deep analysis into future land uses and transportation alternatives. Upon Project Team consensus, a draft recommendation will be proposed, providing detailed review of a preferred land use and transportation alternative, and technical analysis of future Corridor operations under this alternative. A final report is expected to be completed in June 2017.



Regulatory and Planning Framework

This section summarizes previous regulatory and planning documents that guide transportation planning decisions in San Andreas and Calaveras County. The *State Route 49 Commercial Gateway Corridor Study* aims to align its recommendations with these available documents. To the extent feasible, the following documents were referenced for this study:

San Andreas Community Plan, 1988



The *San Andreas Community Plan* was adopted in 1981 and revised in June 1988. The Plan contains land use designations, implementation programs, and Community Plan land use map, and multiple introductory and background sections. The Community Plan provides community-specific land use and circulation plans in congruence with the County General Plan. The San Andreas Community Plan has not been updated since 1988; however, land use maps have been updated in the years 2008 and 2012. The Community Plan area covers 9 square miles, including this Study's boundaries.

Calaveras County General Plan, 1996 and 2014 (Draft)

The *Calaveras County General Plan* was adopted in 1996. A *Draft 2014 General Plan Update* has been made available to the public. The *General Plan* aims to meet state planning requirements and guides countywide development in the following categories: land use, circulation, housing, conservation, open space, noise, and safety.

The *General Plan Land Use Element* is updated under the 2014 Draft General Plan, and provides the general framework for development in the County, and identifies future land use designations in the unincorporated areas of Calaveras County to establish where and what type of development can occur. Specific to Calaveras County, the Land use Element aims to maintain rural, open space by focusing development in and around existing communities.

The *General Plan Circulation Element* is updated under the 2014 Draft General Plan, and provides the framework for countywide transportation systems. In line with planned land use patterns, the Circulation Element identifies the location and extent of existing transportation routes and improvements needed to account for future travel demand.

San Andreas Community Plan Report, 2008 (Not currently adopted)

The *San Andreas Community Plan Report* provides resident-input on land use, conservation, circulation, safety, and community participation, in lieu of the 2008 Calaveras County General Plan Update. The Report was prepared by Citizens for San Andreas, and is the product of several Town Hall meetings and public meetings over a two-year period.

Included in the list of "Proposed San Andreas Community Policies" are the following:

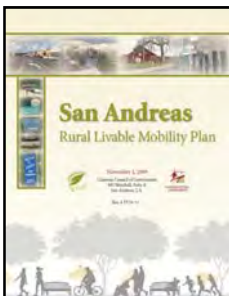
- Protect and maintain the rural and historical character of San Andreas;
- Accommodate the development related influx to San Andreas through facility and road improvements in and around the Government Center, and

- Provide the community with increased retail and commercial opportunities while maintaining the rural and local atmosphere.

The Report also identifies circulations issues, citing congestion and speed issues related to the large volume of drive-through traffic along SR 49; mobility and access barriers between east and west of town; and the lack of adequate bicycle and pedestrian facilities.

San Andreas Rural Livable Mobility Plan, 2009 (Adopted by CCOG)

The *Rural Livable Mobility Plan* (RLMP) addresses mobility and safety issues and opportunities along the St. Charles Street (SR 49) Corridor. As the Main Street Corridor and most significant roadway in San Andreas, SR 49 serves a variety of land and mobility uses that often interfere with one another, creating a complex and unsafe space for local activity. The RLMP provides detailed approaches to multi-modal enhancements, traffic calming, intersection improvements, and streetscape design.



The RLMP was a planning effort lead by the community under the direction of the Calaveras Council of Governments, but it was not adopted by Calaveras County. However, many of the improvements listed in the plan will be incorporated into this current planning effort.

Calaveras County Regional Transportation Plan, 2012

A *Regional Transportation Plan* (RTP) for Calaveras County was prepared in 2007 by LSC Transportation Consultants, Inc. and in 2012 by Fehr + Peers. As required by California law, the Calaveras Council of Governments (CCOG) must adopt and submit an approved RTP to the California Transportation Commission (CTC) every five years. The RTP generally aims to guide transportation investments in the region over a 20-25 year period.



State Route 49: Transportation Concept Report, 2013

The *State Route 49: Transportation Concept Report* (TCR) was prepared by Caltrans District 10, and provides long-term planning for SR 49 within District 10 jurisdiction. SR 49 is broken down into segments, and provides descriptions and analysis for current roadway conditions. Includes analysis of SR 49 throughout the City of San Andreas to guide long-range corridor planning.

Main Street, California: A Guide for Improving Community and Transportation Vitality, 2013



In 2013, Caltrans published *Main Street, California - A Guide for Improving Community and Transportation Vitality*. The report provides planning, design, maintenance, and operational concepts for main street projects, and serves as a guide to complete streets and active transportation planning along State highways.

Complete Streets Implementation Action Plan 2.0 (CSIAP 2.0), June 2014 - June 2017

The CSIAP 2.0 was prepared by Caltrans to describe the complete streets policy framework currently held by Caltrans for planning and implementation of complete streets on the State highway system. The CSIAP 2.0 is required by the *Deputy Directive 64-Revision 2: Complete Streets - Integrating the Transportation System (DD-64-R2)*, which is an update of the State's complete streets policy signed in October 2014.

DD-64-R2 provides the following Caltrans policy on complete streets:

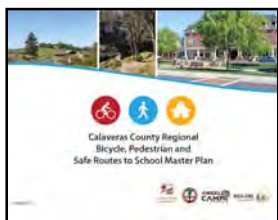
The California Department of Transportation (Caltrans) provides for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State highway system [and] recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system.



Calaveras Transit Intercity Service Feasibility Study, 2014

The *Transit Intercity Service Feasibility Study* (Transit Study) was prepared for CCOG in 2014 to address intercity transit needs for Calaveras County residents. The study focused on a new route(s) that would connect to Greyhound and Amtrak, provide service to out-of-county medical needs, and serve commuters and students.

Calaveras County Regional Bicycle, Pedestrian and Safe Routes to School Master Plan, 2015



This *Bicycle, Pedestrian, and Safe Routes to School Plan* (Bike, Ped, and SRTS Plan) identifies existing and proposed bicycle and pedestrian infrastructure and support facilities, and encourages improvements that enhance safety for active transportation modes. The plan serves as a guide for active transportation improvements that require federal, state, and local funding. As San Andreas is home to six schools, safe and reliable walking and biking routes for children is an important component of this plan.

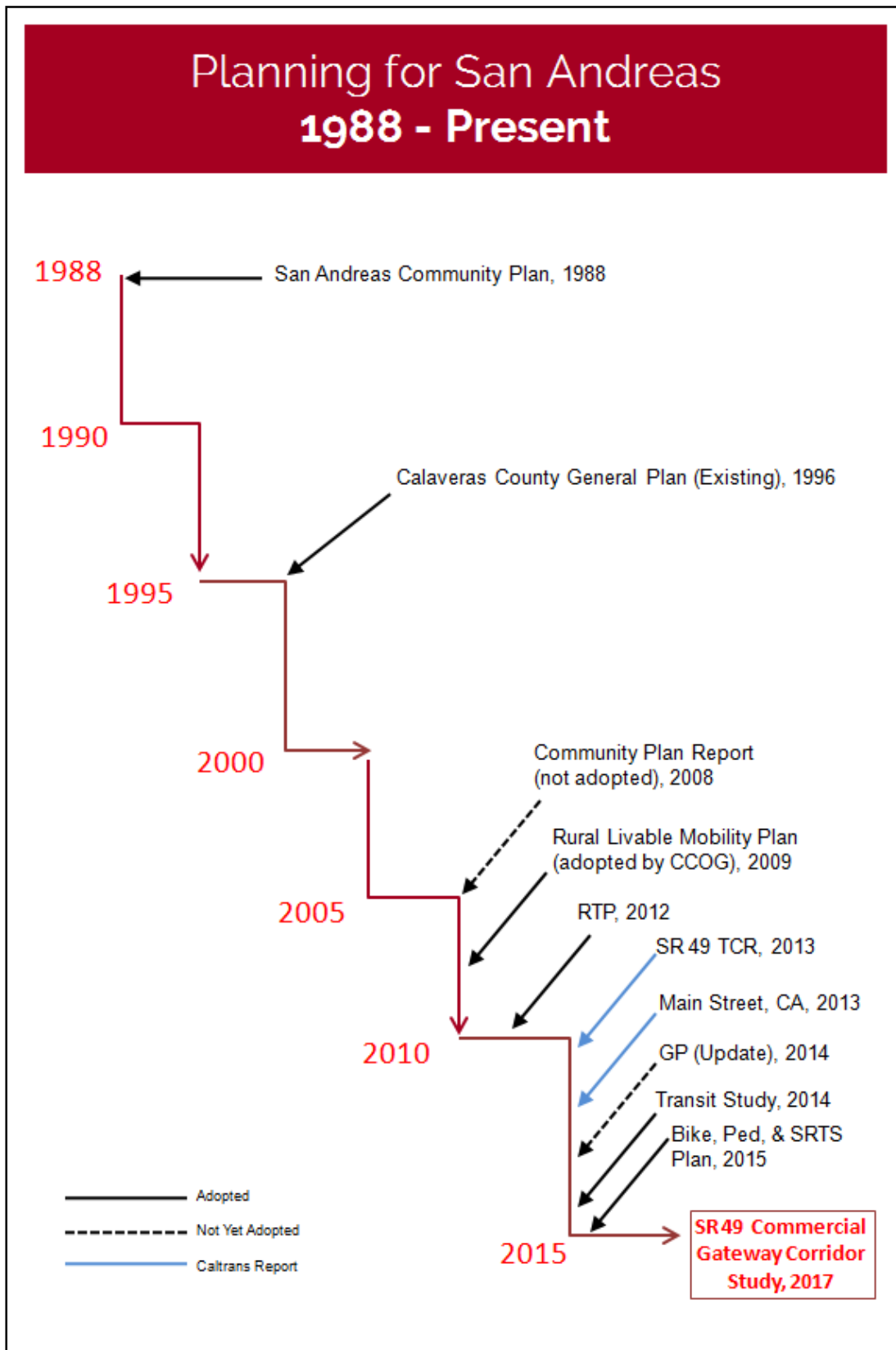
Calaveras County Short Range Transit Plan Update, 2016

The *Short Range Transit Plan* (SRTTP) *Update* was recommended for approval in February 2016. The SRTTP will provide the blueprint for the development of Calaveras County over the next five years. Key issues addressed in this plan include maintaining and improving transit connections to regional transit services in Calaveras County.

Table 1 highlights these regulatory and planning documents in terms of their adoption status and relationship to each other.

**TABLE 1
LOCAL AND REGIONAL PLANNING DOCUMENTS**

LOCAL AND REGIONAL PLANNING AND REGULATORY DOCUMENTS					
	Plan	Agency/Group	Year Completed	Approved / Adopted?	Current?
LAND USE	San Andreas Community Plan	County of Calaveras	1988	Yes (1981, revised 1988; maps revised '08, '12)	Yes, pending new General Plan
	Calaveras County General Plan including Land Use Element (Existing)	County of Calaveras	1996	Yes	Yes
	San Andreas Community Plan Report	Citizens for San Andreas	2008	No	Yes; no official status
	Calaveras County General Plan Background Report	County of Calaveras	In Progress	No	Adoption anticipated
	Calaveras County General Plan, including Land Use Element (Update)	County of Calaveras	In Progress	No	Adoption anticipated
TRANSPORTATION	Calaveras County General Plan including Circulation Element (Existing)	County of Calaveras	1996	Yes	General Plan update in progress
	San Andreas Rural Livable Mobility Plan	Calaveras Council of Governments	2009	Yes, by CCOG	Yes; no official status
	Regional Transportation Plan	Calaveras Council of Governments	2012	Yes	Yes
	State Route 49 Concept Report	California Department of Transportation	2013	Yes	Yes
	Main Street, California: A Guide for Improving Community and Transportation Vitality	California Department of Transportation	2013	Yes	Yes
	Calaveras Transit Intercity Service Feasibility Study	Calaveras Council of Governments	2014	Yes	Yes
	Calaveras County General Plan, including Circulation Element (Update)	County of Calaveras	In Progress	No	Adoption anticipated
	Calaveras County Regional Bicycle, Pedestrian and Safe Routes to School Master Plan	Calaveras Council of Governments	2015	Yes	Yes
	Calaveras County Short Range Transit Plan Update	Calaveras Council of Governments	2016	Yes	Yes



Demographics and Commute Trends

The following section examines recent trends in population, commuter travel, and mode-choice within San Andreas, Calaveras County, and California. Data from the United State Census Bureau's 2010-2014 American Community Survey and the State of California Employment Development Department (EDD) Labor Market Division forms the basis of the following demographic analysis. Data from the United State Census Bureau's 2014 LED/LEHD, "On the Map" application, forms the basis of the following commute analysis.

Population

The population in San Andreas increased from approximately 2,600 in 2000 to 2,783 in 2010, with current Census estimates of 2,812. In 2010, San Andreas was home to approximately 1,146 households, with an average household size of 2.26. The median age in San Andreas was 45.7 (significantly older than the state average of 35.2), and the median household income was \$40,600, compared to the state average of \$61,500. Approximately 55 percent of San Andreas households owned their own home, while 45 percents were renters. Approximately 12.6 percent of housing units were vacant in 2010, significantly higher than the state average of 8.1 percent. **Table 2** presents the various demographic attributes of San Andreas in 2000 and 2010.

**TABLE 2
DEMOGRAPHIC ATTRIBUTES**

	San Andreas CDP			California
	2000	2010	% Change	(2010)
Population	2,615	2,783	6.4%	37,253,956
Households	1,097	1,146	4.5%	12,617,280
Average Household Size	2.24	2.26	0.9%	2.9
Housing Units	1,167	1,311	12.3%	13,680,081
Median Age	43	46	7.3%	35
Median Household Income	\$32,500	\$40,613	25.0%	\$61,489
Tenure				
Rent	43.8%	44.9%		45.2%
Own	56.2%	55.1%		54.8%
Vacant Housing Units	6.0%	12.6%	110.0%	8.1%

Source: U.S. Census 2000 and 2010 (as presented by New Economics, 2016)

Employment

According to the State of California Employment Development Department (EDD) Labor Market Division, approximately 1,170 San Andreas residents were employed in 2015, with an unemployment rate of 6.1 percent. Unemployment in San Andreas is consistent with the unemployment rate in Calaveras County (6.4 percent). **Table 3** presents the labor force characteristics within San Andreas, and compares it to communities within Calaveras County. Subsequent analysis is based on 2014 data from United State Census Bureau's 2014 LED/LEHD, "On the Map" application, which differs slightly from, but does not conflict with, EDD (2016) data.

**TABLE 3
SAN ANDREAS AND CALAVERAS COUNTY LABOR FORCE CHARACTERISTICS**

Area Name	Labor Force	Employment	Unemployment	
			Number	Rate
Calaveras County	20,300	19,010	1,290	6.4%
San Andreas CDP	1,250	1,170	80	6.1%

Source: EDD, Labor Market Information Division, March 2016.
*March 2015 benchmark

San Andreas hosts 11 of the 25 identified 'major employers' within the County, including County Government offices, Mark Twain Medical Center, Forestry and Fire Protection, and several elementary and high schools. Given the commuter character of Calaveras County, and the concentration of employment centers within the community, San Andreas circulation patterns are heavily influenced by commuter travel. **Table 4** provides information on the number employed and employment category of 'major employers' in San Andreas.

TABLE 4
MAJORS EMPLOYERS IN SAN ANDREAS

Employer	Number Employed	Category
Calaveras County Human Services	50-99	Government
Calaveras County Sheriff	50-99	Government
Calaveras Water District	50-99	Utility
Calaveras High School	50-99	School
Calaveras Public Works Department	50-99	Libraries-Public
Forestry & Fire Protection	250-499	Government
Independent Learning Center	50-99	School
Mark Twain Medical Center	250-499	Hospital
Rail Road Flat Elementary School	50-99	School
Rite-Passage-Sierra Ridge Academy	100-249	Residential Care Homes; School
West Point Elementary School	50-99	School

Source: State of California Employment Development Department, 2016.

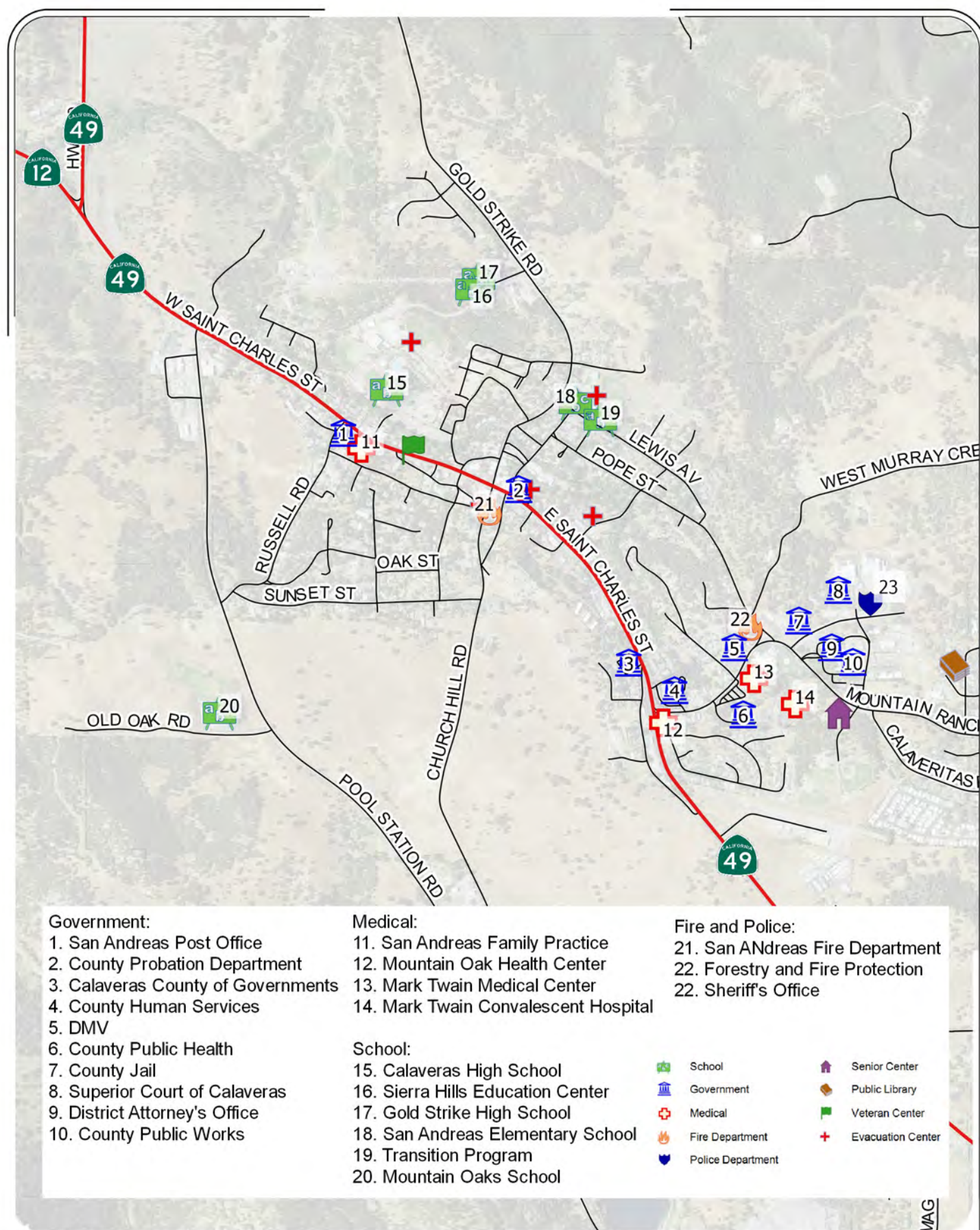


Calaveras High School



Hospital sign on Mountain Ranch Road for the Mark Twain Medical Center

The government sector accounts for approximately 14 percent of employment within Calaveras County, and the majority of these government employers are located along Mountain Ranch Road, east of SR 49. San Andreas is also host to three (3) major schools and several learning centers, including a regional high school and local elementary school serving more than 1,200 students combined. These schools also significantly contribute to employment within the community, providing at least 250 jobs. The majority of these schools are located east of SR 49 and north of Main Street. **Figure 3** illustrates the location of employment centers, schools, and other major facilities within San Andreas.



San Andreas SR 49 Commercial Gateway Corridor Study

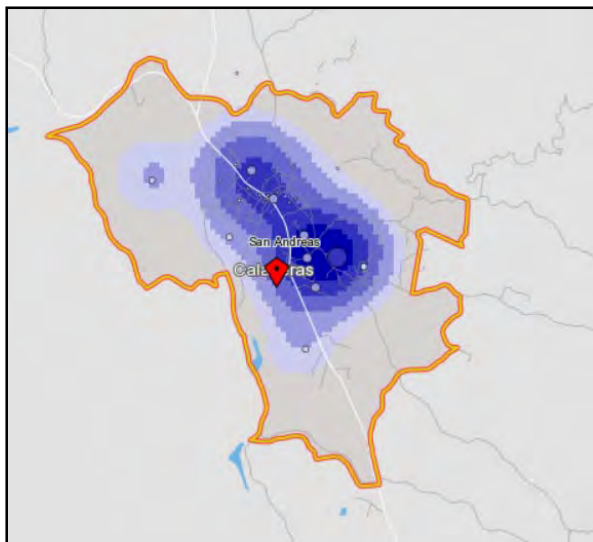
San Andreas Major Facilities and Employment Centers

Figure 3

Commute Trends

Calaveras County is characterized by a large degree of in-bound and out-bound commuter travel. Of the 19,264 employed residents within Calaveras County, approximately 23.5 percent work within the county; 13.5 percent commute to San Joaquin County in the west; and 7.7 percent commute to Sacramento County in the north. Overall, 20.8 percent of Calaveras employed residents travel more than 25 miles to work, and 46.5 percent travel more than 50 miles to work.

Employment in San Andreas



Source: U.S. Census Bureau, OnTheMap Application and LEHD (2002-2014).

Of the 19,264 employed residents within Calaveras County, 6.5 percent (1,252) work in San Andreas. As shown in **Figure 3**, a majority of the major government and employment centers in San Andreas are located along Mountain Ranch Road. SR 49 provides primary access to Mountain Ranch Road; however, Pope Street provides access via residential neighborhoods. Government Center Drive and Jeff Tuttle Drive provide access to government and employment centers via Mountain Ranch Road, and include bicycle and pedestrian facilities. The map (shown, left) shows the concentration of jobs within San Andreas, with higher concentrations of jobs illustrated by a deeper shade of blue.

Intersection at Mountain Ranch Road and Pope Street



Jeff Tuttle Drive, seen from Mountain Ranch Road



Government Center Drive, seen from Mountain Ranch Road



Superior Court of Calaveras, Government Center Drive



In-Bound Commute Trends

Due to San Andreas' position as an employment hub, there is a great deal of in-bound commuter traffic entering San Andreas via SR 49. Of the more than 1,900 jobs stationed within San Andreas, only 135 of those jobs (7 percent) are held by San Andreas residents. Approximately 93 percent of employees who work in San Andreas commute into the community from neighboring communities, cities, and counties.

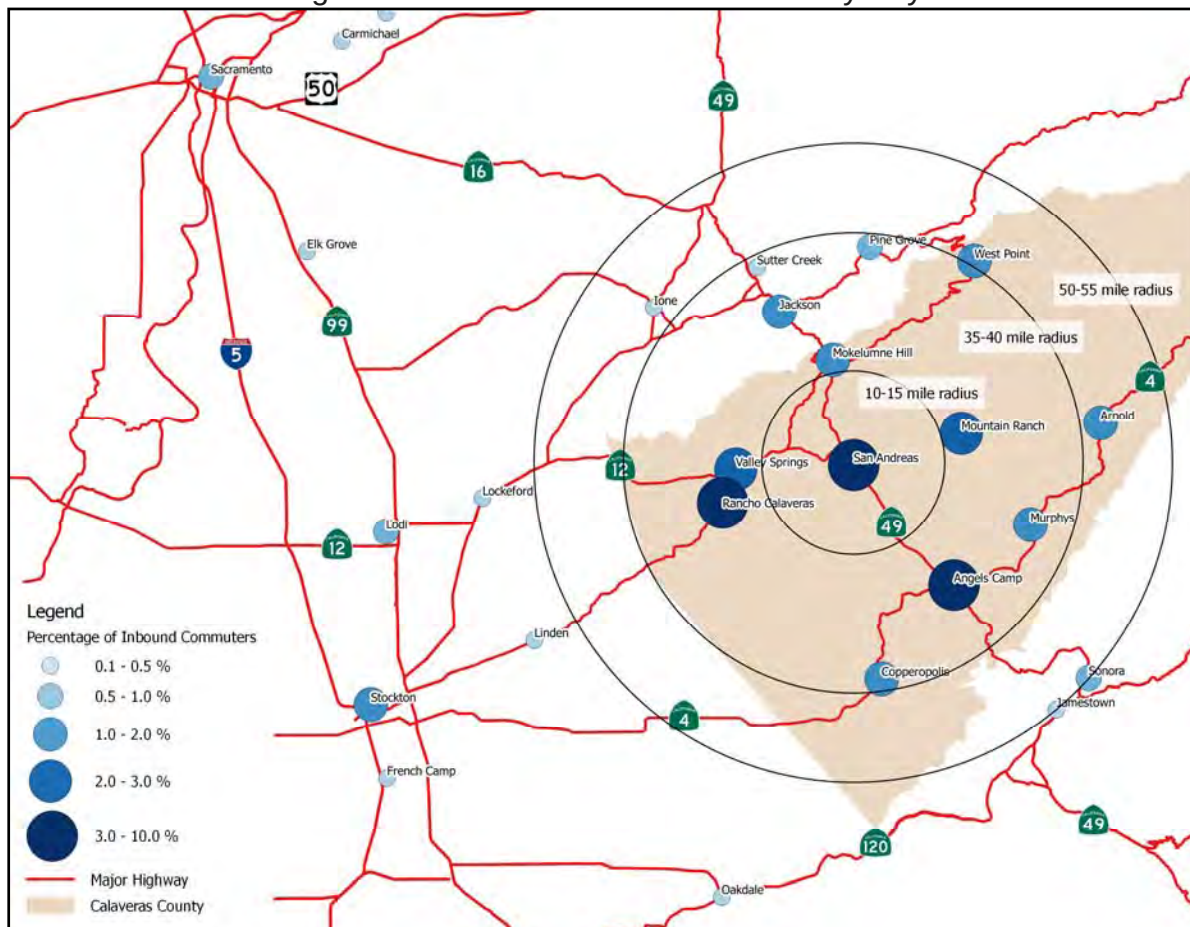
A majority of in-bound commuters employed in San Andreas come from the Rancho Calaveras and Valley Springs communities in the west, and from the City of Angels Camp in the south. In-bound commute trends, in terms of where employees who work in San Andreas live, are illustrated in **Figure 4** and **Table 5**.

TABLE 5
WHERE SAN ANDREAS EMPLOYEES LIVE

	1,927	100%
Community	Count	Share
Rancho Calaveras CDP, CA	209	10.8%
San Andreas CDP, CA	135	7.0%
City of Angels Camp, CA	109	5.7%
Valley Springs CDP, CA	95	4.9%
Mountain Ranch CDP, CA	81	4.2%
Copperopolis CDP, CA	53	2.8%
Arnold CDP, CA	40	2.1%
Murphys CDP, CA	40	2.1%
City of Stockton, CA	38	2.0%
Other (< 2.0%)	1,127	58.5%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2014).

Figure 4 - In-Bound Commute Trends by City



Out-Bound Commute Trends

In the out-bound direction, 13.3 percent of the 1,013 employed San Andreas residents work within the community, while 86.7 percent commute outside of the community. The second most popular city of employment for San Andreas residents is the City of Stockton, capturing 4.5 percent of employed San Andreas residents.

Directionally, employed San Andreas residents generally travel west (northwest, west, and southwest) and southeast to work. Out-bound commute patterns in terms of where San Andreas residents work, are illustrated in **Figure 5** and **Table 6**.

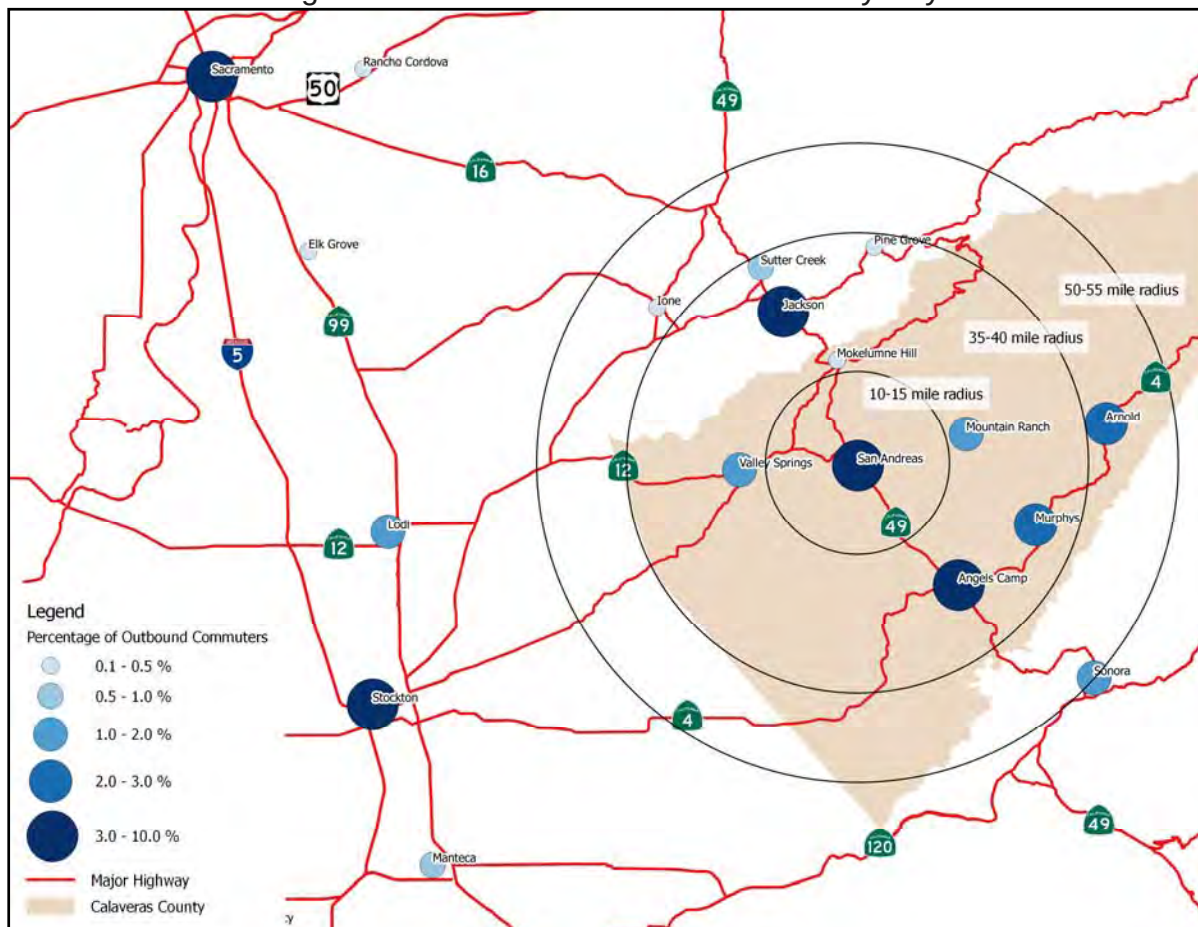
Out-bound commute patterns for San Andreas residents is discussed in further detail on the following page.

TABLE 6
WHERE SAN ANDREAS RESIDENTS WORK

Community	Count	Share
San Andreas CDP, CA	135	13.3%
City of Stockton, CA	46	4.5%
City of Angels Camp, CA	40	3.9%
City of Jackson, CA	27	2.7%
City of Sacramento, CA	27	2.7%
City of Los Angeles, CA	25	2.5%
Murphys CDP, CA	25	2.5%
City of San Jose, CA	22	2.2%
City of Sonora, CA	20	2.0%
<i>Other (< 2.0%)</i>	<i>646</i>	<i>63.8%</i>

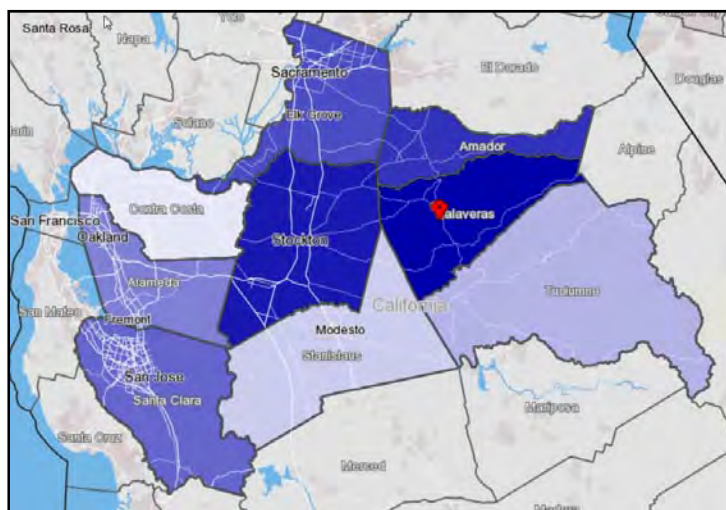
Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2014).

Figure 5 - Out-Bound Commute Trends By City



Overall, the majority (30.9 percent, 313 persons) of San Andreas residents work within Calaveras County. Approximately 10 percent (101 persons) commute to San Joaquin County; 5.8 percent (59 persons) commute to Amador County; and 5.7 percent (58 persons) commute to Sacramento County. In terms of travel distance to work, 19.8 percent (201 persons) commute less than 10 miles to work; 19.9 percent (202 persons) commute 10 to 24 miles to work; 18.2 percent (184 persons) commute 25 to 50 miles to work; and 42.1 percent (426 persons) commute more than 50 miles to work.

The following map shows employment destinations by county of San Andreas residents, with higher percentages of employment destinations expressed in darker blue. **Table 7** presents travel time to work, and corresponds to data regarding distance and direction travelled.



Source: U.S. Census Bureau, OnTheMap Application and LEHD (2002-2014).

**TABLE 7
TRAVEL TIME TO WORK**

Travel Time to Work	Estimate
Less than 10 minutes	38.4%
10 to 14 minutes	11.2%
15 to 19 minutes	9.1%
20 to 24 minutes	14.2%
25 to 29 minutes	1.9%
30 to 34 minutes	6.3%
35 to 44 minutes	6.0%
45 to 59 minutes	6.1%
60 or more minutes	6.8%
Mean travel time to work (minutes)	19.2

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year

Table 8 shows the means (or mode) of transportation to work for employed residents in San Andreas compared to Calaveras County and California. The term "mode" represents the type of travel utilized to travel to, and return from, a place of employment.

**TABLE 8
SAN ANDREAS RESIDENTS: MODE OF TRAVEL**

	Drive alone	Carpool	Transit	Walk	Bicycle	Other
San Andreas residents	69.8%	11.9%	0.0%	13.8%	1.0%	3.5%
Calaveras County	77.3%	11.7%	0.3%	2.9%	0.2%	7.7%
California	73.2%	11.1%	5.2%	2.7%	1.1%	6.6%

Source: U.S. Census, American Community Survey 5-year estimated (2010-2014).

Due to the high percentages of long-distance out-bound commuting through San Andreas, a majority of employed residents in San Andreas travel by car to their place of employment. Approximately, 13.8 percent of employed residents in San Andreas walk to their place of employment. This percentage is significantly higher than other communities in Calaveras County, which averages 2.9 percent. Pedestrian facilities, including marked crosswalks and connected sidewalks, are lacking in San Andreas. However, the close proximity of residential areas to places of employment could explain the relatively high percentage of commuters who walk to work.

Roadway Classification

The 1996 *General Plan Circulation Element* includes the following roadway classifications for Calaveras County:

Major Arterials: Major arterials are multi-lane freeways which handle high volumes of traffic. State Route (SR) 49 is classified as a major arterial in Calaveras County.

Minor Arterials: Minor arterials are roads which have a primary function of serving through traffic movements and connect communities and traffic destination centers, such as recreational facilities and resources.

Major Collectors: Major collections are roads which move traffic from one community to the next. Major collectors serve through traffic movements to and from minor arterials into and out of communities.

Minor Collectors: Minor collectors move traffic from traffic generators (such as residential areas) to major collectors or arterials. Minor collectors are generally located within residential areas where they connect a number of local roads to a major collector.

Local Roads: The primary function of local roads is to provide access to individual properties, delivering this traffic in a relative short distance compared to collectors or arterial roadways. Local roadways include commercial roads, cul-de-sacs, minimum service roads, and emergency access road(s).

Study Roadways

The SR 49 Corridor through San Andreas encompasses a network of local roadways linked to a State highway. While the land use study area falls within southern San Andreas, the circulation study area includes the greater community circulation network of the SR 49 Corridor. The following roadways are analyzed in this report:

- State Route 49 (SR 49/St. Charles Street)
- Mountain Ranch Road
- Pool Station Road
- Calaveritas Road
- Pope Street

Other significant roadways within the community circulation network include:

- Russell Road
- Main Street
- Court Street
- Treat Avenue
- Jeff Tuttle Drive
- Government Center Drive

The 2014 *Calaveras County General Plan Update Draft* (GP Draft) provides roadway classifications for the study roadways. These classifications are consistent with the functional classifications provided within the 2012 *Calaveras County Regional Transportation Plan* (RTP); however, the 2014 GP Draft provides specifications for number of lanes. State Route 49, previously a minor arterial, was classified as a principal arterial by the National Highway System (NHS) in 2014. (**Note:** The 2012 RTP classifies SR 49 through San Andreas as a Three-Lane Arterial, while the 2014 GP Draft classifies it as a Two-Lane Minor Arterial with Two-Way Left

Turn Lanes (TWLTLs). The 2014 GP Draft classifications have been utilized in this report). The 2009 *Rural Livable Mobility Plan* (RLMP) provides classifications for roadways not classified in either the 2014 GP Draft or the 2012 TRP, and is therefore included for consideration purposes. **Table 9** presents the classifications for study roadways as presented in the 2012 RTP, the 2014 GP Draft, and the 2009 RLMP.

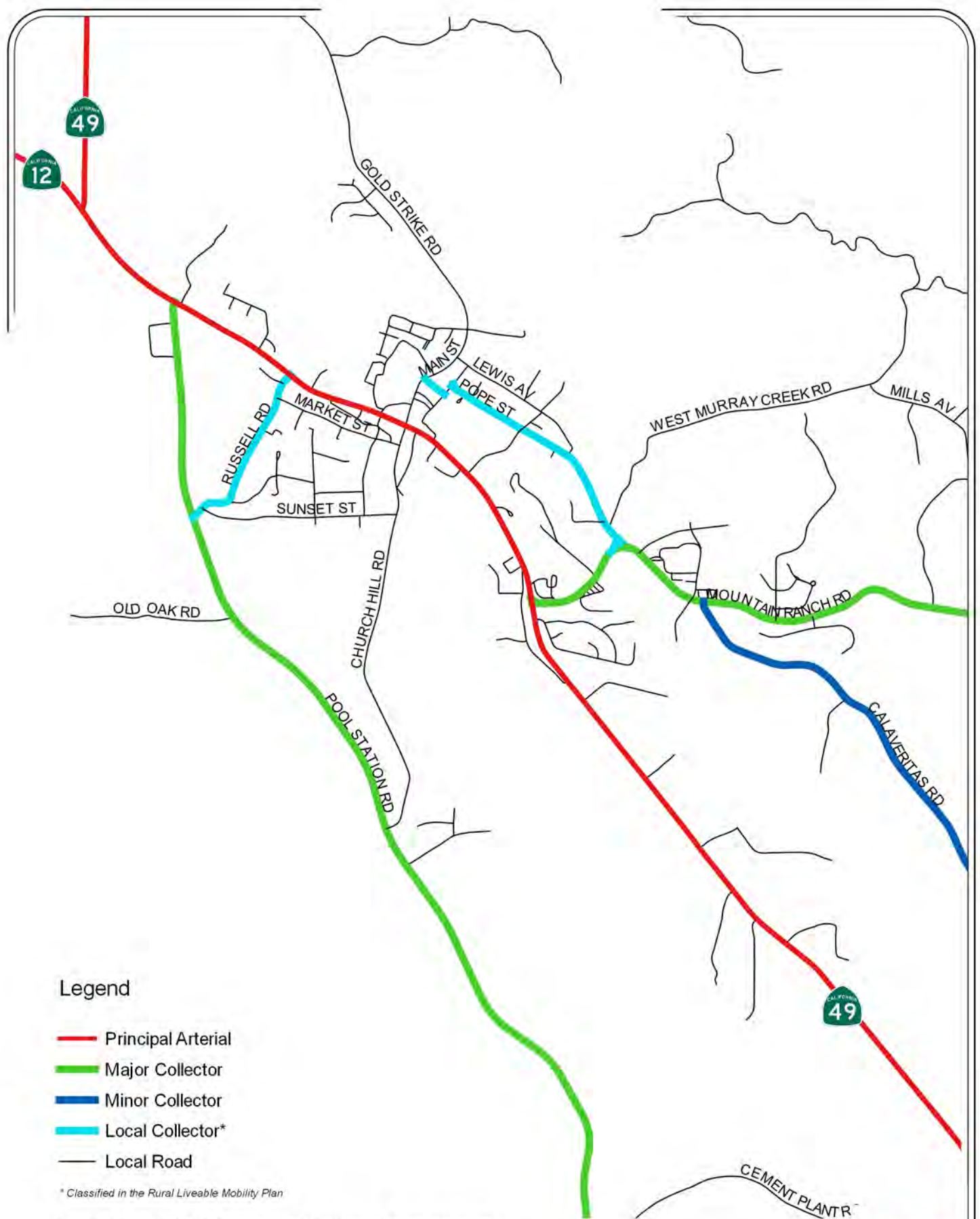
TABLE 9
ROADWAY CLASSIFICATION IN VARIOUS DOCUMENTS

Roadway	Segment	2014 General Plan Update Draft	2012 County Regional Transportation Plan	2009 Rural Livable Mobility Plan (Adopted by CCOG)
State Route 49	SR 12 to Mountain Ranch Rd	Principle Arterial (National Highway System (NHS), 2014)	Three-Lane Minor Arterial	n/a
State Route 49	Mountain Ranch Rd to 4th Crossing Rd	Principle Arterial (National Highway System (NHS), 2014)	Major Two-Lane Highway/Minor Arterial	n/a
Mountain Ranch Road	SR 49 to Gold Hunter	Two-Lane Major Collector	Major Two-Lane Highway/Major Collector	Two-Lane Arterial
Pool Station Road	SR 4 to SR 49	Two-Lane Major Collector	Major Two-Lane Highway/Major Collector	Two-Lane Arterial
Calaveritas Road	<i>Within San Andreas</i>	Two-Lane Minor Collector	n/a	n/a
Pope Street	<i>Within San Andreas</i>	n/a	n/a	Local Collector
Russell Road	<i>Within San Andreas</i>	n/a	n/a	Local Collector
Main Street	<i>Within San Andreas</i>	Two-Lane Minor Arterial	n/a	n/a

Table 10 presents the roadway classifications assumed within this study. **Figure 4** presents the existing roadway network in the Study area.

TABLE 10
STUDY ROADWAY CLASSIFICATION TABLE

Roadway	Segment	Classification	Source
State Route 49	SR 12 to Mountain Ranch Rd	Principle Arterial	2014 NHS
State Route 49	Mountain Ranch Rd to 4th Crossing Rd	Principle Arterial	2014 NHS
Mountain Ranch Road	SR 49 to Gold Hunter	Two-Lane Major Collector	2014 GP Draft
Pool Station Road	SR 4 to SR 49	Two-Lane Major Collector	2014 GP Draft
Calaveritas Road	<i>Within San Andreas</i>	Two-Lane Minor Collector	2014 GP Draft
Pope Street	<i>Within San Andreas</i>	Local Collector	2009 RLMP
Russell Road	<i>Within San Andreas</i>	Local Collector	2009 RLMP
Main Street	<i>Within San Andreas</i>	Two-Lane Minor Arterial	2014 GP Draft



Legend

- Principal Arterial
- Major Collector
- Minor Collector
- Local Collector*
- Local Road

* Classified in the Rural Liveable Mobility Plan

San Andreas SR 49 Commercial Gateway Corridor Study

San Andreas Existing Roadway Network

Figure 6

State Route 49 Corridor Characteristics

State Route 49 (SR 49) is a Main Street Highway and National Highway System (NHS) designated route that runs on a skewed north-south alignment through San Andreas. SR 49 is known regionally as the Golden Chain Highway, as it provides the primary north-south connection to mining towns of the Gold Country foothills along the western slope of the Sierra Nevada. The State highway lies within Caltrans District 10 jurisdiction, extending north from Mariposa County to Amador County, continuing northeast to the California/Nevada county line. The number of travel lanes and the character of the roadway changes as it passes through District 10 counties, transitioning from two- to four-lanes, and from a rural to urban segment. Within Calaveras County, SR 49 is a two-lane conventional highway, connecting to the communities of Mokelumne Hill, San Andreas, and the City of Angels Camp.



SR 49 - SR 12 to Gold Oak Road



Through San Andreas, SR 49 is known as St. Charles Street, and is considered a Main Street Corridor. Through the project area, SR 49 is a two lane conventional highway, and is classified by Caltrans as 'other principle arterial', per National Highway System 2014 designation of SR 49 as a principle arterial. The community of San Andreas borders SR 49 to the east and west. As such, the major highway serves not only regional traffic through San Andreas, but also travel within the community. Local collector roads connect residential areas directly to SR 49, and commercial businesses, government buildings, and some residences have direct access to SR 49 via driveways. Currently, there is little in place to manage local access onto SR 49, and all intersections on SR 49 through the Study area are two-way stop controlled.

From the south, the speed limit on SR 49 drops from 55 to 40 mph, and again to 30 mph at Mountain Ranch Road. The speed limit returns to 55 mph after the SR 49/SR 12 intersection, approximately 1/3 mile north of Pool Station Road. This transition from a rural highway to a Main Street Corridor with local circulation activity creates challenges to the safety and comfort of residents. Due to changing community character, as well as changes to the roadway structure, the SR 49 Corridor through San Andreas is divided into five study segments within this report:

Main Street Corridor:

Northern Gateway:

- SR 12 to Gold Oak Road

- Gold Oak Road to Court Street
- Court Street to Treat Avenue
- Treat Avenue to Mountain Ranch Road

Commercial Gateway:

- Mountain Ranch Road to Howell Road

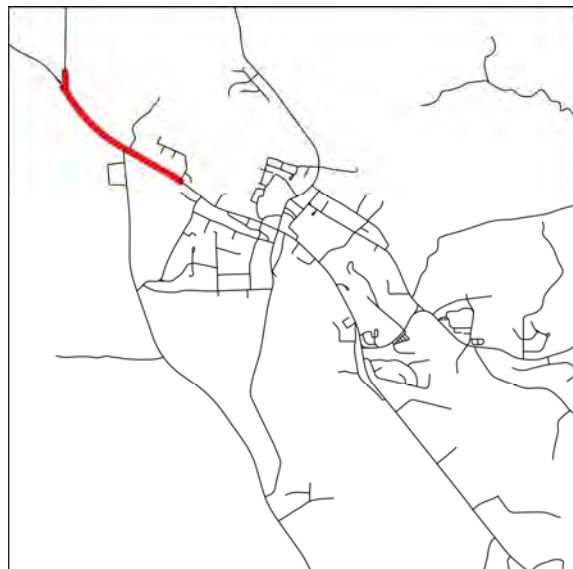
Northern Gateway

SR 12 to Gold Oak Road

As SR 49 runs through Calaveras County, it intersects with several major State highways, including SR 26, SR 4, SR 120, SR 108, SR 132, SR 140, and SR 12 just north of San Andreas. **SR 12** is an east-west highway extending from its terminus at SR 49 in San Andreas to the City of Lodi approximately 31 miles to the west. At its eastern terminus, SR 12 runs into the north-south alignment of SR 49, creating a "Y" intersection at the north end of San Andreas CDP.

Entering San Andreas from the North, the southbound direction has two 12-foot lanes (pictured) to accommodate merging traffic from SR 12. The speed limit drops from 50 to 40 mph at **Pool Station Road**, and drops to 30 mph at **Gold Oak Road**, where SR 49 returns to one-lane in both the north and southbound direction.

At the intersection of SR 49/Pool Station Road, vehicles entering San Andreas are greeted by a sign stating "Welcome to Historic San Andreas - Calaveras County Seat" (pictured). The sign is located at the SR 49/Pool Station Road intersection. Signage like this aids in drawing attention to the transition of SR 49 from a rural highway into a community Main Street Corridor.



SR 49 - SR 12 to Gold Oak Road



Entering San Andreas from the North



SR 49 / SR 12 Intersection, north of San Andreas



Gateway signage - Entering San Andreas from the North

Main Street Corridor

While the San Andreas Community Plan area covers nine square miles, the San Andreas urban/commercial area is concentrated along a 1.3 mile segment of SR 49, extending approximately from the SR 49/Gold Oak Road intersection to the SR 49/Mountain Ranch Road intersection. Throughout the Main Street Corridor, SR 49 is known as St. Charles Street (West and East).

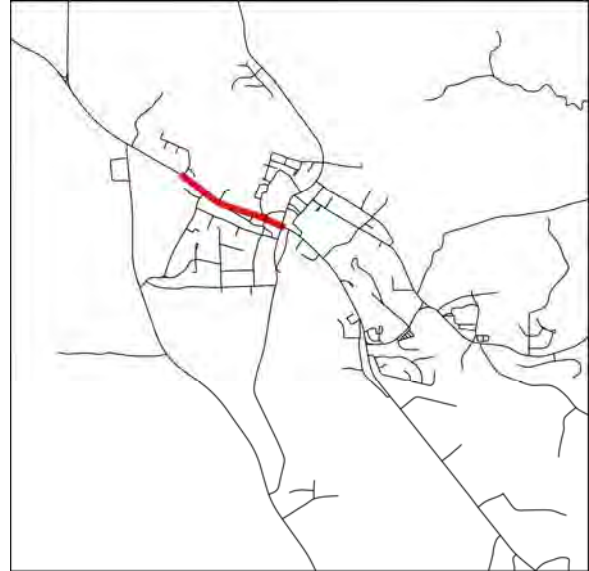
Gold Oak Road to Court Street

State Route 49 from Gold Oak Road to Court Street is a two-lane highway segment approximately 0.4 miles in length and accommodating center two-way left turn lanes (TWLTLs) and on-street parking throughout its extents.

This segment intersects with three main roadways: **Russell Road**, **Bellview Street**, and **High School Street**. Russell Road and Bellview Street collect residential traffic from western San Andreas and provide direct access to SR 49 via one-way stop controlled intersections. Motels and restaurants, as well as the post office and Calaveras High School, are located along this segment of SR 49.

At its intersection with High School Street, which provides primary access to and from Calaveras High School, there are high volumes of student and school employee traffic turning left and right onto SR 49.

Traveling southbound on SR 49, there is one marked pedestrian crossing 300 feet north of High School Street (pictured, above right), and incomplete sidewalk infrastructure. Heavy trucks driving through San Andreas on regional trucking routes pass by the entrance to the high school (pictured, right). Passing High School Street, SR 49 slopes upwards to meet Court Street, just north of the historic Main Street.



SR 49 - Gold Oak Road to Court Street



Single pedestrian crossing near the intersection of SR 49/Russell Road



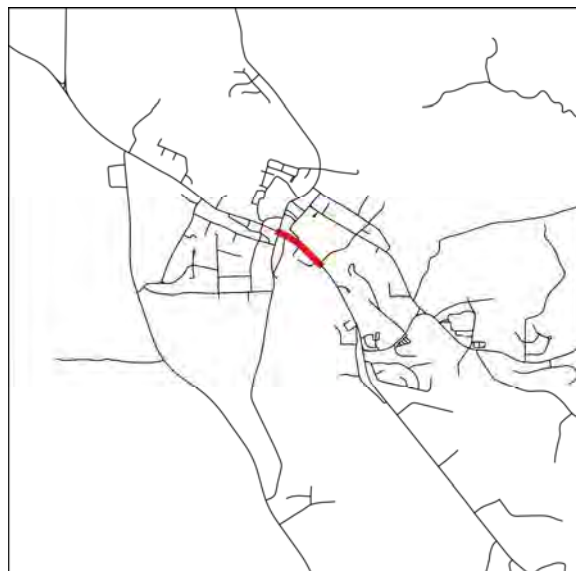
Looking south on SR 49 - Heavy truck traffic by the High School

Court Street to Treat Avenue

State Route 49 from Court Street to Treat Avenue is a two-lane highway segment approximately 0.3 miles in length and accommodating center two-way left turn lanes (TWLTLs) and on-street parking throughout its extents. There are patchy sidewalk facilities on either side of SR 49 throughout this segment. There are two marked pedestrian crossings along this segment: one at Main Street, and one at California Street.

The intersection of SR 49 and Main Street signifies the town's geographic center and the historic core of San Andreas, and is distinguished by historic monuments and signage. **Main Street** begins at SR 49 and travels one-way eastbound to **Court Street**, and two-way to **Neilsen Road**, where Main Street transitions into **Gold Strike Road**. In addition to these intersections, there are approximately 21 access points along this segment of SR 49 in the form of driveways and parking lots, connecting to local restaurants, shops, and residences.

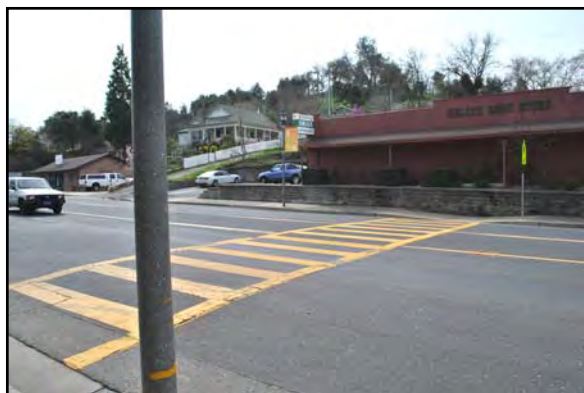
Residential areas extend east and west into the hillsides on either side of the Main Street Corridor, connected to SR 49 by **Church Hill Road** to the west, and California Street and **Treat Avenue** to the east.



SR 49 - Court Street to Treat Avenue



SR 49 / Main Street intersection



Pedestrian Crossing at California Street

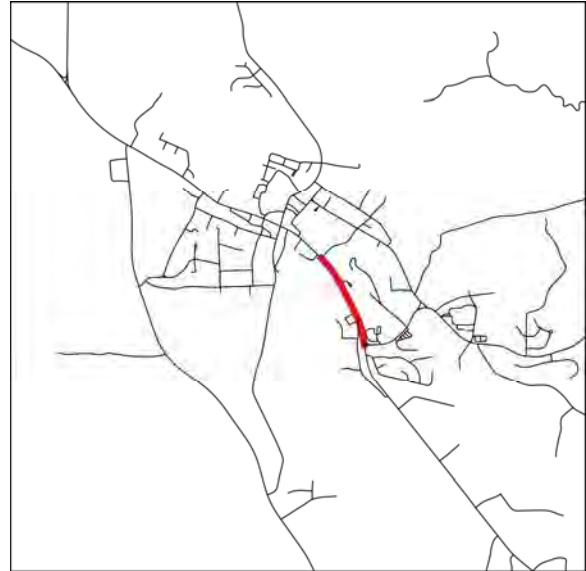


SR 49 - Looking North from Main Street

Treat Avenue to Mountain Ranch Road

State Route 49 from Treat Avenue to Mountain Ranch Road is a two-lane highway segment approximately 0.4 miles in length and accommodating center two-way left turn lanes (TWLTLs) and on-street parking throughout its extents. There are patchy sidewalk facilities on either side of SR 49 throughout this segment. There are no marked pedestrian crossings along this segment.

While the only local road that connects to SR 49 between Treat Avenue and Mountain Ranch Road is Angels Road, there are approximately 21 additional access points, connecting to local restaurants, shops, residences, gas stations, and a grocery store.



SR 49 - Treat Avenue to Mountain Ranch Road



SR 49 / Treat Avenue intersection



Lack of sidewalk in the southbound direction on SR 49



Sidewalk in the northbound direction on SR 49



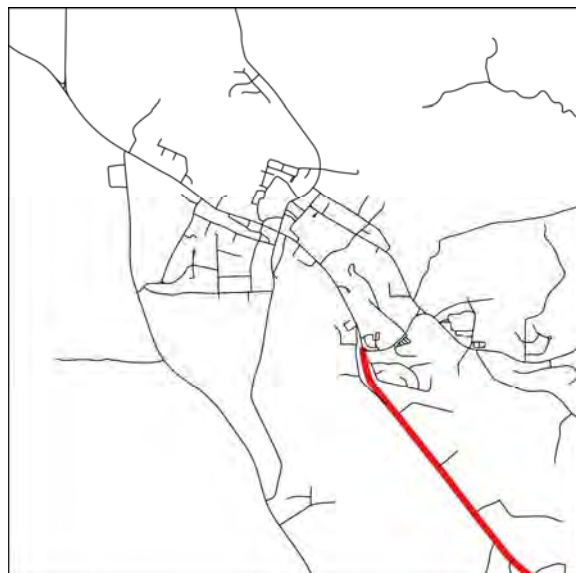
Heavy truck on-street parking on SR 49

Commercial Gateway

The southern segment of SR 49 in San Andreas, referred to in this Study as the Commercial Gateway, runs for approximately one-mile south of the SR 49/Mountain Ranch Road intersection. There is a protected passing-lane for southbound traffic leaving San Andreas, and the roadway is a two-lane highway with passing lanes throughout this segment. Several local roads connect to SR 49 along this segment, including **Angels Road**, **Airport Road** (pictured), **Buckskin Way**, and **Howell Road**. All of these roads are two-way stop controlled.

The northern boundary of the Land use study area begins less than 1/3 mile from the SR 49/Mountain Ranch Road intersection (pictured), and expands for 240 acres on the western and eastern sides of SR 49. Currently, the area consists of rural, open space, with sparsely located residential, industrial, and commercial sties connected by local roads. The area has no significant roadway network to support traffic flowing in from the south on SR 49, and remains geographically and systematically detached from the greater San Andreas community.

Due to the abrupt transition from an undeveloped rural highway area to a downtown "Main Street" corridor, the southern segment of SR 49 generally hosts speeds that exceed the speed limits and safety standards for the rural community. Additionally, this brief segments of SR 49 has eight access points, including the four roads identified above, as well as four uncontrolled driveways. Efforts to establish a southern gateway corridor on SR 49 aim to address these safety concerns by transforming the character area of southern San Andreas to highlight entrance into the community.



SR 49 - Mountain Ranch Road to Howell Road



SR 49 / Mountain Ranch Road intersection

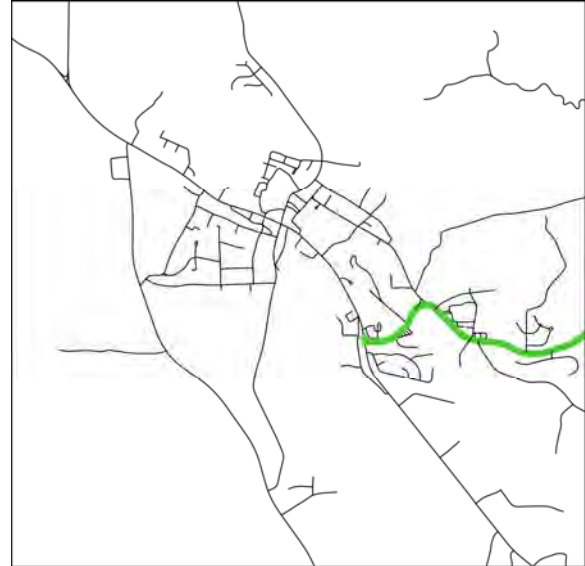


Entering San Andreas from the South

Mountain Ranch Road

Mountain Ranch Road is a two-lane major collector that runs from its intersection with SR 49 to the community of Mountain Ranch nine miles to the east. There are no pedestrian facilities crossing Mountain Ranch road through this segment. The posted speed limit is 25 mph.

Mountain Ranch Road provides access to the major government and employment centers in San Andreas. **Marshall Avenue, Pope Street, Jeff Tuttle Drive, and Government Center Drive** connect to Mountain Ranch Road. The presence of government facilities and employment centers along Mountain Ranch Road contributes to San Andreas' position as an activity hub and classifies Mountain Ranch Road as an important roadway for local and regional traffic.



Mountain Ranch Road - East of SR 49



Hospital sign on Westbound Mountain Ranch Road



Eastbound direction on Mountain Ranch Road, leaving San Andreas



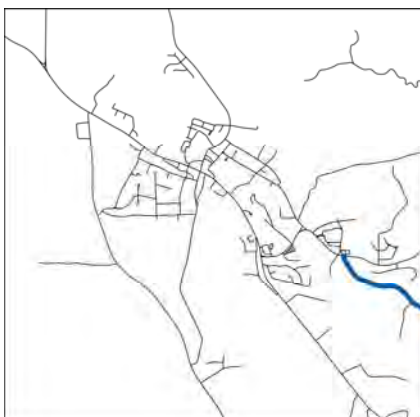
Government Center Building on Mountain Ranch Road



Approaching Mountain Ranch Road/Pope Street intersection from the East

Calaveritas Road

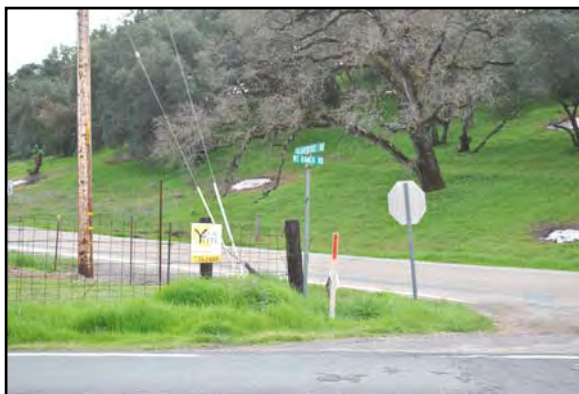
Calaveritas Road is a two-lane minor collector that runs southeast from Mountain Ranch Road to the community of Calaveritas. Through the San Andreas community, Calaveritas Road runs parallel to SR 49 and on the eastern border of the Study area development site. Calaveritas Road provides access to residential communities just south of Mountain Ranch Road and sparsely located residential units throughout its extent.



Calaveritas Road



Calaveritas Road/Mountain Ranch Road intersection



Calaveritas Road/Mountain Ranch Road intersection

Pool Station Road

Pool Station Road is a two-lane major collector that runs from SR 49 on the north side of town to SR 4 approximately 10 miles southwest of San Andreas. Through the San Andreas Community, Pool Station Road runs parallel to SR 49. Pool Station Road provides access to industrial sites, as well as Mountain Oaks School, Calaveras County Water District, and the Food Bank.



Pool Station Road



Northbound direction on Pool Station Road, towards San Andreas



Southbound direction on Pool Station Road

Active Transportation & Complete Streets

A comprehensive network of bikeways and pedestrian paths that are safe, convenient, and accessible for both commuter and recreation travel is an essential part of community transportation infrastructure. However, as of current, Calaveras County has a limited network of bicycle and pedestrian facilities. According to the 2014 *General Plan Circulation Element Draft*, both bicycle and pedestrian facilities are discontinuous throughout the County, resulting in incomplete travel paths that significantly affect children, seniors, and persons with disabilities who often rely on alternative travel modes.



Government Center Drive sidewalk - South Direction

In an effort to address these deficiencies, the *Calaveras County Bicycle Master Plan* and *Pedestrian Master Plan* were adopted in 2007 to establish guidance for bicycle and pedestrian planning throughout the County. The *Calaveras County Regional Bicycle, Pedestrian and Safe Routes to School Master Plan* was adopted in 2015 as an update to the bicycle and pedestrian master plans, and provides recommendations for facility improvements. The *San Andreas Rural Livable Mobility Plan* (2009) identifies transportation plans for the SR 49 Corridor through San Andreas, and provides community input on active transportation needs.

In 2013, Caltrans published *Main Street, California - A Guide for Improving Community and Transportation Vitality*. The report provides planning, design, maintenance, and operational concepts for main street projects, and serves as a guide to complete streets and active transportation planning along State highways.

This section provides a summary of existing and proposed active transportation facilities within San Andreas. This section also reviews existing recommendations presented in the documents listed above, and introduces Complete Streets as a concept for the SR 49 Corridor.

Facility Classification

The Calaveras County General Plan encourages the use of bicycling and walking, and recognizes the following functional classes of bicycle and pedestrian facilities:

Class I – Bicycle Path. Class I facilities are multi-use facilities that provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.

Class II – Bicycle Lane. Class II facilities provide a striped and signed lane for one-way bicycle travel within the paved area of a roadway that shares the roadway with motor vehicles. The minimum width for bike lanes ranges between four and six feet depending upon the edge of roadway conditions (curbs). Bike lanes are demarcated by a six-inch white stripe, signage and pavement legends.



Class III – Bicycle Route. Class III facilities provide signs for shared use with motor vehicles within the same travel lane on a street or highway. Bike routes may be enhanced with warning or guide signs and shared lane marking pavement stencils. While Class III routes do not provide measure of separation, they have an important function in providing continuity to the bikeway network.



Class IV – Separated Bikeway. An exclusive bikeway for bicyclists that is separated from the roadway. Separations may include grade separation, flexible posts, physical barriers, or on-street parking.

Pedestrian Path. A path that is physically separated by distance or barrier from a roadway. Pedestrian paths are different than sidewalks, and are typically constructed in conjunction with Class I Bicycle Paths.

Sidewalk. A pedestrian-dedicated paved walkway located adjacent to roadways.

Complete Street. A transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function of the facility (Caltrans, 2014). Complete streets must be designed for the needs of travelers of all ages and abilities.



Existing Bicycle and Pedestrian Facilities

Calaveras County currently has approximately 2.5 miles of separated (Class I) bikeway, 0.4 miles of striped Class II bicycle lanes, and just less than 3 miles of signed (Class III) bicycle routes. Additionally, there is approximately 17.6 miles of recreation trail. Sidewalks are generally located within commercial centers. San Andreas currently has 0.86 miles of bicycle infrastructure. According to US Census data (2014), approximately 1.0% of San Andreas residents commute to work by bike. **Table 11** lists the existing bicycle facilities in San Andreas. The following images show existing bicycle facilities in San Andreas.

**TABLE 11
EXISTING BICYCLE FACILITIES**

Existing Bikeway	Start	End	Class	Length (miles)
Government Center Class I Shared-Use Path	County Government Offices	Library	I	0.44
Gold Strike Rd	Gold Strike High School	Pixley Ave	I	0.32
Government Center Dr/Jeff Tuttle Dr	Government Center Rd	End of Jeff Tuttle Dr	II	0.1

Sources: Calaveras County Regional Bicycle, Pedestrian and Safe Routes to School Plan, 2015.



Government Center Class I - East Direction



Government Center Dr - South Direction



Jeff Tuttle Drive - East Direction



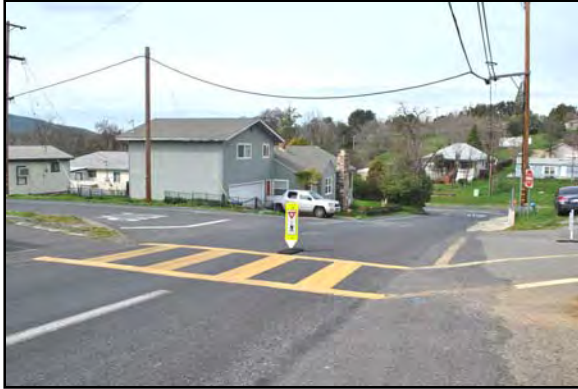
Government Center Class I terminus - East Direction

Pedestrian facilities include sidewalks, crosswalks, and pedestrian paths. Aspects of pedestrian safety include condition and continuity of sidewalks, crosswalk visibility and warning signs, street lighting, and curb extensions, among others. According to US Census data (2014), approximately 13.8% of San Andreas residents walk to work.

San Andreas' pedestrian facility network is comprised of nearly complete but discontinuous sidewalks on either side of SR 49 and Mountain Ranch Road. Aside from the easterly side of SR 49 from Main Street to Mountain Ranch Road, there is no continuous path accommodating safe pedestrian travel from various destinations throughout the community.

There are three crosswalks on SR 49 at the following intersections with the State highway: Russell Road; Main Street; California Street. These crosswalks feature some level of visibility, but are not sufficient for their location along a State route of regional significance. The following images show existing pedestrian facilities in San Andreas.

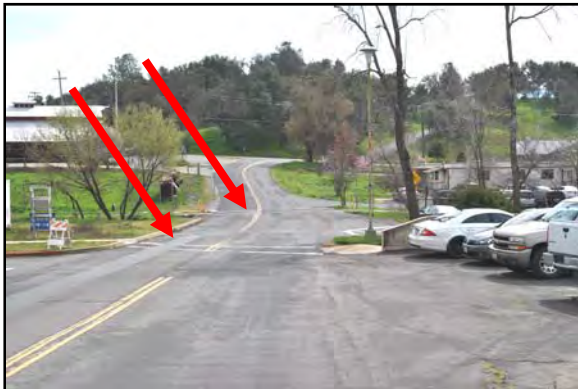




Pedestrian crossing by the elementary school, Lewis Avenue



Pedestrian crossing on SR 49 just south of Russell Road



Faded pedestrian crossings on Government Center Drive



Pedestrians using the sidewalk on Jeff Tuttle Drive

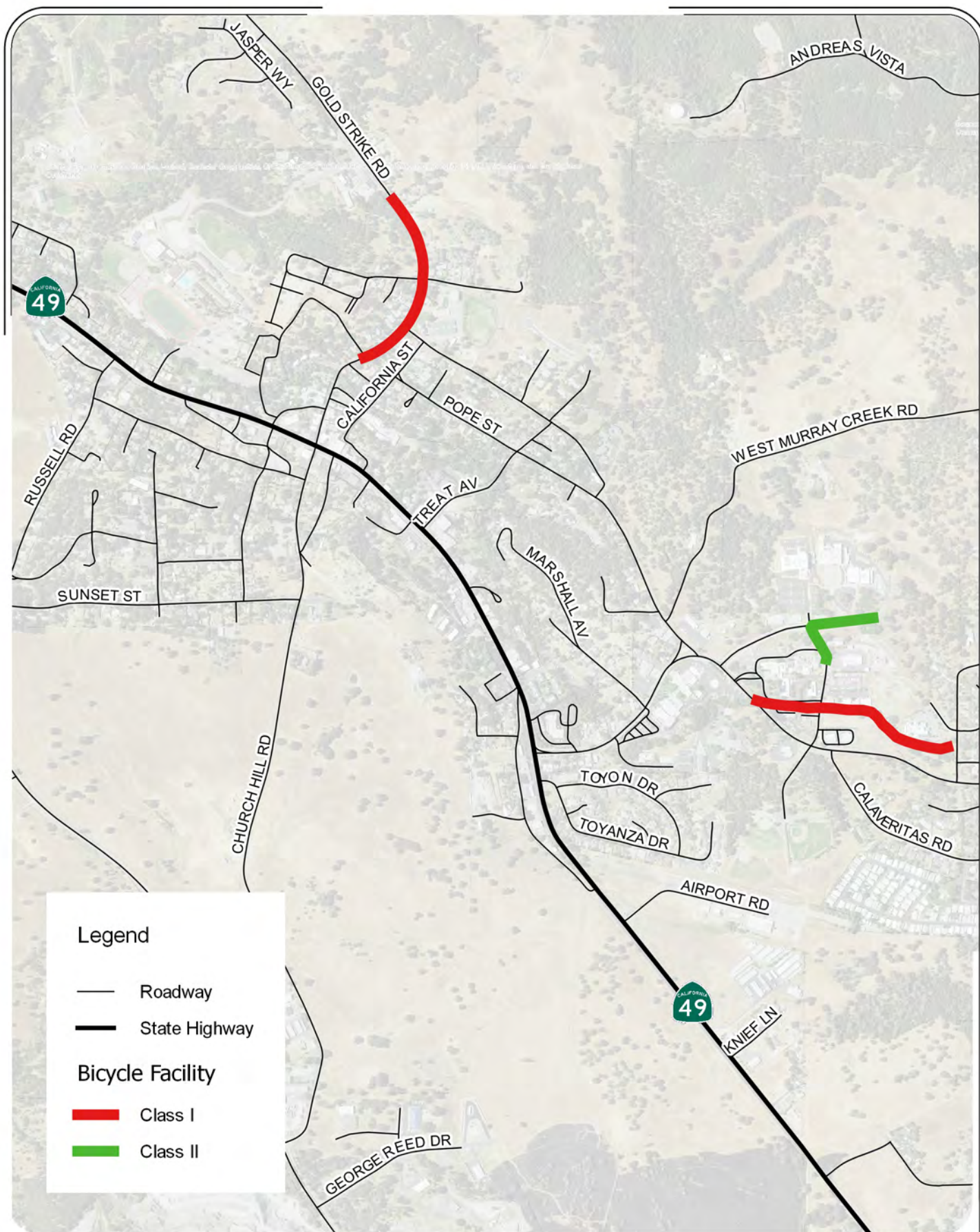


Government Center Class I Multi-Use Path



Pedestrian bridge crossing at the Public Library

Figure 7 and **Figure 8** present the locations of existing bicycle and pedestrian facilities as identified in the the *Rural Livable Mobility Plan* (RLMP, 2009); and the *Calaveras County Regional Bicycle, Pedestrian, and Safe Routes to School Plan* (Bike, Ped, and SRTS Plan, 2015). Additional sidewalks and crosswalks were identified during field visits conducted in 2016.



San Andreas SR 49 Commercial Gateway Corridor Study

Existing Bicycle Facilities

Figure 7





San Andreas SR 49 Commercial Gateway Corridor Study

Existing Pedestrian Facilities

Figure 8

Proposed Bicycle and Pedestrian Facilities

Table 12 and **Table 13** show proposed bikeways and pedestrian facilities as recommended in the Bike, Ped, and SRTS Plan (2015).

**TABLE 12
PROPOSED BICYCLE FACILITIES**

Recommended Bikeway	Start	End	Class	Length (miles)	Source
Calaveritas Rd	Government Center	South Community Boundary	III	5.64	Calaveras County Regional Bicycle, Pedestrian and Safe Routes to School Plan
California St	Lewis Ave	Nielsen Park	III	0.15	
Government Center Dr	Mountain Ranch Rd	Government Center Rd	II	0.14	
Hwy 12	West Community Boundary	Pool Station Rd	STR	4.16	
Hwy 49	Pool Station Rd	Angels Rd	II	1.59	
Hwy 49	Hwy 26	Hwy 12	III	7.09	
Hwy 49	Angels Rd	South Community Boundary	STR	6.01	
Lewis Ave/Pope St/Mountain Ranch Rd	California St	Mountain Ranch Rd	I	0.7	
Main St	Hwy 12	Nielsen Park	III	0.09	
Mountain Ranch Rd	Pope St	Hwy 49	III	0.41	
Nielsen Park	Main St	California St	III	0.07	
Pool Station Rd	Hwy 49	South Community Boundary	III	5.43	
Pope St	California St	Lewis Ave	III	0.38	
San Andreas Elementary Path	Gold Hunter Rd	East end of Existing Path	I	0.03	

**TABLE 13
PROPOSED PEDESTRIAN FACILITIES**

Recommended Sidewalks	Start	End	Length (ft)
East side - St Charles St/Hwy 49	Pool Station Rd	Angeles Rd	8410
West wide - St Charles St/Hwy 49	High School St	Court St	1070
West wside - St Chrale St/Hwy 49	SE Gold Oak Rd	Russell Rd	160
Mountain Ranch Rd	Hwy 49	Government Center Dr	2973
Government Center Dr	Government Center Rd	Mountain Ranch Rd	326

Source: Calaveras County Regional Bicycle, Pedestrian and Safe Routes to School Plan

Complete Streets

The Complete Streets Act of 2008 (Assembly Bill 1358) requires cities and counties to adopt complete streets concepts in their general plans. A complete street provides mobility for all users, including bicyclists, pedestrians, transit riders, and motorists. The 2014 *Calaveras County General Plan Draft Circulation Element* holds the following policy on complete streets:

CIR 1.1 Incorporate the concept of complete streets in all planning, programming, design, operations, and maintenance activities, which requires more complete consideration of all users of the street, including pedestrians, bicyclists, automobiles, trucks, and transit, as appropriate for surrounding land uses.

State Highway Main Streets

Caltrans' Deputy Directive 64-R2 (2008, 2014) directs Caltrans to implement complete streets. Recognizing the challenges as well as opportunities that accompany communities whose Main Street is also a State highway, Caltrans introduced their *Main Street, California* guide in 2013. The guide provides planning and design solutions for complete streets on State highways, and moves away from planning for high-speed Interstate highways. Caltrans states the following:

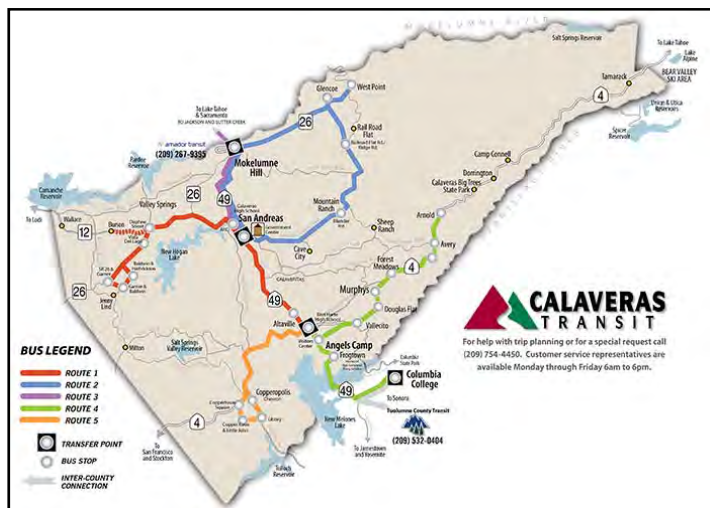
State highway main streets must accommodate the circulation of the local community as well as regional and statewide travel demands [and] ensure that mobility and access are addressed in a manner that makes main street an asset to the local community.

Integral to a successful State highway Main Street is a sense of community livability, identify, and economic viability. Features such as street landscapes, safe public spaces, and options for active transportation promote a "sense of place" that enhances community life, improves circulation, and attracts opportunities for economic advancement.

Transit Facilities

Access to transit facilities is an important component of Complete Streets. Transit service within Calaveras County is provided by Calaveras Transit of Calaveras County Department of Public Works. Calaveras Transit operates between 5:30 AM and 8:00 PM Monday through Friday, with no service on weekends or holidays. Calaveras Transit currently has five routes through Calaveras County. The Delta Gold Line provides bus service from the San Andreas Government Center to the City of Stockton, twice per day.

Routes 1 (A and B), 2, and 3 pass through San Andreas, connecting the community to Rancho Calaveras, Angels Camp, Valley Springs, Burson, West Point, Railroad Flat, Mountain Ranch, Jackson, and Mokelumne Hill, as shown in the Calaveras Transit map. As reported by the US Census (2014), no San Andreas residents travel to work via transit.



Analysis Policies and Methodologies

Traffic operations and impact are typically quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an intersection, representing progressively worsening traffic operations as determined by vehicle delay and congestion. **Table 14** presents intersection control types and corresponding LOS standards.

Recent state legislation (SB 743) mandates that traffic impact analysis utilize a different element to determine traffic operating conditions: Vehicle Miles Traveled (VMT). While this mandate will not take effect during the lifetime of this Study, the Calaveras County 2014 General Plan Draft Circulation Element recognizes that the new traffic impact analysis guidelines should be considered within the scope of future transportation planning, and has incorporated the following policies:

- CIR 1.1** Incorporate the concept of complete streets in all planning, programming, design, operations, and maintenance activities, which requires more complete consideration of all users of the street, including pedestrians, bicyclists, automobiles, trucks, and transit, as appropriate for surrounding land uses.
- CIR 1.3** Prioritize funding and construction of projects that reduce vehicle miles traveled.
- CIR 1.6** Encourage development that reduces or limits vehicle miles traveled, consistent with the policies of the Land Use Element.

Level of Service Policy

The Calaveras County 2014 *General Plan Update Circulation Element* contains the following policy pertaining to the LOS standards within County jurisdiction:

CIR 2.3: Road impacts created by new development shall not reduce the minimum level of service of (LOS) D or better for roadways and intersections in Community Areas [...] and LOS C or better on County-maintained roadway outside of Community Areas, except as specified [...].

Caltrans' Guide for the Preparation of Traffic Impact Studies contains the following policy pertaining to the LOS standards within Caltrans jurisdiction:

Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS.

**TABLE 14
LOS STANDARDS**

Level of Service	Type of Flow	Delay	Maneuverability	Stopped Delay/Vehicle		
				Signalized	Un signalized	All-Way Stop
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	< 10.0	< 10.0	< 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10.0 and < 20.0	>10.0 and < 15.0	>10.0 and < 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20.0 and < 35.0	>15.0 and < 25.0	>15.0 and < 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35.0 and < 55.0	>25.0 and < 35.0	>25.0 and < 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55.0 and < 80.0	>35.0 and < 50.0	>35.0 and < 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent move-ment. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0	> 50.0	> 50.0

Existing Traffic Conditions

The existing conditions analysis investigates current traffic operations at study intersection in the San Andreas, using counts collected on Tuesday April 19, 2016. Existing AM and PM peak hour intersection traffic operations are quantified using intersection existing lane geometrics and traffic volumes. **Table 15** shows the peak hour intersection LOS operations at study locations under existing conditions.

TABLE 15
EXISTING INTERSECTION LOS

#	Intersection	Control Type ^{1,2}	Target LOS	AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1	SR 49 & SR 12	TWSC	C	59.4	F	29.4	D
2	SR 49 & Pool Station Road	TWSC	C	28.7	D	36.2	E
3	Pool Station Road & Russell Road	TWSC	C	9.5	A	9.0	A
4	SR 49 & Russell Road	TWSC	C	20.0	C	13.8	B
5	SR 49 & High School Street	TWSC	C	45.3	E	21.7	C
6	SR 49 & Court Street/Adams Avenue	TWSC	C	30.0	D	32.7	D
7	SR 49 & Main Street/Church Hill Road	TWSC	C	18.4	C	14.2	B
8	SR 49 & Treat Avenue	TWSC	C	20.2	C	17.6	C
9	SR 49 & Mountain Ranch Road ⁴	TWSC	C	59.9	F	69.3	F
10	Mountain Ranch Road & Pope Street	TWSC	C	9.9	A	11.2	B
11	Mountain Ranch Road & Jeff Tuttle Drive	TWSC	C	10.2	B	11.6	B
12	Jeff Tuttle Drive & Govt Center Drive	AWSC	C	7.3	A	7.1	A
13	Mountain Ranch Road & Park Drive/Govt	TWSC	C	12.2	B	13.9	B
14	Mountain Ranch Road & Calaveritas	TWSC	C	11.6	B	12.0	B
15	Mountain Ranch Road & Pope Street	TWSC	C	16.1	C	15.7	C

Notes:

1. AWSC = All Way Stop Control; TWSC = Two Way Stop Control; RNDBT = Roundabout

2. LOS = Delay based on worst minor street approach for TWSC intersections, average of all approaches for AWSC, Signal, RNDBT

As presented in **Table 15**, the two-way stop controlled intersections of SR 49/SR 12, SR 49/Pool Station Road, SR 49/Court Street/Adams Avenue, and SR 49/Mountain Ranch Road, are currently operating at unacceptable LOS for the AM and PM peak hours. All other study intersections are operating at acceptable LOS C or below under existing conditions.

Table 16 presents the average daily traffic and heavy truck percentages along study roadways, calculated as the average of three-day (Tuesday, Wednesday, Thursday) daily traffic counts collected April 19-21, 2016.

TABLE 16
EXISTING AVERAGE DAILY TRAFFIC (ADT)

# Segment	Average - 3 day		
	NB	SB	Heavy Truck %
1 SR 49 s/o SR 12	5939	5634	15.2%
2 Pool Station s/o SR 49	923	913	15.1%
3 SR 49 s/o Bellview St	6246	6153	16.4%
4 SR 49 n/o Treat Ave	6280	n/a	5.2%
5 SR 49 n/o Mountain Ranch Road	n/a	n/a	n/a
6 SR 49 s/o Mountain Ranch Rd	4544	4545	11.7%
7 Mountain Ranch Rd e/o SR 49	3621	3780	15.0%
8 Pope St n/o Mountain Ranch	692	841	2.8%
9 Calaveritas Rd s/o Mountain Ranch Rd	490	477	1.6%
10 Mountain Ranch Road e/o Calaveritas	2010	1995	12.7%

Collision Summary

Collision data for the San Andreas circulation study area was derived from Statewide Integrated Traffic Records System (SWITRS), maintain by the California Highway Patrol (CHP), for a five-year period between January 1, 2011 and December 31, 2015.

Collision Type and Severity

During this five year period, 179 collisions occurred within the circulation study area and on connecting roadways, resulting in one (0.6 percent) fatality, 3 (1.7 percent) severe injuries, 62 (33.5percent) mild to moderate injuries, and 113 (63.1 percent) damages to property. The following tables provide a summary of the collisions within the study area from January 1, 2011 to December 31, 2015 by collision type and severity type, respectively. **Tables 17** and **18** presents collision severity and collision type by study roadway. The following graphic presents the frequency of these severity types:

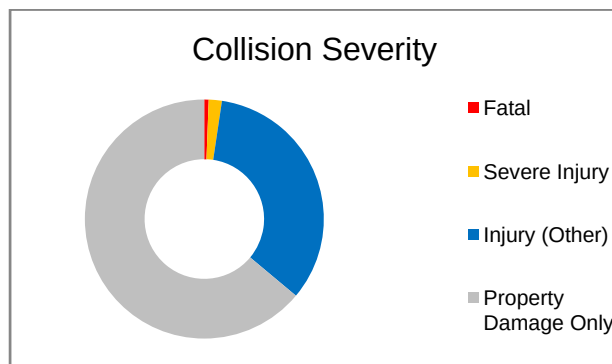


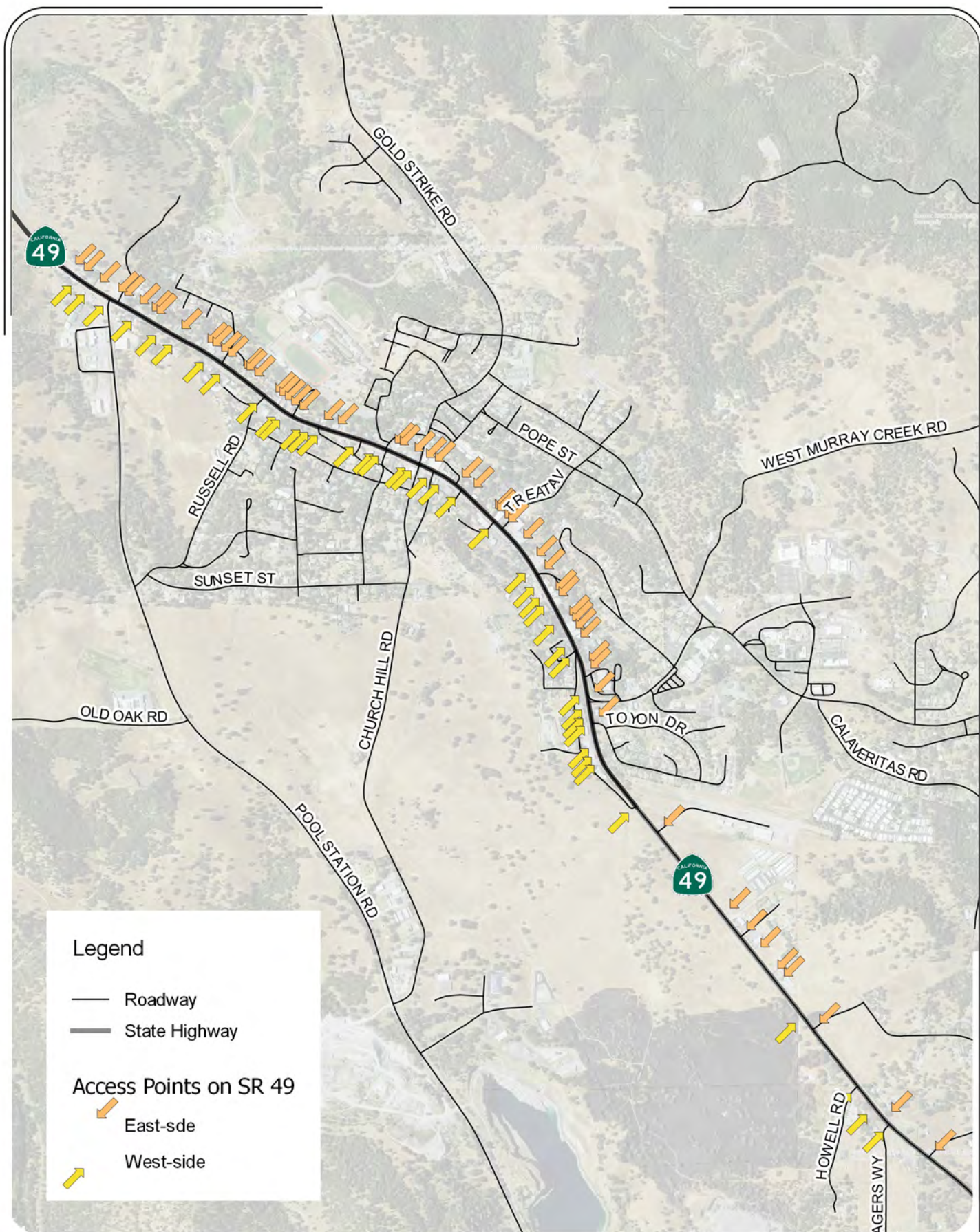
TABLE 17
COLLISIONS SEVERITY BY STUDY ROADWAY

	Fatal	Injury (Other)	Property Damage Only	Severe Injury	Grand Total
Calaveritas Rd			2		2
California St			1		1
Church Hill Rd			2		2
Court St			1		1
Mountain Ranch Rd		3	12	2	17
Pool Station Rd			2		2
Pope St		1	2		3
SR 49	1	40	67		108
SR 12		8	13		21

TABLE 18
COLLISIONS BY TYPE

Collision Type	Calaveritas Rd	California St	Church Hill Rd	Court St	Mountain Ranch Rd	Pool Station Rd	Pope St	SR 49	SR 12	Grand Total
Broadside							1	39	3	43
Head-On					3			3	1	7
Hit Object	1	1	1	1	5	2	1	13	11	36
Other	1							4		5
Overturned					3			3	3	9
Rear End					4		1	33	2	40
Sideswipe			1		1			11	1	14
Vehicle/Pedestrian					1			2		3
Grand Total	2	1	2	1	17	2	3	108	21	157

Segment collision rates through San Andreas are associated with the high number of access points along SR 49, where vehicles entering/existing the highway conflict with each other. Access points include intersecting roadways, and private and commercial driveways. **Figure 9** presents the location of access points along SR 49.



San Andreas SR 49 Commercial Gateway Corridor Study

Access Points - SR 49

Figure 9

Collision Location & Severity

The majority (108 collisions, or 61 percent) of all collisions occurred on SR 49, including one fatality at the intersection of SR 49/Angels Road in 2012. Of collisions with reported direction of travel, the majority occurred in the northbound direction. Nineteen collisions (18 percent) of collisions on SR 49 occurred just north or south of Treat Avenue. **Figure 10** presents the approximate locations and frequency of these collisions. **Figure 11** presents the location and severity of collisions resulting in injuries or fatalities.

Figure 10 - Collision Locations

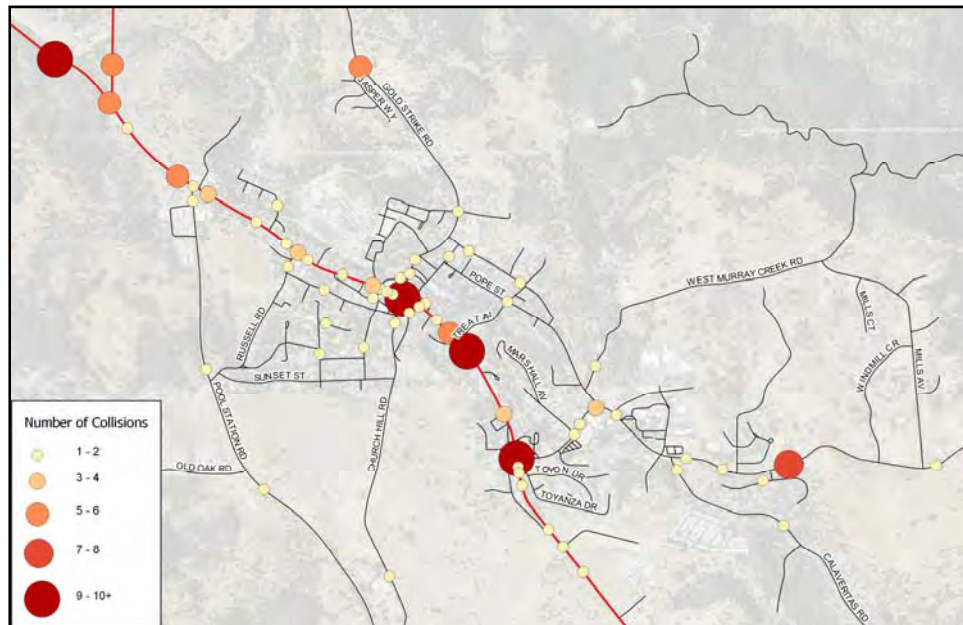
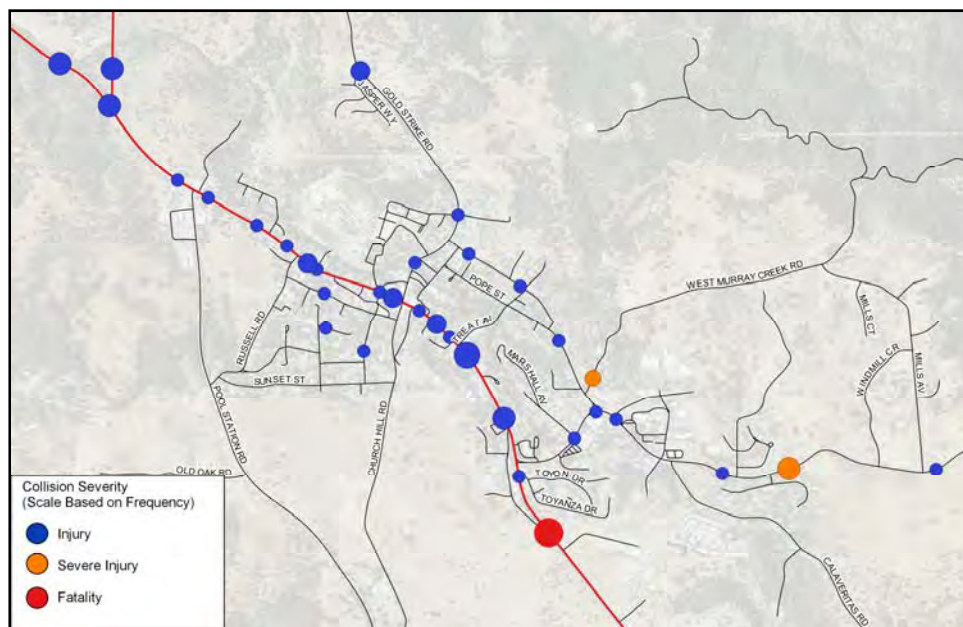


Figure 11 - Collision Severity



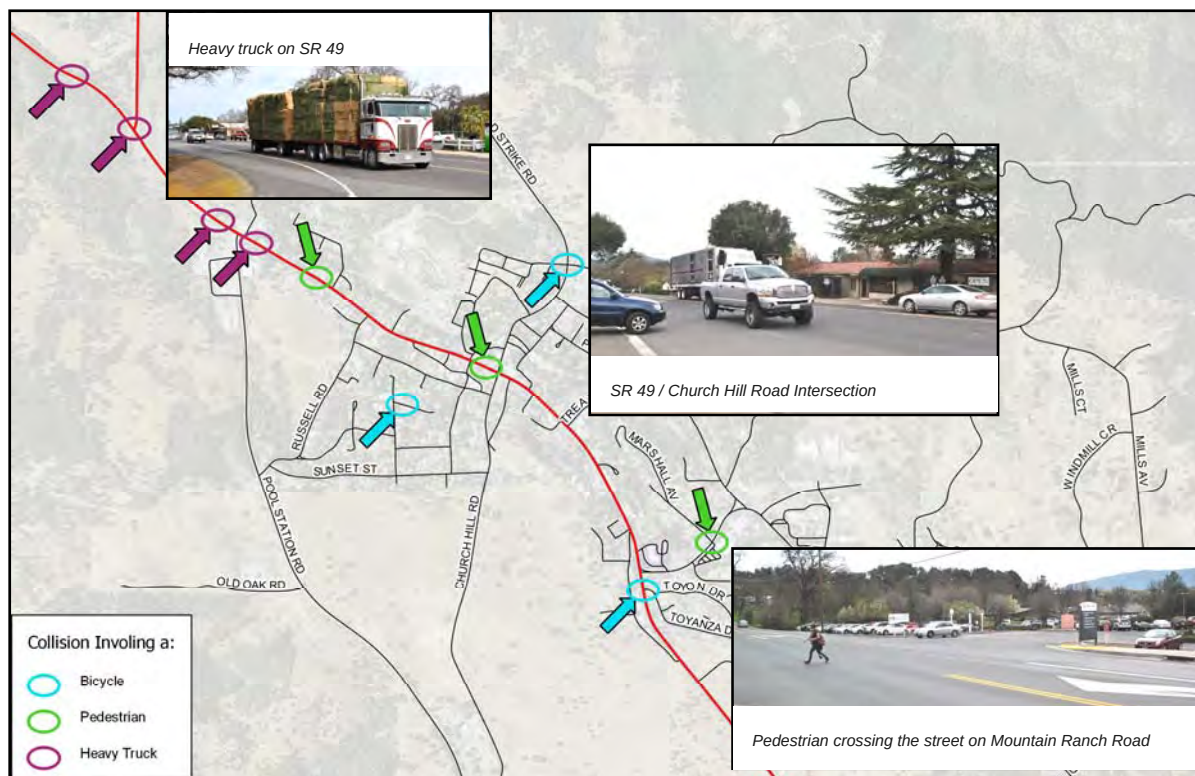
Between 2011 and 2015, there were three vehicle/pedestrian collisions, three vehicle/bicycle collisions, and five collisions involving a heavy truck. There were no severe injuries or fatalities. **Table 19** and **Figure 12** show the location and severity of these collisions.

TABLE 19
COLLISIONS INVOLVING A BICYCLE, PEDESTRIAN, OR HEAVY TRUCK

Year	Primary Roadway	Location	Approximate Time	Injury Type	Severity	Collision Type	Existing Facilities/ Roadway Design
2011	SR 49	South of Court Street	7:54 PM	Pedestrian	Injury (Other)	Vehicle/Pedestrian	Sidewalk on east side; No crosswalk
2011	SR 49	North of Gold Oak Road Intersection with Cemetery	10:00 PM	Pedestrian	Injury (Complaint of	Vehicle/Pedestrian	No crosswalk; No sidewalk
2012	Gold Strike Road	Avenue	2:15 PM	Bicycle	Injury (Other)	Other	Class I Bike Path
2012	SR 49	South of Pool Station Road	3:05 PM	Truck	Property Damage Only	Broadside	Two-way highway; No TWLTL
2012	SR 49	Intersection with Toyanza Street	3:40 PM	Bicycle	Injury (Complaint of	Other	No bike lane
2013	SR 12	West of SR 49	2:00 PM	Truck	Property Damage Only	Hit Object	Two-way highway; No TWLTL
2013	SR 49	Intersection with SR 12	5:25 PM	Truck	Property Damage Only	Broadside	One-way stop controlled intersection
2014	Mountain Ranch Road	Marshall Avenue	10:30 AM	Pedestrian	Injury (Pain)	Vehicle/Pedestrian	Sidewalk; No crosswalk
2015	SR 49	North of Pool Station Road	8:03 AM	Truck	Injury (Other)	Hit Object	Two-way highway; No TWLTL
2015	Pine Street	South of Mariposa St	9:30 AM	Bicycle	Property Damage Only	Broadside	No bike lane
2015	SR 49	Intersection with SR 12	9:35 PM	Truck	Property Damage Only	Broadside	One-way stop controlled intersection

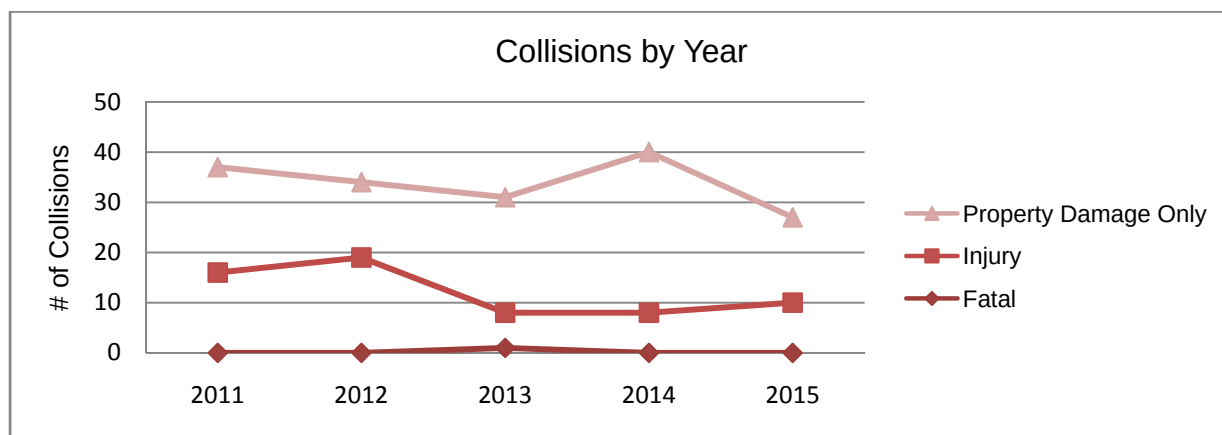
Source: SWITRS, 2011 - 2015

Figure 12 - Bicycle, Pedestrian, and Heavy Truck Collision Locations

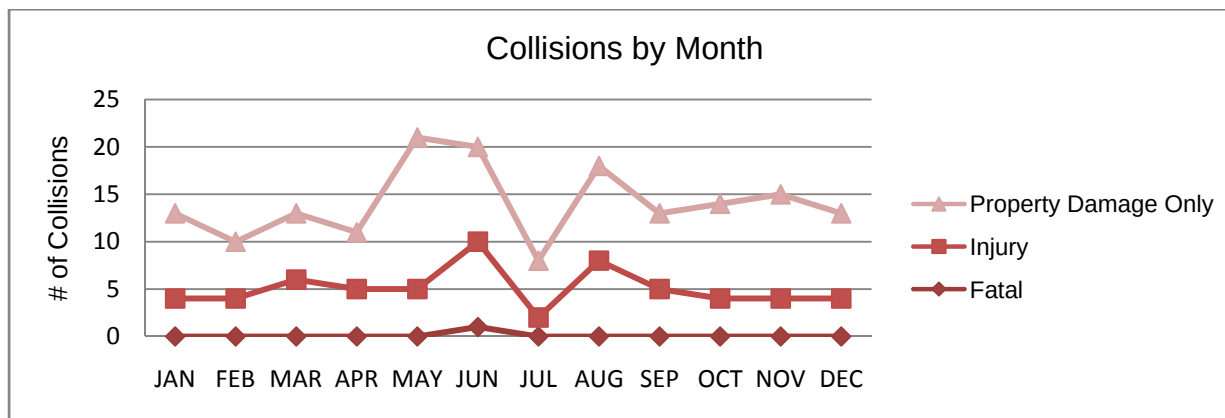


Collision Frequency

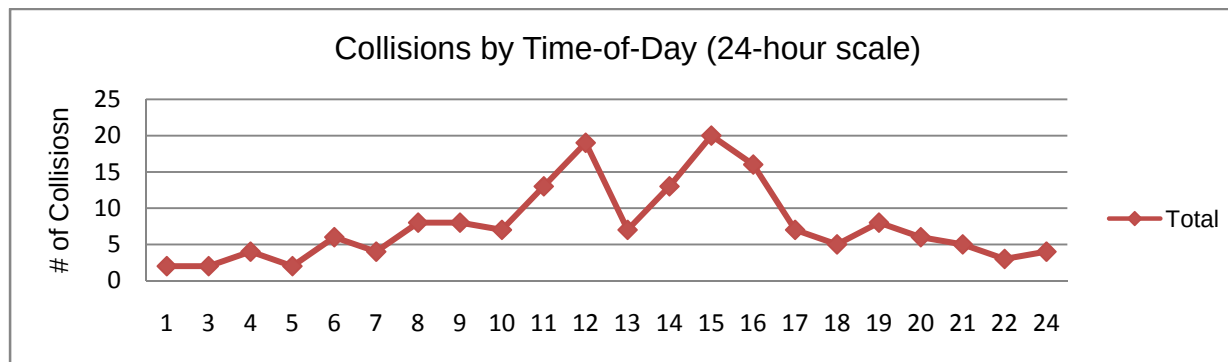
According to data gathered from SWITRS between January 1, 2011 to December 31, 2015, approximately 169 collisions have occurred within the circulation study area and connecting roadways. Collisions are most frequent during the months of May, June, and August; and between the hours of 11 to 12 AM, and 2 to 4 PM. Over the five year data period, there have been on average 34 collisions per year, with a slight spike in 2014, and fall in 2015, as shown in the following graphic.



The following graphic shows the number of collisions by month during the five year period.



The following graphic shows the number of collisions by time-of-day during the five year period.



Safety Performance

Collision rates were calculated for segments along SR 49 and Mountain Ranch Road, in terms of "accidents per million vehicle miles traveled". The collision rates are based on the number of collisions, the average daily traffic (ADT) volumes (April, 2016), and the length of the segment, and the following equation:

$$\text{Collision Rate} = \frac{(\text{Number of Collisions}) \times (1,000,000)}{\text{Vehicle Miles Traveled}}$$

The calculated collision rates were compared with statewide average rates compiled by the California Department of Transportation (Caltrans) as published in their most recent document 2012 Collision Data on California State Highways¹. The document provides basic average accident rates for various types of roadways and intersections categorized by number of lanes, travel speed, etc., and are derived from the California Statewide Integrated Traffic Records System (SWITRS). **Table 20** presents the collision rates for the study segments of SR 49 and Mountain Ranch Road, as well as portions of the segments, within the circulation study area.

TABLE 20
SAFETY PERFORMANCE: SR 49 AND MOUNTAIN RANCH ROAD

Segments	Length (mi)	2016 ADT	Total Collisions	Fatality (F) + Injury (I)	Segment F + I %	Statewide F + I %	Segment Collision Rate	Statewide Basic Average Rate
SR 49 (SR 12 to Howell Rd)	2.7	11365	100	38	38.0%	45.4%	1.79	1.15
SR 12 to Bellview	0.88	11573	30	12	40.0%	45.4%	1.61	1.15
Bellview to Treat Ave	0.44	12399	34	11	32.4%	45.4%	3.41	1.15
Treat Ave to Mtn Ranch Rd	0.4	12399	23	9	39.1%	45.4%	2.54	1.15
Mnt Ranch to Howell Rd	0.98	9089	13	6	46.2%	45.4%	0.80	1.15
Mountain Ranch Rd (SR 49 to east of Calaveritas)	1.12	5703	17	5	29.4%	42.5%	1.46	1.20
SR 49 to Calaveritas	0.59	7401	8	2	25.0%	42.5%	1.00	1.19
e/o Calaveritas	0.53	4005	9	3	33.3%	42.5%	2.32	1.23

As shown in red in Table 16, there are six segments where the collision rate is higher than the statewide average rate, and one segment where the fatality and injury percentage of collisions is higher than the statewide average percentage. Overall, both SR 49 and Mountain Ranch Road, through the extents of the circulation study area, have higher collision rates than statewide average rates.

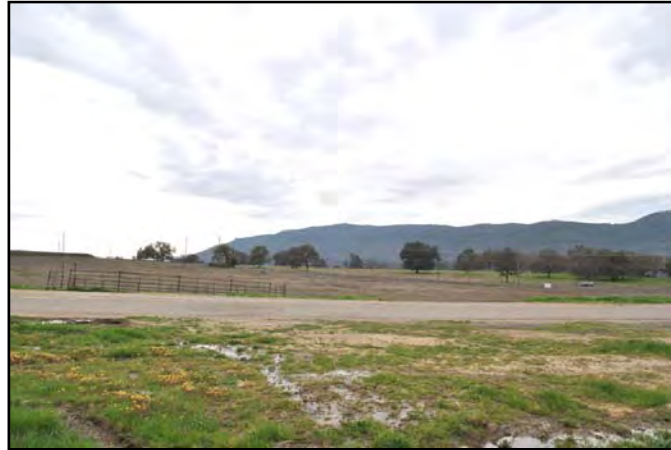
¹ California Department of Transportation 2012 Collision Data on California State Highways (road miles, travel, collisions, collision rates), Division of Traffic Operations, Sacramento, CA.

Land Use and Market Analysis Summaries

The land use study area encompasses approximately 400 acres, including 240 acres of undeveloped land in southern San Andreas. This section provides summaries of land use and market analyses, for the land use study area and San Andreas in general, that were conducted by De Novo Planning Group and New Economics & Advisory, respectively. Full reports presenting the entirety of these analyses are provided in the **Appendix**.

Land Use Analysis

The land use study area is designated Single Family Residential (SFR), Multi-Family Residential (MF), Commercial Planned Development (C-PD), and Industrial Planned Development (i-PD) by the San Andreas Community Plan. The area south of the study area is designated Agricultural Preserve, Mineral Resource Area 2B, and Timberlands/Mineral Resource 2A/Dam Inundation by the 1996 Calaveras County General Plan. **Table 21** shows the land use designation categories by acreage, as provided by De Novo Planning Group.



Landscape of Oak trees in the Land Use Study Area

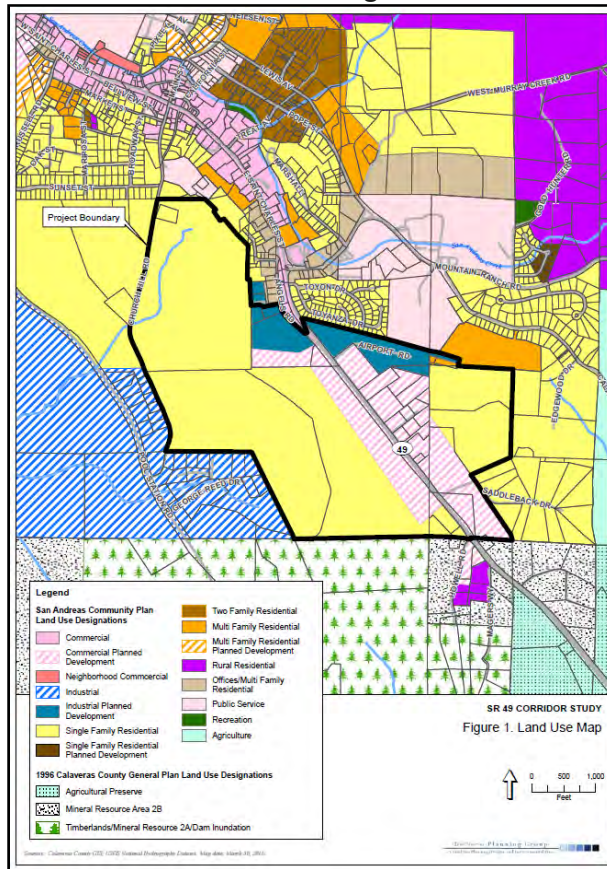
TABLE 21
STUDY AREA LAND USE DESIGNATIONS

Land Use Designation	Total Acres	% of Total
Commercial Planned Development (C-PD)	82.89	20.6%
Industrial Planned Development (I-PD)	29.84	7.4%
Multi-Family Residential (MFR)	0.99	0.2%
Single Family Residential (SFR)	289.23	71.8%
Total	402.95	100.0%

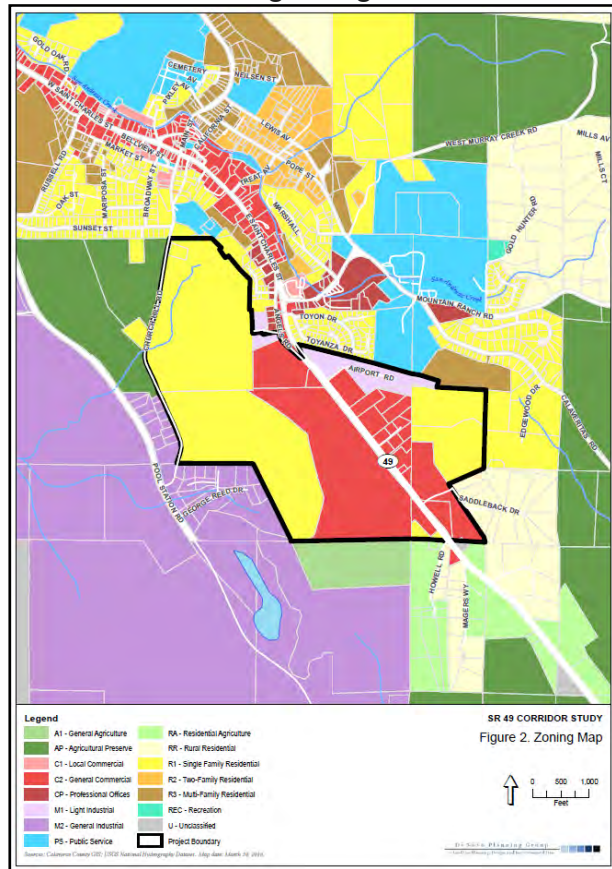
As prepared by De Novo Planning Group, 2016.

The following images present the land use designations and the zoning designations map as provided by De Novo Planning Group. The land use study area is zoned Single Family Residential (R1), General Commercial (C2), and Light Industrial (M1). The portion of the study area adjacent to SR 49 is zoned C2 and M1; the eastern and westernmost portions of the study area are zoned R1.

Land Use Designation



Zoning Designation



Environmental Conditions

The general landscape of the land use study area is classified as grasslands and oak woodland habitat. There are clusters of oak woodlands throughout, and is a stream/river located in the northwestern portion of study area. The majority of the slopes in the study area are less than 15 percent. Areas that contain slopes greater than 15 percent include areas near the on-site stream/river in the northern portion, the southeastern corner, and a small area in the central portion of the study area.

Development Status

The land use study area is comprised of underutilized, vacant, and developed parcels, each with an adopted land use designation. Underutilized parcels have some form of development or improvement, but the improvements and existing development represent a small fraction of the development potential of the parcel, as allowed by the San Andreas Community Plan.



Industrial/commercial site on Airport Road

There are approximately 120.88 acres of underutilized parcels and 246.46 acres of vacant parcels in the land use study area. There are approximately 35.61 acres of developed parcels in the land use study area, which are concentrated east of SR 49, north and south of Airport Road. **Table 22** shows the breakdown by land use category of the underutilized and vacant parcels in the land use study area.

TABLE 22
LAND USE STUDY AREA: DEVELOPMENT STATUS

Land Use Designation	Underutilized Acres	Vacant Acres	% of Total
Commercial Planned Development (C-PD)	12.96	55.09	18.5%
Industrial Planned Development (I-pD)	9.74	3.34	3.6%
Multi-Family Residential (MFR)	0	0.88	0.2%
Single Family Residential (SFR)	98.18	187.5	77.8%
Total	120.88	246.46	100.0%

As prepared by De Novo Planning Group, 2016.

Water Supply & Sewer Services Summary

Calaveras Public Utility District (CPUD), which provides treated water services to the study area, has adequate capacity to provide service to existing water connections, and adequate water rights to supply projected growth in demand well past 2030. CPUD has adequate treatment capacity to accommodate near-term growth in the next 10-15 years.

The wastewater treatment plant (WWTP) is currently at capacity. The District estimates that the WWTP can accept a maximum of 22 new connections, and that it will need a new plant to serve projected growth. Additionally, there is no reserve capacity for in-fill development.

Market Analysis

According to analysis prepared by New Economics & Advisory in 2016, San Andreas remains a challenged market for new development. While there is a relatively large amount of jobs within the community, employees favor living outside of San Andreas because of the lack of "quality of life" factors such as building quality stock, shopping opportunities, and recreational/cultural amenities. While the County grew by approximately 500 new homes from 2006 to 2015 (the majority of which occurred in the communities of Valley Springs and Copperopolis), San Andreas grew by only 7 new homes, and existing housing stock is of marginal quality.

The following findings and projections will be used to inform subsequent recommendations for development opportunities in the land use study area. These estimates are based on future expectation of growth in the County, and San Andreas' current share of countywide growth. These findings and projections do not account for the potential of San Andreas to capture a larger share of countywide growth by significantly improving its competitive position, or if the County experiences more growth than currently anticipated. In either case, San Andreas could potentially achieve higher levels of growth.

Overall Findings:

- San Andreas median household income and average home sales price are significantly lower than communities throughout the County, and new home development is limited.
- Residential growth in San Andreas has been limited, and its proportion of growth in the region has been declining over the past forty years.
- San Andreas holds the opportunity to attract future development to serve workers who are employed in San Andreas and wish to live close to their place of work.
- The Primary Trade Area (PTA) of San Andreas is a 6-mile radius around the center of town; however, it does not capture residents of areas near Jackson and Angels Camp, who have a larger selection of shopping opportunities available to them closer their homes.
- No significant retail development has occurred in several decades, and existing retail buildings in San Andreas are uniformly aged and of poor quality by today's standards.

Projections:

- Assuming "business as usual" conditions, San Andreas can expect to experience approximately 180 (a growth increase of 0.69 percent per year) to 220 units of new residential growth over the next twenty years.
- San Andreas may support up to approximately 20,000 square feet (approximately 2.0 acres) of new retail development over the next twenty years.
- Given anticipated growth in employment and population, San Andreas could expect approximately 2.0 to 4.0 acres of office development in the next twenty years.
- San Andreas could expect approximately 1.5 to 3.5 acres of industrial space by 2035.

Table 23 summaries the growth projections for residential, retail, office, and industrial land uses, with a moderate estimate and high estimate for 20 year projections.

TABLE 23
SAN ANDREAS 20-YEAR DEVELOPMENT PROJECTIONS: 2016 THROUGH 2035

Item	20-Year Total: 2016 - 2035	
	Moderate Estimate	High Estimate
Residential Growth		
New Residential Units	180	220
Commercial Growth		
Retail Acres	1.8	1.9
Office Acres	1.8	4.1
Industrial Acres	1.5	3.4
Subtotal Commercial Growth (Acres)	5.2	9.5

As prepared by New Economics & Advisory, 2016.

APPENDIX

A) LAND-USE PLANNING ISSUES AND OPPORTUNITIES
ANALYSIS (DE NOVO)

B) FOCUSED REAL ESTATE MARKET ANALYSIS (NEW
ECONOMICS)

State Route 49 Corridor Study

This technical memo provides a summary and overview of land uses within the study area, regulatory documents that guide land uses within the study area, environmental conditions and constraints within the study area, and water and sewer services within the study area that may influence future growth and development.

REGULATORY DOCUMENTS

San Andreas Community Plan

The San Andreas Community Plan was adopted in 1981 and revised in June 1988. The Community Plan contains land use designations, implementation programs, a Community Plan Map, and multiple introductory and background sections. The Community Plan provides community-specific land use and circulation plans in congruence with the County General Plan. The San Andreas Community Plan has not been updated since 1988; however, land use maps have been updated in the years 2008 and 2012.

The San Andreas Community Plan Report provides resident-input on land use, conservation, circulation, safety, and community participation, in lieu of the 2008 Calaveras County General Plan Update. The Community Plan Report has not been adopted.

Calaveras County General Plan

The Calaveras County General Plan was adopted in 1996. A 2014 General Plan update has been drafted and made available to the public, and is awaiting adoption by the County Board of Supervisors. This document aims to meet state planning requirements and guides countywide development in the following categories: land use, circulation, housing, conservation, open space, noise, and safety.

The Calaveras County General Plan Land Use Element provides the general framework for development in the County, and identifies future land use designations in the unincorporated areas of Calaveras County to establish where and what type of development can occur. Specific to Calaveras County, the Land Use Element aims to maintain rural, open space by focusing development in and around existing communities. The 2014 Land Use Element has not been adopted.

The Calaveras County General Plan Background Report provides technical data to support the 2014 General Plan.

Calaveras County Zoning Ordinance

Title 17 of the Calaveras County Municipal Code is the County's Zoning Ordinance. The Zoning Ordinance carries out the policies of the General Plan by classifying and regulating the uses of land and structures within the county, consistent with the General Plan. The Zoning Ordinance is adopted to promote and protect the public health, safety, peace, comfort, convenience, and general welfare. More specifically, the purpose of the Zoning Ordinance is to achieve the following objectives:

- A. To provide a means of implementing the policies of the Calaveras County general plan;
- B. To provide a means to classify, and ensure adequate development of real property in the unincorporated portion of the county;
- C. To ensure that there are adequate services available to meet the needs of residences, business, commerce, recreation and industry;

- D. To establish fair, consistent development standards;
- E. To provide a means of prompt, fair, project consideration and review.

The Zoning Ordinance establishes the County’s zoning districts and includes the County’s Zoning Map and provides direction for the interpretation of the Zoning Map. The Zoning Ordinance defines allowable land uses within each zoning and combining district, provides development standards for each zoning district and, where applicable, provides performance standards and identifies design criteria.

LAND USE AND PLANNING

The following provides a summary of land uses, zoning, and development status within the study area.

Land Use Designations

The following discussion is based on a search of the San Andreas Community Plan and 1996 Calaveras County General Plan land use maps.

Figure 1, Land Use Map, shows the San Andreas Community Plan and 1996 Calaveras County General Plan land use designations for the study area and region. As shown in the figure, the study area is designated Single Family Residential (SFR), Multi Family Residential (MFR), Commercial Planned Development (C-PD), and Industrial Planned Development (I-PD) by the San Andreas Community Plan. The study area is not designated by the 1996 Calaveras County General Plan; however, the area to the south of the study area is designated Agricultural Preserve, Mineral Resource Area 2B, and Timberlands/Mineral Resource 2A/Dam Inundation by the 1996 Calaveras County General Plan. The surrounding land uses outside of the study area are shown in the following table:

Table 1: Surrounding Land Uses

DIRECTION	SAN ANDREAS COMMUNITY PLAN	1996 CALAVERAS COUNTY GENERAL PLAN
North	Single Family Residential, Two Family Residential, Multi Family Residential, Multi Family Residential Planned Development, Rural Residential, Public Service, Commercial, Neighborhood Commercial, Commercial Planned Development, Offices/Multi Family Residential	N/A
South	Rural Residential, Commercial Planned Development	Agricultural Preserve, Mineral Resource Area 2B, Timberlands/Mineral Resource 2A/Dam Inundation
East	Single Family Residential, Single Family Residential Planned Development, Multi Family Residential, Rural Residential, Public Service, Commercial, Offices/Multi Family Residential, Agriculture, Recreation	N/A
West	Single Family Residential, Industrial	N/A

Zoning

The following discussion is based on a search of the Calaveras County zoning map.

Figure 2, Zoning Map, shows the Calaveras County zoning designations for the study area and region. As shown in the figure, the study area is zoned Single Family Residential (R1), General Commercial (C2), and Light Industrial (M1). The portion of the study area adjacent to SR 49 is zoned C2 and M1, while the eastern and westernmost portions of the study area are zoned R1. The zoning designations surrounding the study area include: R1, Two-Family Residential (R2), Multi-Family Residential (R3), Local Commercial (C1) C2, M1, Professional Offices (CP), Public Service (PS), and Agricultural Preserve (AP) to the north; R1, Rural Residential (RR), R2, R3, C1, C2, CP, PS, AP, and Recreation (REC) to the east; General Industrial (M2), General Agriculture (A1), AP, Residential Agriculture (RA), and RR to the south; and R1, AP, and M2 to the west.

Development Status

All of the parcels within the study area are shown on Figure 3, and are listed below in Table 2. Table 2 identifies the map label, which corresponds to Figure 3, identifies the APN, parcel acreage, San Andreas Community Plan Land Use Designation, and the development status of each parcel within the study area.

Table 2: Parcels in the Study Area

MAP LABEL	APN	ACRES	SAN ANDREAS COMMUNITY PLAN LAND USE DESIGNATION	DEVELOPMENT STATUS
1	440-06-040	1.099	I-PD	Vacant
2	440-07-020	2.6977	C-PD	Developed
3	440-07-021	2.5256	C-PD	Underutilized
4	440-14-014	18.7742	C-PD: 17.7 acres; SFR: 1.1 acres	Vacant
5	440-07-006	0.9553	C-PD	Developed
6	440-07-022	0.9951	C-PD	Developed
7	440-07-005	1.0448	C-PD	Developed
8	440-07-016	1.4424	C-PD	Developed
9	440-01-008	1.5577	SFR	Developed
10	440-14-007	3.831	C-PD	Vacant
11	440-14-027	3.1052	C-PD: 1.0 acres; SFR: 2.1 acres	Underutilized
12	440-14-026	0.0285	C-PD	Vacant
13	440-07-014	0.6984	C-PD	Developed
14	440-07-012	3.9407	C-PD	Underutilized
15	440-06-032	1.4128	C-PD	Vacant
16	440-06-026	5.9399	C-PD	Vacant
17	440-14-004	0.095	C-PD	Developed
18	440-14-019	0.6688	SFR	Developed
19	440-14-018	1.675	SFR	Developed
20	440-07-001	3.1201	C-PD	Vacant
21	440-07-019	2.6633	C-PD	Developed

MAP LABEL	APN	ACRES	SAN ANDREAS COMMUNITY PLAN LAND USE DESIGNATION	DEVELOPMENT STATUS
22	440-12-033	0.0957	SFR	Vacant
23	440-06-030	1.3643	I-PD	Vacant
24	440-14-024	19.1701	SFR	Vacant
25	440-14-025	0.1079	MFR	Developed
26	440-12-032	1.3071	I-PD: 0.66 acres; MFR: 0.65 acres	Vacant
27	440-12-028	0.4564	I-PD: 0.22 acres; MFR: 0.23 acres	Vacant
28	440-07-018	0.7941	C-PD	Developed
29	440-07-004	1.157	C-PD	Developed
30	440-14-016	21.1014	C-PD: 0.28 acres; SFR: 20.83 acres	Vacant
31	440-07-017	1.0367	C-PD	Developed
32	440-06-028	15.5928	I-PD	Developed
33	440-07-010	0.8924	C-PD	Developed
34	440-07-009	0.371	C-PD	Developed
35	440-01-074	81.6938	C-PD: 22.77 acres; SFR: 58.93 acres	Vacant
36	440-06-031	15.2356	C-PD: 5.50 acres; I-PD: 9.74 acres	Underutilized
37	440-06-039	1.1637	I-PD	Developed
38	440-01-056	87.067	SFR	Vacant
39	440-01-071	96.0769	SFR	Underutilized

Table 3 identifies the total acreage of each land use designation within the study area.

Table 3: Total Acreage of Land Uses in the Study Area

SAN ANDREAS COMMUNITY PLAN LAND USE DESIGNATION	TOTAL ACRES
Commercial Planned Development (C-PD)	82.89
Industrial Planned Development (I-PD)	29.84
Multifamily Residential (MFR)	0.99
Single Family Residential (SFR)	289.23
Grand Total	402.95

Underutilized parcels are parcels that have some form of development or physical improvements, as recorded by the County Assessor's Office, but the improvements and existing development represent a small fraction of the development potential of the parcel, as allowed by the San Andreas Community Plan. Table 4 identifies the acreage of each land use designation for underutilized parcels within the study area.

Table 4: Underutilized Parcels in the Study Area

SAN ANDREAS COMMUNITY PLAN LAND USE DESIGNATION	TOTAL ACRES
Commercial Planned Development (C-PD)	12.96
Industrial Planned Development (I-PD)	9.74
Single Family Residential (SFR)	98.18
Grand Total	120.88

Vacant parcels are parcels that have no development or physical improvements, as recorded by the County Assessor's Office. Table 5 identifies the acreage of each land use designation for vacant parcels within the study area.

Table 5: Vacant Parcels in the Study Area

SAN ANDREAS COMMUNITY PLAN LAND USE DESIGNATION	TOTAL ACRES
Commercial Planned Development (C-PD)	55.09
Industrial Planned Development (I-PD)	3.34
Multifamily Residential (MFR)	0.88
Single Family Residential (SFR)	187.5
Grand Total	246.46

Developed parcels are parcels that have existing buildings and structures, and are assumed to have little to no additional development potential. Table 6 identifies the acreage of each land use designation for developed parcels within the study area.

Table 6: Developed Parcels in the Study Area

SAN ANDREAS COMMUNITY PLAN LAND USE DESIGNATION	TOTAL ACRES
Commercial Planned Development (C-PD)	14.84
Industrial Planned Development (I-PD)	16.76
Multifamily Residential (MFR)	0.11
Single Family Residential (SFR)	3.90
Grand Total	35.61

As shown in the tables above, over half of the study area is undeveloped, and the majority of the vacant land within the study area is designated Single Family Residential.

ENVIRONMENTAL CONSTRAINTS AND CONDITIONS

The following section provides a summary of the environmental constraints and conditions influencing the study area.

Biological Resources

Habitat types in the study area can be generally described and classified as grasslands and oak woodland habitat. To the west of SR 49, oak trees and clusters of oak woodlands are scattered throughout grasslands within the largely undeveloped areas of the study area. A dense stand of oak woodlands is located east of SR 49, southeast of the terminus of Airport Road. As shown on Figure 4, an ephemeral

stream is located in the northwestern portion of the study area. While a wetland delineation has not been performed for the study area, a review of historical aerial photography indicates the potential presence of wetlands in the areas adjacent to this stream channel.

In order to determine the presence of special-status species in the study area, a background search of special-status species that are documented in the California Natural Diversity Database (CNDDDB) was performed. The background search was regional in scope and focused on the documented occurrences within the vicinity of the study area. Figure 5, CNDDDB 5-mile Radius Search, presents the documented occurrences within a 1-mile and 5-mile radius of the study area.

As shown in the figure, there are no documented occurrences of special-status species within the study area. However, special-status species are known to occur within 5 miles of the study area. The nearest special-status species occurrence, Townsend's big-eared bat, is located approximately 1.25 miles northwest of the study area. Other special-status species occurrences within 5 miles of the study area include lone Chaparral (approximately 2.60 miles to the northeast), lone manzanita (approximately 2.60 miles to the northeast), Bisbee Peak rush-rose (approximately 2.90 miles to the north), and Parry's horkelia (approximately 5.00 miles to the northeast). Special-status species occurrences beyond the 5-mile radius include bald eagle (approximately 5.60 miles to the southwest), tricolored blackbird (approximately 6.23 miles to the southeast), Red hills soaproot (approximately 8.75 miles to the northeast), foothill yellow-legged frog (approximately 8.45 miles to the northeast), and dubious pea (approximately 8.88 miles to the northeast).

The oak woodlands located throughout the study area provide suitable nesting and foraging habitat for a variety of raptors protected under the Migratory Bird Treaty Act. Any future development within the study area should be required to conduct pre-construction surveys for nesting raptors. Additionally, future development potential within the study area would be limited within the dense stand of oak woodlands located in the eastern portion of the study area. Future development in the northwestern portion of the study area, within the vicinity of the stream and pond shown on Figure 4, may be required to complete a wetland delineation in order to assess and avoid potential impacts to wetland and jurisdictional waters of the U.S.

Cultural Resources

In order to determine the potential for cultural or historical resources to occur within the study area, a records search was completed through the Central California Information Center. According to the search results provided by the Information Center, there are no known prehistoric or Native American historical resources known to occur within the study area.

There are a limited number of historic-era resources known to occur within the eastern portion of the study area. These include mining remnants, concrete stock tanks, and concrete slab foundations. Given the nature of these documented resources, it is not likely that these resources would pose an impediment to future development within the study area, however, proper recordation and documentation of these resources would likely be required prior to any removal or disturbance.

Additionally, as with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown cultural, paleontological, or archaeological resources. The California Public Resources Code and the California Environmental Quality Act include requirements and

procedures that must be implemented in the event that a previously-unknown cultural or historical resource is discovered during construction activities.

EARTHQUAKE FAULTS

The following discussion is based on a background search of regional earthquake faults that are documented by the U.S. Geological Survey (USGS).

Figure 6, Fault Map, shows quaternary faults in the region of the study area. The figure also shows the slip rates of the quaternary faults. Slip rates are considered well constrained if the direction, amount, and timing of displacement have been demonstrated. Moderately constrained slip rates generally have significant uncertainty for one of these components. Poorly constrained slip rates have either significant uncertainty with respect to both amount and timing of displacement or else the reported slip rate is a long-term (late Cenozoic) average rate. Many of the faults in California are poorly to moderately constrained because they have not been studied sufficiently or because no available site has been found that contains appropriate stratigraphic relationships and dateable material needed to infer details of the paleoseismic history.¹

The study area is not located within a currently designated Alquist-Priolo Earthquake Fault Zone, and known surface expression of active faults does not exist within the study area. However, the study area is located within a seismically active region. As shown in the figure, quaternary faults are known to occur within the vicinity of the study area. The nearest quaternary fault, the Poorman Gulch Fault, crosses a portion of the western study area boundary. This fault is considered “well-constrained.” Other quaternary faults near the study area include the Haupt Creek Fault (approximately 2.42 miles to the east), Youngs Creek Fault (approximately 2.94 miles to the east), Waters Peak Fault (approximately 6.95 miles to the east), Lone Fault (approximately 10.05 miles to the northwest), Bowie Flat Fault (approximately 14.65 miles to the south), Green Springs Run Fault (approximately 17.73 miles to the south), and Rawhide Flat East Fault (approximately 18.48 miles to the south).

All areas within California are subject to hazards associated with earthquakes and seismic ground shaking. Any future development that occurs within the study area would be required to be built in conformance with the most current edition of the California Building Code (CBC), which would reduce hazards to life and property associated with earthquakes and seismic ground shaking.

Slope Contours

The following discussion is based on an assessment of slope contours and the presence of USGS streams/rivers that are documented in the Calaveras County Geographical Information System (GIS) and USGS National Hydrography Dataset.

Figure 7, Slope Map, shows the contours, slope percentages, and presence of streams or rivers in the region of the study area. As shown in the figure, the majority of the slopes in the study area are less than 15 percent. A USGS stream/river is located in the northern portion of the study area, and streams/rivers are located to the north, south, east, and west of the study area. Areas within the study area that contain slopes greater than 15 percent include areas near the on-site stream/river in the northern portion of the study area, the southeastern corner of the study area, and a small area in the central portion of the study

¹ California Department of Conservation, California Geological Survey. 1996. Probabilistic Seismic Hazard Assessment for the State of California - Open File Report 96-08.

area. These areas with slopes greater than 15 percent would be constrained for future development potential.

Soil Types

The following discussion is based on a soils report completed for the study area using soil data provided by Calaveras County.

Figure 8, Soils Map, shows the soil types, locations, and properties in the study area. As shown in the figure, the study area contains four soil series: Stover (fine, mixed, thermic), Auburn (loamy, mixed, thermic), Exchequer (loamy, mixed, non-acidic, thermic), and Inks (loamy-skeletal, mixed thermic). Urban/industrial soils are also located along SR 49 and the northern study area boundary. The on-site soils are moderately permeable, well to excessively drained, and have moderately low to high runoff potential with a slight erosion hazard. The Auburn soil series, which has moderately high runoff potential, makes up the majority of the study area. The soils present within the study area do not pose a significant hazard or impediment to future development potential.

FLOOD HAZARDS

The following discussion is based on the Flood Insurance Rate Map (FIRM) delineated by the Federal Emergency Management Agency (FEMA).

Figure 9, FEMA Flood Hazard Map, shows the FEMA FIRM for the study area and region. As shown in the figure, the majority of the study area is located in Zone X, outside of the 100-year flood zone in an area of minimal flood hazard. Two small areas of the study area are located in Zone A, within the 100-year flood zone: an area in the northern portion of the study area near the USGS stream/river, and an area in the southern portion of the study area near George Reed Drive.

Hydrography

The following discussion is based on a search of the National Wetlands Inventory documented by the U.S. Fish and Wildlife Service (USFWS), as well as the USGS National Hydrography Dataset and Calaveras County GIS.

Figure 4, Hydrography Map, shows the watersheds and nearby freshwater emergent wetlands, freshwater ponds, lakes, and other water features for the study area and region. As shown in the figure, the study area is located within the South Fork Calaveras River watershed, Calaveritas Creek watershed, and Murray Creek watershed. The majority of the study area is located within the South Fork Calaveras River watershed, while the other two watersheds are mainly located east of SR 49 within the study area. As noted previously, a USGS stream/river is located in the northern portion of the study area. The stream/river terminates at a freshwater pond in the northernmost-portion of the study area. Other freshwater ponds, emergent wetlands, and a lake are located in the vicinity of the study area.

WATER AND SEWER SERVICES

Information in this section was derived primarily from the *Final Water and Wastewater Municipal Service Review*, Calaveras Local Agency Formation Commission, June 18, 2012.

Water Services

The Calaveras Public Utility District (CPUD) provides treated water services to the study area. The CPUD's service area includes Mokelumne Hill, San Andreas, Paloma, and portions of Glencoe and Railroad Flat.

The District bounds encompass a variety of land uses, as they include the communities of San Andreas and Mokelumne Hill, in addition to the Highway 49 corridor between the two. In the community of San Andreas, land uses include residential, commercial, public, and parks and recreation land uses; and in the community of Mokelumne Hill, land uses include residential, commercial, agricultural, and public land uses. Significant planned development is associated with both communities. Other land uses within CPUD include agricultural preserve, timberland and mineral resources.

Local businesses include commercial and institutional operations located in the communities of San Andreas and Mokelumne Hill. Major employers within the District include Calaveras County, Mark Twain St. Joseph's Hospital, Mark Twain Convalescent Hospital, and Calaveras Unified School District.

The District considers its customer base to be the water connections served and the residents within the District boundaries. As of 2009, the District provided water services to 1,985 water connections—1,461 single-family residential, 285 multi-family residential, 228 commercial, seven public, no industrial, and four irrigation connections. The estimated number of residents in 2009 was 3,915, based on analysis of connections served and 2010 DOF household size data. The District's population density was approximately 50 per square mile in 2009, compared with the countywide density of 45 per square mile.

The District's projected population growth rate from 2009 to 2030 is 49 percent (two percent annually), which is somewhat higher than the countywide projected growth of 32 percent over that period.

In terms of planned development, new multi-family units within the District are planned south of Highway 49, west of Russell Road, and north of Highway 49, along Main Street and along Gold Strike Way. Multi-family units are also planned in the vicinity of the Highway 12/49 junction. Commercial development is planned south of Highway 49, east of Pool Station Road, and in the southeastern portion of the District along Highway 49. Industrial areas are planned west of Angels Road and along Airport Road, in the south of the District. Minimal development is planned in Mokelumne Hill where single family residential infill is planned to be constructed on two parcels south of Center Street. The District is not a land use authority, and does not hold primary responsibility for implementing growth strategies.

CPUD provides surface water treatment and distribution, for domestic use, directly. CPUD provides limited raw water service to four accounts. The District generates hydroelectric power at four generating stations for sale to PG&E. Key infrastructure for water service includes the District's water supplies, its water treatment plant, three pump stations, two reservoirs, six storage tanks, three pressure-reducing stations, 18 miles of transmission mains, and 23 miles of distribution pipeline.

Water Supplies

CPUD obtains its water from the South Fork of the Mokelumne River where the District has a diversion dam; the dam is located just below the confluence of the South and Licking Forks of the Mokelumne River. The dam causes the river water to pool, so CPUD can extract the water from the river through a pump station (3,300 gpm capacity) and transport it via a three-mile pipeline (9.7 mgd capacity) to the Jeff Davis Reservoir. From there, it enters the treatment plant and then flows through transmission mains into the distribution system.

The District also has facilities for extracting water from the Middle Fork of the Mokelumne River. CPUD's Schaads Reservoir on the Middle Fork of the Mokelumne River is used to supply CCWD with up to 200 acre-feet annually (afa). The reservoir capacity is 1,800 afa. Historically, water was moved from Schaads Reservoir through a diversion canal to the Licking Fork of the Mokelumne River (which is upstream from the CPUD pump station). Due to the poor condition of the diversion canal, the Middle Fork water has not been diverted into the Licking Fork for some time. Schaads Reservoir is not connected hydraulically to the CPUD treated water system at this time. Schaads Reservoir needs improvements to remove siltation, install flashboards and reconstruct the pressure reducing facility there.

CPUD reported that it has rights to store 400 afa of Calaveras River water at its Redhawk Reservoir located to the east of the intersection of Ridge Road and Railroad Flat. The water was used in the past to supply downstream agricultural users. CPUD has not supplied those agricultural users since approximately 2002, and is not actively operating the Redhawk Reservoir.

Treatment Systems

The District owns, operates and maintains a treatment plant for surface water. The Jeff Davis Water Treatment Plant (WTP) consists of six dual media pressure filters, and has capacity to produce 6 million gallons per day (mgd) of treated water.

The WTP was designed to allow for expansion to 12 mgd capacity with the addition of six pressure filters. By comparison, average day demand is 1.3 mgd and peak day demand is 3.02 mgd. There is adequate WTP capacity. CPUD plans to start planning for WTP expansion within the next 10-15 years. The WTP is in good condition, having been upgraded recently. When it is expanded, the WTP will need to provide more treated water storage and to re-engineer to avoid in-plant pumping.

Water Storage

The Agency owns and maintains six treated water storage facilities. The storage tanks have a combined storage of 5.66 mg of water. Treated water storage would accommodate 1.9 days of peak demand or 4.4 days of average system demand. Four storage tanks were built in the 1970s, a minor storage tank in Golden Hills was built in the 1980s, and the Railroad Flat storage tank was built in 2002. Storage facilities in Golden Hills and Paloma lack capacity to meet District standards.

Distribution and Transmission

The transmission system consists of 18 miles of mains made primarily from cement, mortar lined and coated steel pipe of 16 to 27 inches in diameter. The transmission main runs from the WTP and generally follows SR 26 but crosses open country in some locations. The distribution system consists of 20 miles of pipeline made of steel, PVC and other materials; some distribution pipelines are 50 years or older in age.

The CPUD master plan calls for \$795,000 in annual pipeline replacement expenditures to replace aging pipelines; under this plan 25 percent of the CPUD pipeline will be replaced by 2030. The most recent State inspection report indicated that a majority of distribution lines are steel mains installed in the 1940s and 1950s.

Water Demand and Supply

Average annual water demand within the CPUD service area increased from 1,250 acre-feet per year (afy) to 1,625 afy from 2000 to 2015. Total demand is projected to increase to 2,186 afy by 2030. Surface water supplies from the Mokelumne River average 6,656 afy, with a maximum supply of 9,125 afy, and a safe/firm supply of 4,370. The safe/firm supply is approximately twice the project demand for the year 2030.

Summary

CPUD has adequate capacity to provide service to existing water connections. The District has adequate water rights to supply projected growth in demand well past 2030. CPUD has adequate treatment capacity to accommodate near-term growth, and plans to initiate WTP expansion planning in the next 10-15 years to accommodate long-term growth needs. As such, water supplies and water availability do not pose an impediment to future development within the study area.

Sewer Services

The San Andreas Sanitary District (SASD) provides wastewater collection, treatment and disposal services for the unincorporated community of San Andreas and neighboring areas. The boundaries of SASD extend along SR 49 from Magers Way to beyond Pool Station Road, north along Gold Strike Road in the east and up to West Murray Creek Road in the West. The District has a boundary area of approximately 1,387 acres or 2.2 square miles.

The SASD provides sewer services to the eastern portion of the study area, east of SR 49. However, the majority of the study area located to the west of SR 49 is not within the service area of the SASD, and sewer services are not provided by any other provider or service district in this portion of the study area.

The District bounds encompass residential, commercial, public, and parks and recreation land uses. Single family residential land uses are located in the central portion of the District, north and south of Highway 49. Two-family and multi-family residential land uses are located in the central portion of the District, north of Highway 49, and in the southern portion of the District, south of Calaveras Road. Rural residential land uses are located in the northwestern and northeastern portions of the District boundary. Commercial land uses dominate the Highway 49 corridor that runs through the District. Public land uses include the Calaveras County Government Center, San Andreas Elementary School, Calaveras High School, the Peoples Cemetery, and the San Andreas Sanitary District facilities. Park and recreation facilities within the District include Nielsen Park and the baseball fields at Park Drive, south of Mountain Ranch Road, and tennis courts adjacent to Gold Hunter Road.

Local business activities include the County's offices, a hospital, a California Highway Patrol office, a Department of Forestry station, and two hotels. As San Andreas is the county seat of Calaveras County and has a high school, there is a substantial influx in population during the day, resulting in increased demand for wastewater services.

The District considers its customer base to be the wastewater connections served and the residents within the District boundaries. As of 2010, the District provided wastewater services to 897 wastewater connections—657 single family residential, 78 multi-family residential, 162 commercial and public, and no industrial connections. The estimated number of residents in 2010 was 1,658, based on analysis of the number of residential connections served. The District’s population density was approximately 386 per square mile in 2010, compared with the countywide density of 45 per square mile.

The District reported that it anticipates approximately two to three new connections annually, although this may fluctuate depending on the timing of the completion of proposed developments. Two to three new connections annually would result in a growth in population of eight percent between 2010 and 2030, which is lower than the countywide projected growth of 40 percent over that period. However, these projections may be low given the number of developments that showed interest prior to the economic recession.

In terms of planned development, new multi-family units within the District are planned south of Highway 49, west of Russell Road, and north of Highway 49, along Main Street and along Gold Strike Way. Multi-family units are also planned west of the existing SASD boundaries, in the vicinity of the Highway 12/49 junction. Commercial development is planned south of Highway 49, east of Pool Station Road, and in the southeastern portion of the District along Highway 49. Industrial areas are planned west of Angels Road and along Airport Road, in the south of the District, and to the west of the existing SASD boundaries along Highway 49. The future growth area of the District is to the west of the existing boundaries, encompassing the planned multi-family and industrial development areas. The District is not a land use authority, and does not hold primary responsibility for implementing growth strategies.

Infrastructure

Key SASD wastewater infrastructure includes one wastewater treatment plant (WWTP), leach fields, 23.5 miles of sewer pipes and 5 lift stations.

Wastewater is treated to tertiary levels, is discharged into an effluent storage reservoir and then pumped to two miles of on-site evaporation, transpiration and percolation ditches. The WWTP was upgraded in 2011. Under the District’s former waste discharge requirements permit (R5-2003-0151), treated effluent was discharged exclusively to the percolation ditches during the dry months from May 1 to October 31. During wet weather, from November 1 to April 30, treated effluent was discharged to the land disposal area to the extent possible; however, treated effluent that could not be discharged to the land was discharged into the San Andreas Creek. The former permit required that discharges to the San Andreas Creek, as well as the North Fork Calaveras River, be diluted to a daily average of 20:1 (receiving water flow: treated effluent flow) or receive tertiary treatment after April 1, 2006. SASD has since constructed an outfall pipeline to the North Fork Calaveras River, to discharge excess secondary treated effluent from November 1 to April 30, and has discontinued discharging to San Andreas Creek. Dried sludge is disposed of at the Forward Landfill.

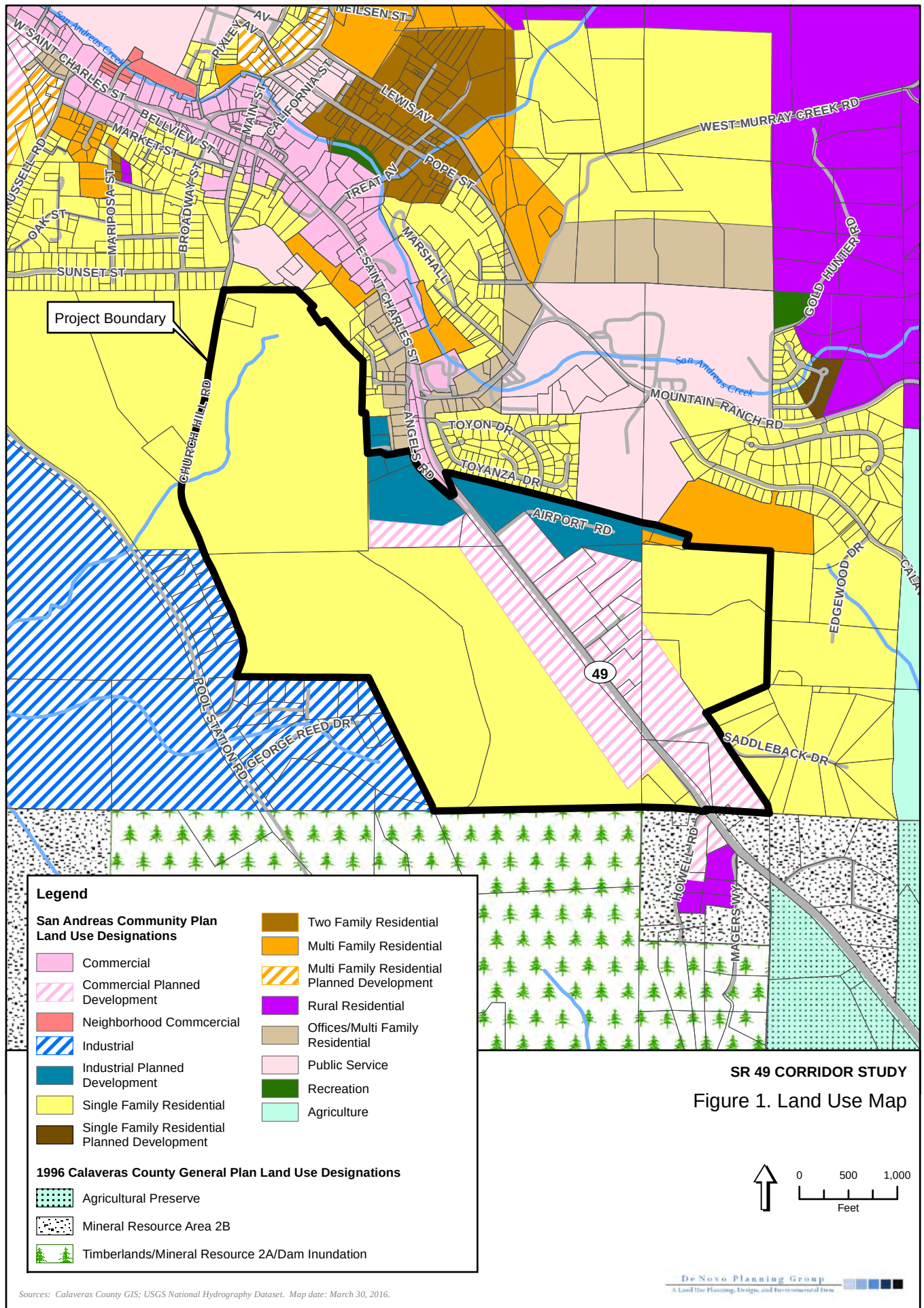
The WWTP was originally built between 1948 and 1954 and was upgraded in 1975, 1995 and 2011. The District identified the plant as being in good condition.

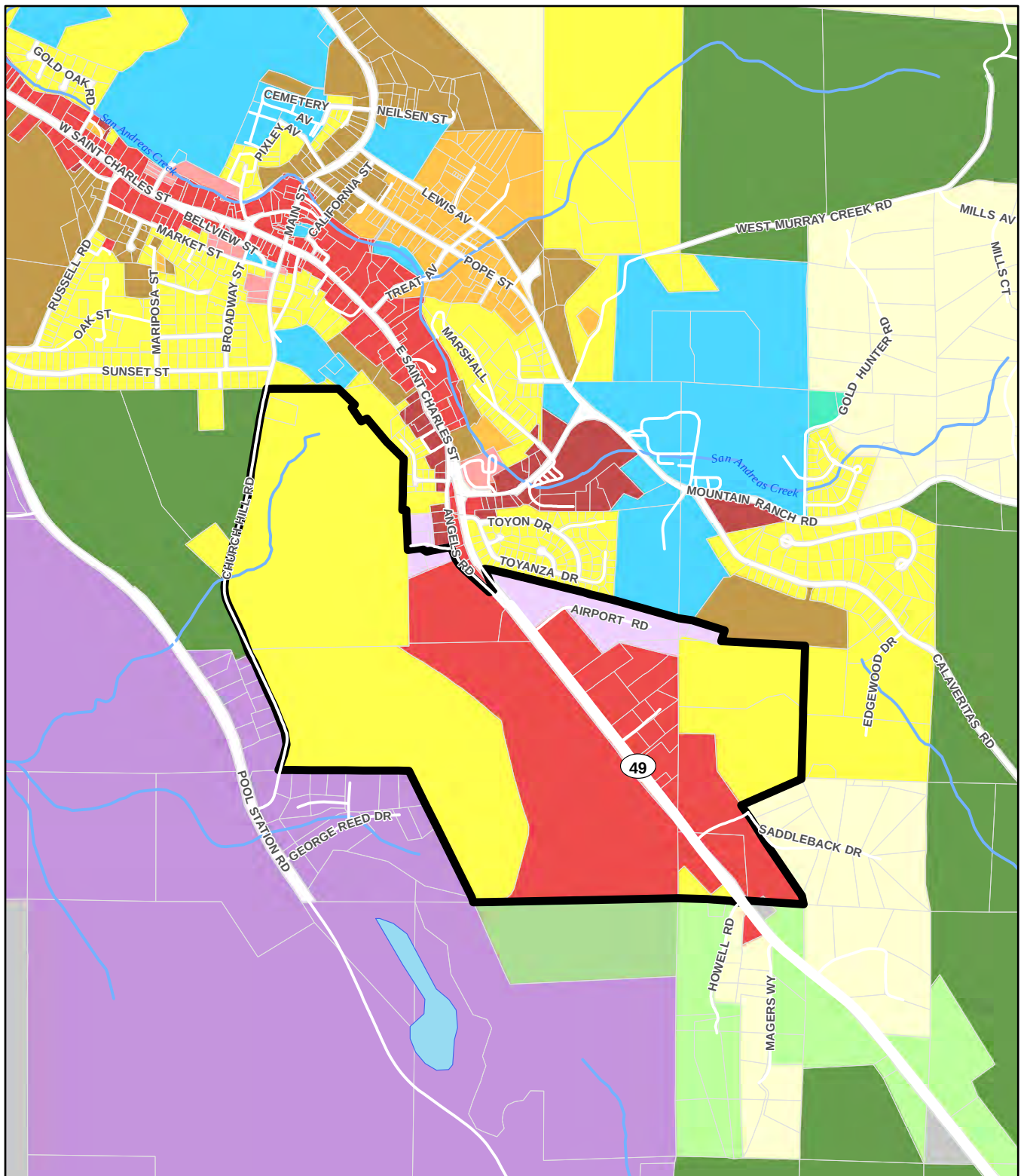
Summary

The WWTP has a design capacity of 0.4 mgd average dry weather flow. While the District's average dry weather flow is .29 mgd or 73 percent of the WWTP's capacity, the District reported that due to high flows during work periods, the WWTP is essentially at capacity. Based on the design capacity of 0.4 mgd, the District can treat approximately 277 gpm; however, during work hours on weekdays the plant treats up to 350 gpm. During evening hours, the District's flow can be as low as 90 gpm. The District estimates that it can accept a maximum of 22 new connections.

Due to limitations on capacity expansion at the existing WWTP, the District reported that it will need a new plant to serve projected growth. The District reported that there is presently no reserve capacity for in-fill development.

The existing capacity limitations at the WWTP present a significant obstacle to future growth and development within the study area.

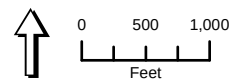




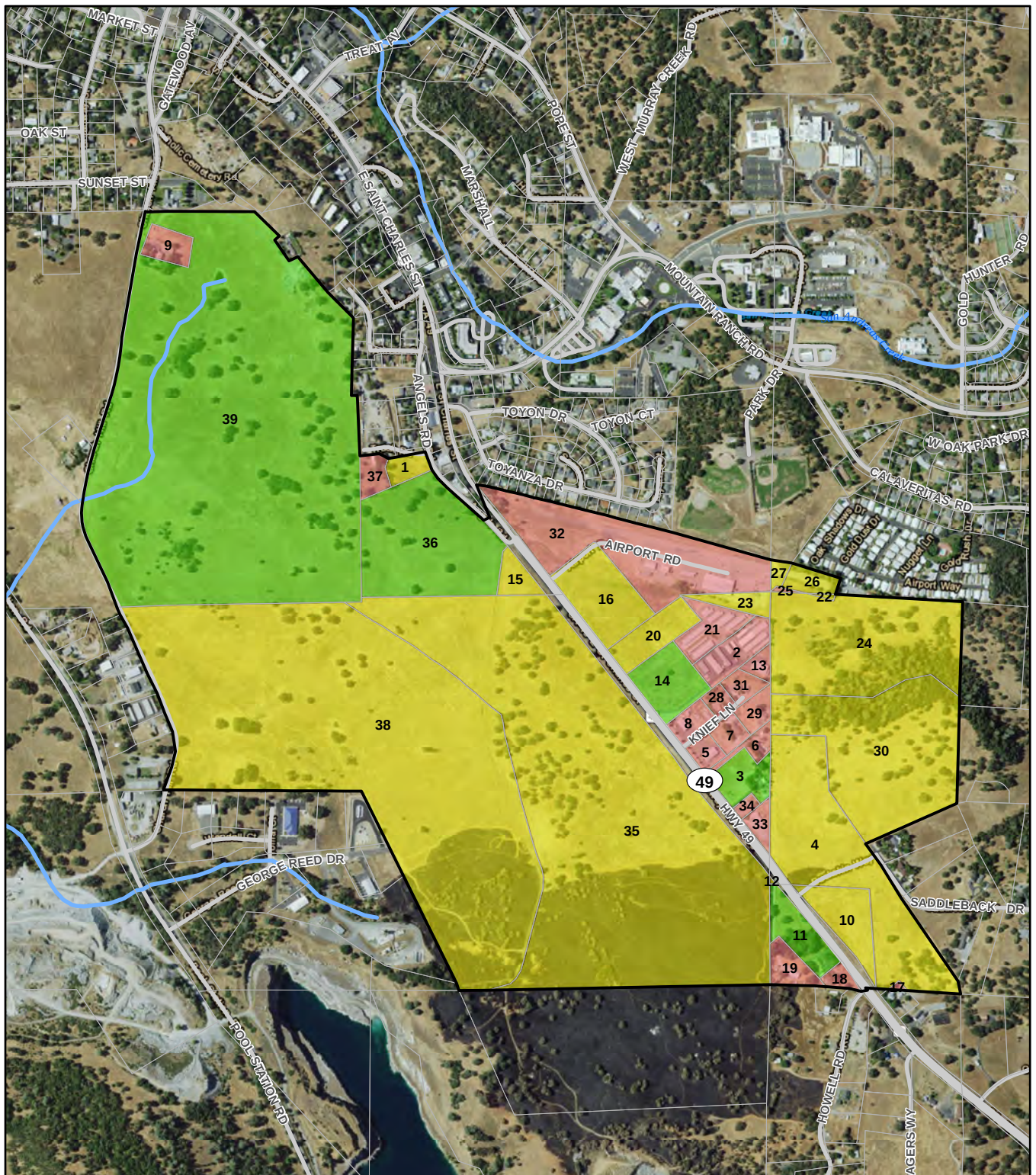
Legend

 A1 - General Agriculture	 RA - Residential Agriculture
 AP - Agricultural Preserve	 RR - Rural Residential
 C1 - Local Commercial	 R1 - Single Family Residential
 C2 - General Commercial	 R2 - Two-Family Residential
 CP - Professional Offices	 R3 - Multi-Family Residential
 M1 - Light Industrial	 REC - Recreation
 M2 - General Industrial	 U - Unclassified
 PS - Public Service	 Project Boundary

SR 49 CORRIDOR STUDY
Figure 2. Zoning Map



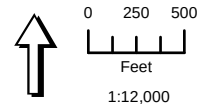
Sources: Calaveras County GIS; USGS National Hydrography Dataset. Map date: March 30, 2016.

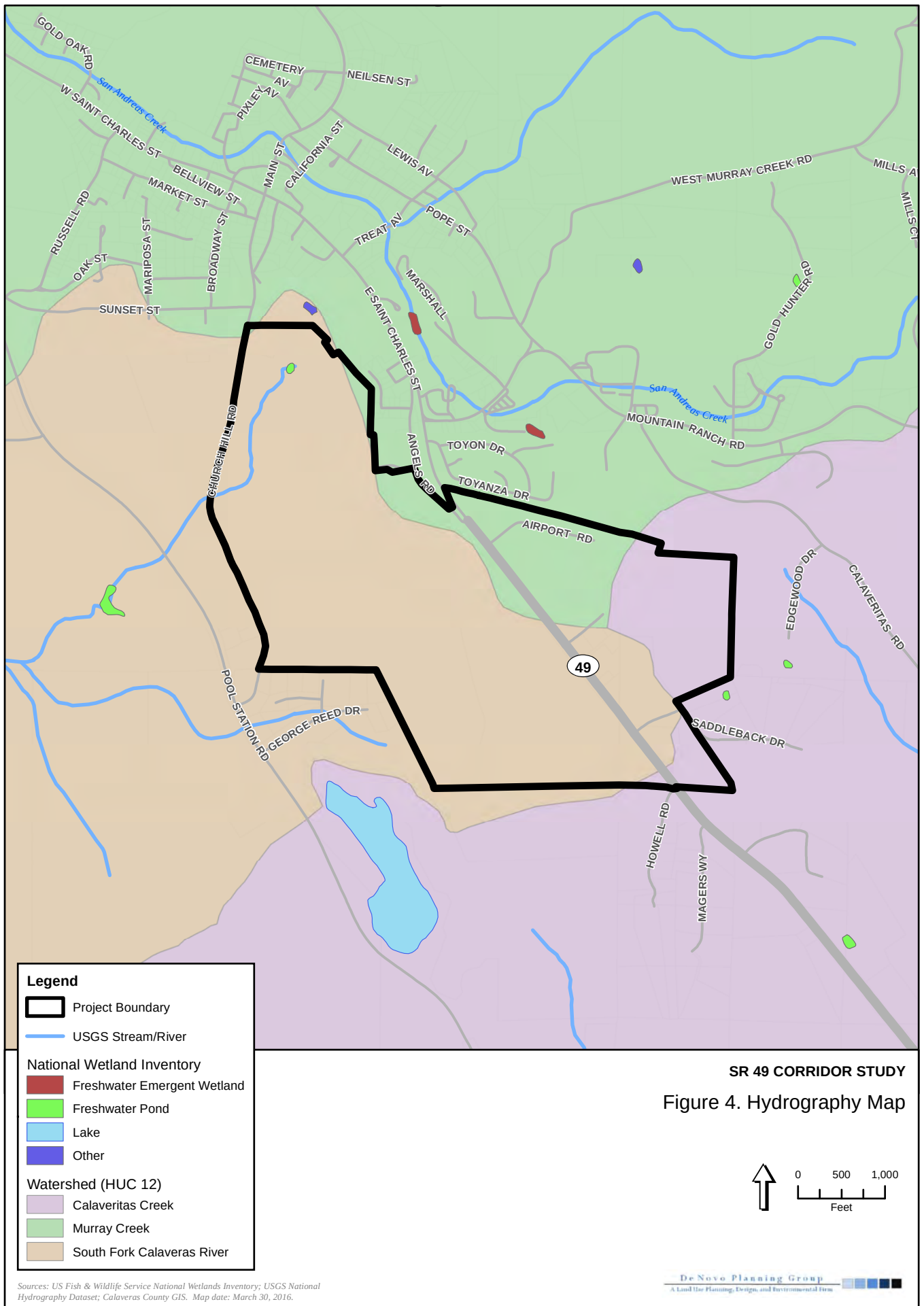


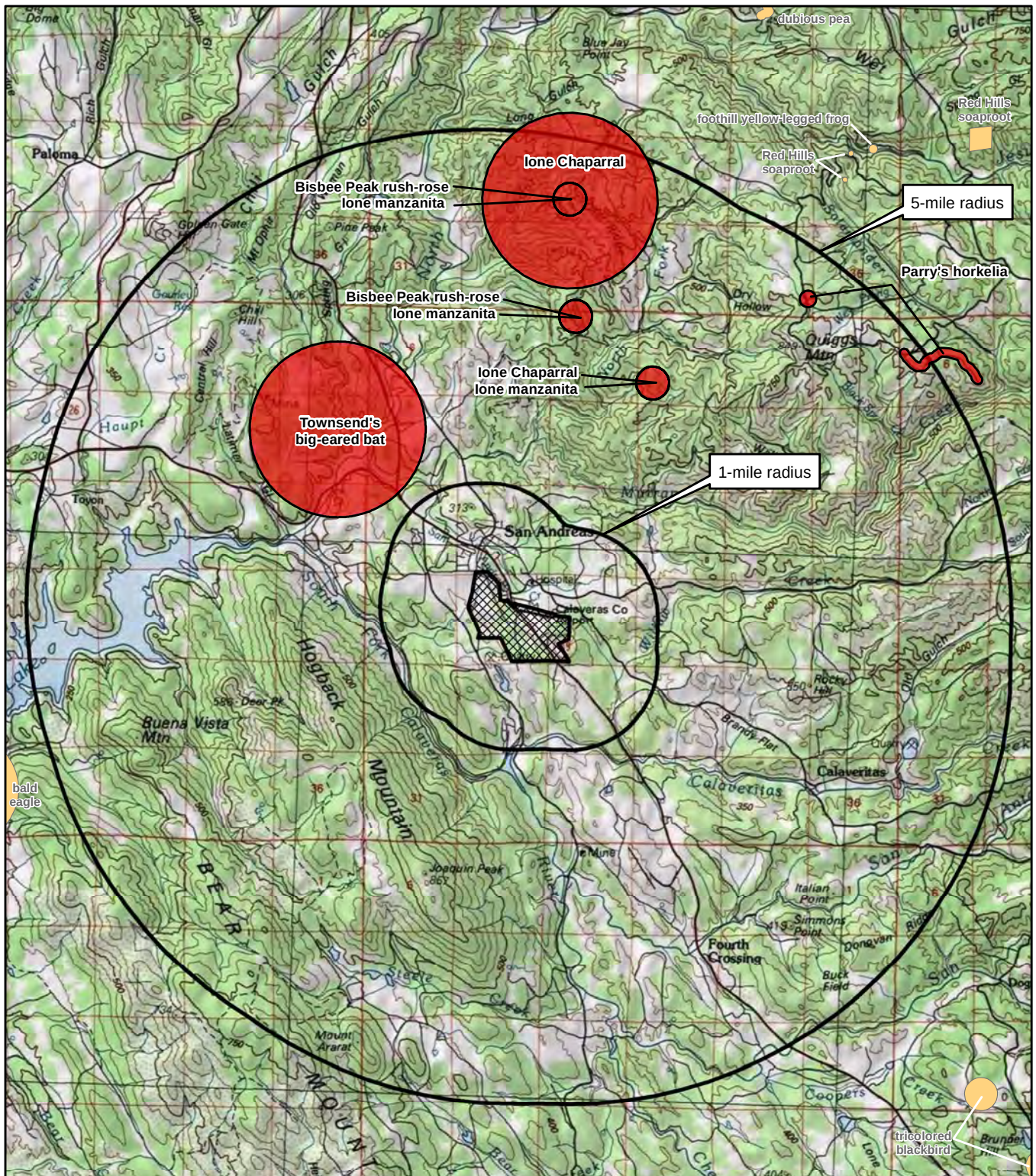
SR 49 CORRIDOR STUDY

Figure 3. Development Status

- Developed
- Underutilized
- Vacant





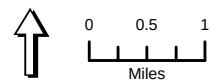


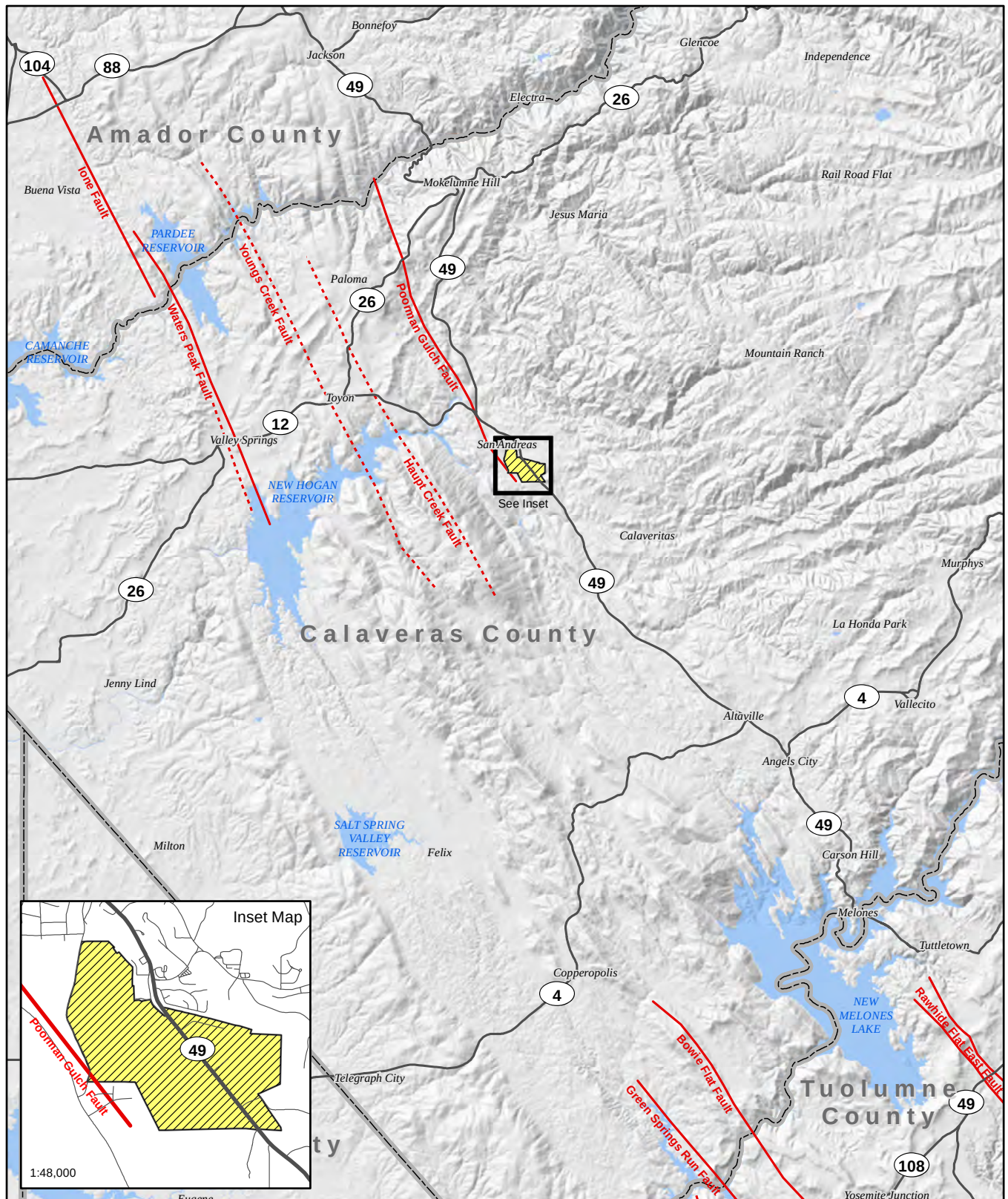
SR 49 CORRIDOR STUDY

Figure 5. California Natural Diversity Database (CNDDB) 5-mile Radius Search

Legend

-  Project Area
-  Special Status Species Occurrences within 5-mile Radius
-  Special Status Species Occurrences beyond 5-mile Radius





Legend



Project Location

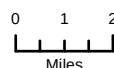
Quaternary Faults



Moderately-constrained



Well-constrained

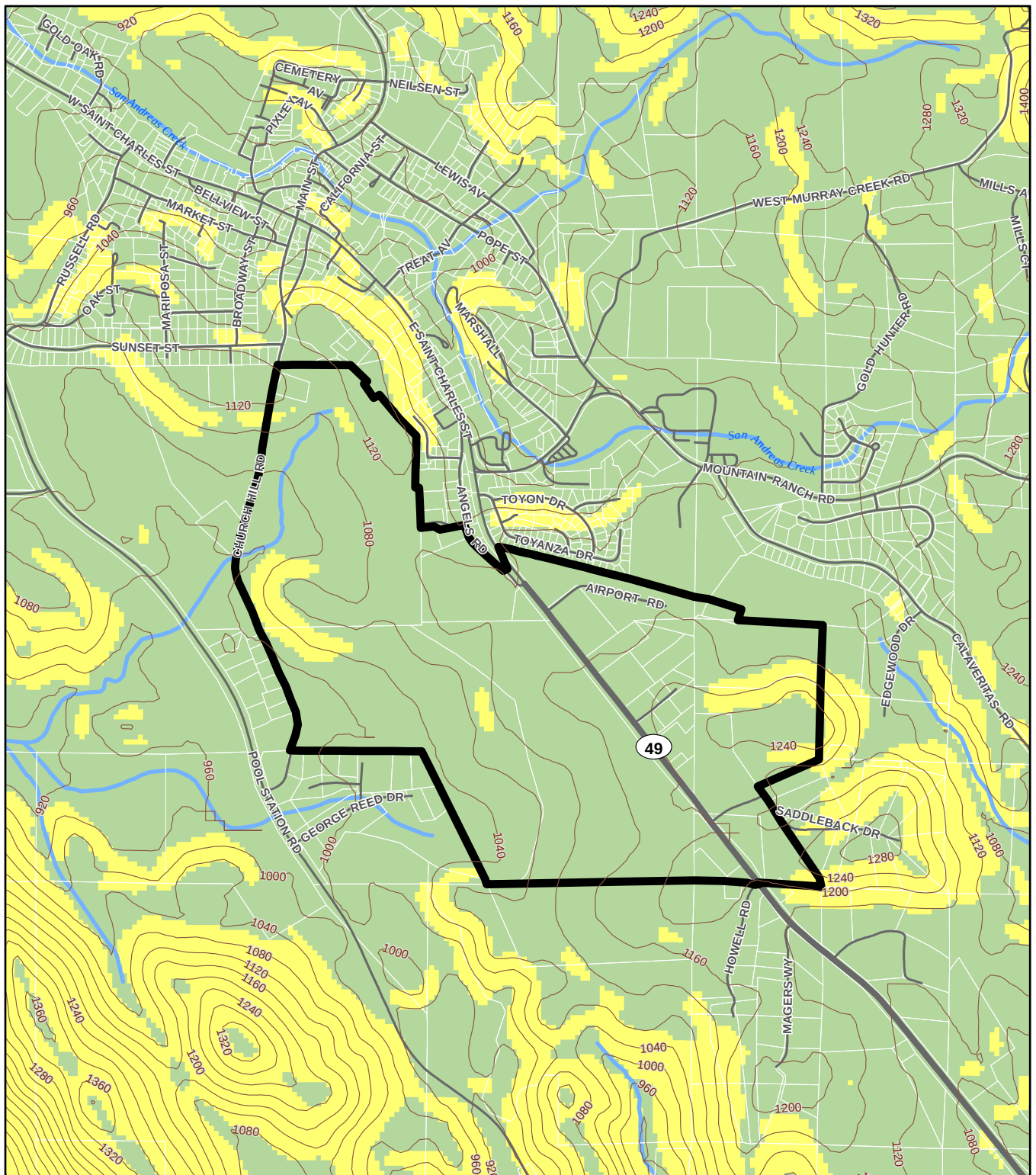


1:250,000

Data sources: USGS and California Geologic Survey, 2016, Quaternary fault and fold database for the United States, accessed February 10, 2016, from USGS web site: <http://earthquakes.usgs.gov/regional/qfaults/>. Map date: March 30, 2016.

SR 49 CORRIDOR STUDY

Figure 6. Earthquake Fault Map



Legend

Project Boundary

USGS Stream/River

40-ft Contour

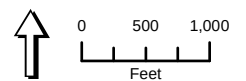
Percent Slope

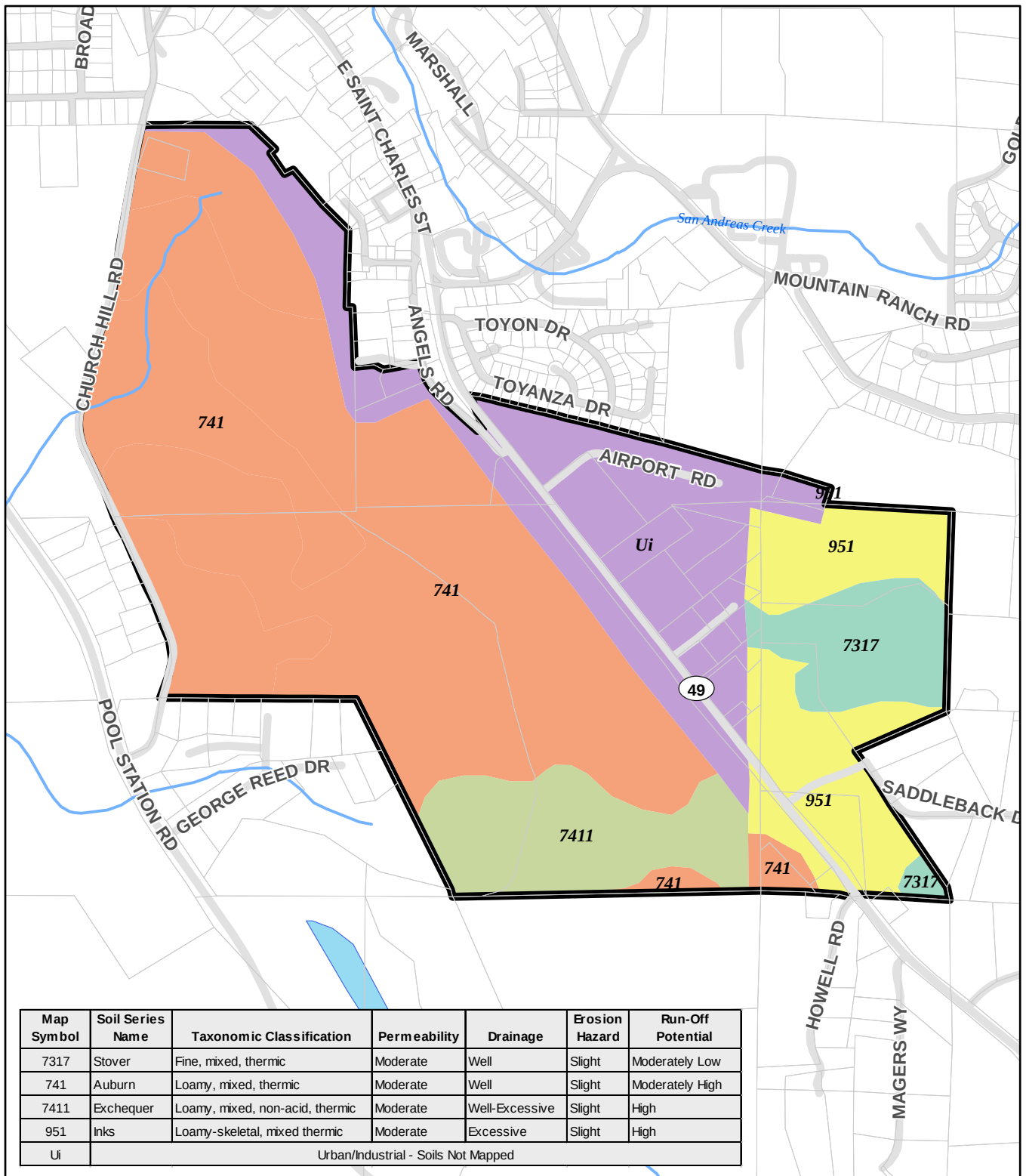
≤15%

>15%

SR 49 CORRIDOR STUDY

Figure 7. Slope Map





Legend

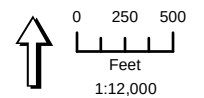
Project Boundary

Soil Series

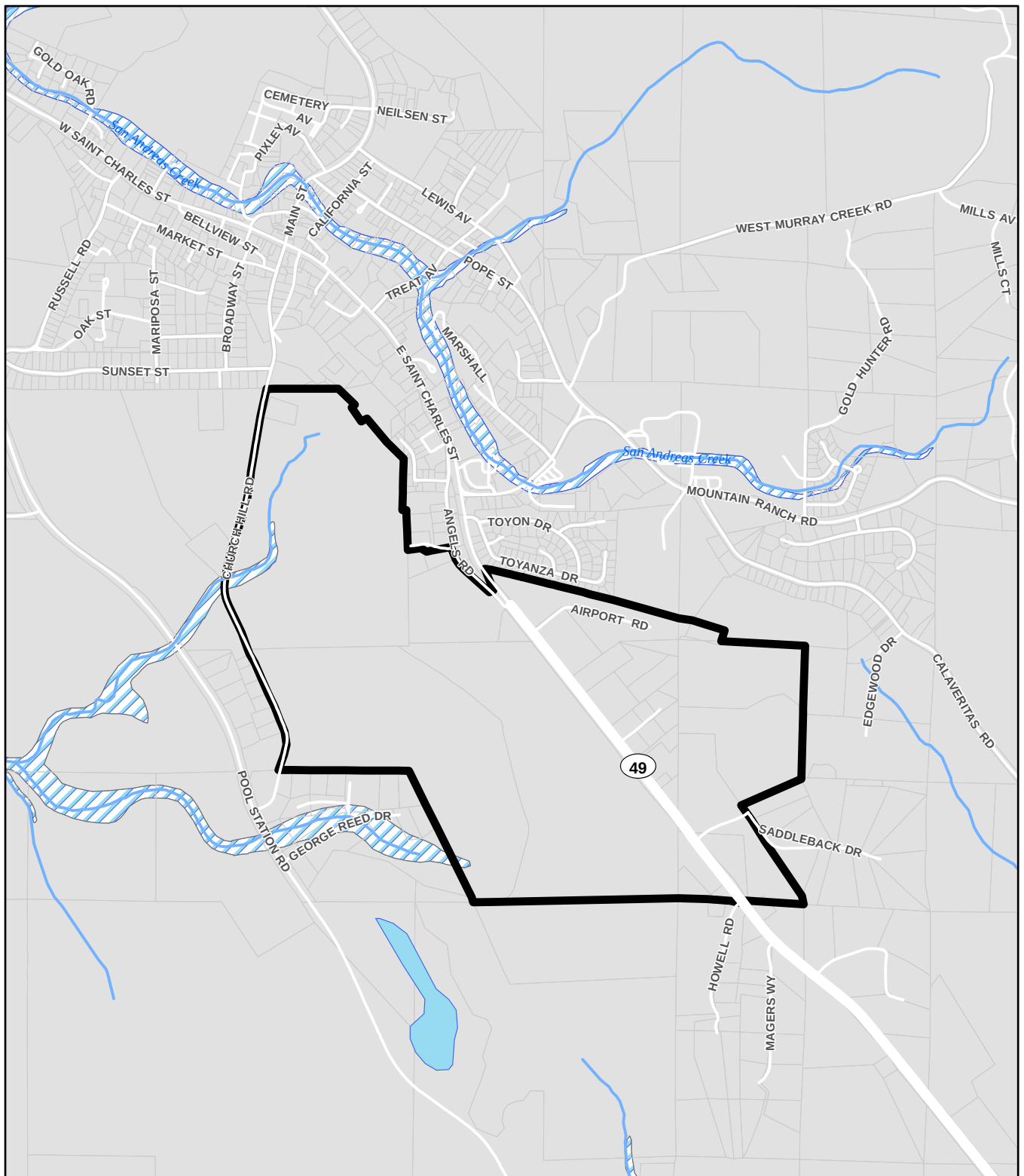
- 7317- Stover Series
- 741 - Auburn Series
- 7411 - Exchequer Series
- 951 - Inks Series
- Ui - Urban/Industrial

SR 49 CORRIDOR STUDY

Figure 8. Soils Map



Sources: Soil Data provided by Calaveras County and based on "Report and general soil map: Calaveras County California [1966]." Map date: March 30, 2016.

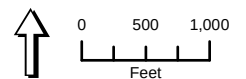


Legend

- Project Boundary
- USGS Stream/River
- Lake
- FEMA Designation**
 - Zone A - 100-yr Flood
 - Zone X - Area of Minimal Flood Hazard

SR 49 CORRIDOR STUDY

Figure 9. FEMA Flood Hazard Map



San Andreas State Route 49 Commercial Gateway Corridor Study Market Analysis

DRAFT REPORT

Prepared by New Economics & Advisory

March 30, 2016

Table of Contents

1. Executive Summary.....	1
Introduction.....	1
Overall Findings.....	2
Detailed Findings - Residential.....	3
Detailed Findings - Commercial	4
2. Economic Context	6
Geographic Overview.....	6
Economic Profile	6
3. Residential Real Estate Market	13
Residential Overview	13
Residential Market Activity.....	15
Future Residential Growth.....	19
4. Commercial Real Estate Market	24
Retail Development	24
Office Development.....	32
Industrial Development	34
Appendix A: Technical Support	56

Section 1: Executive Summary

Introduction

In support of the San Andreas State Route 49 Commercial Gateway Corridor Study, New Economics & Advisory (New Economics) has analyzed the market for real estate development in San Andreas and the surrounding area. This Market Analysis will be used to inform comprehensive transportation planning activities to ensure that transportation-related improvements will meet the needs of future residents, employees, and visitors to the area based on likely levels of future development. While San Andreas and the surrounding region possess large quantities of developable land, historical growth rates have been slow and unsteady, and the market potential for future development is uncertain. This Market Analysis is meant as a tool to provide a more realistic depiction of potential future levels of growth in the area.

Key questions that this Market Analysis addresses include:

- What is a realistic range of market-based demand for residential and commercial development in and around San Andreas over the next twenty years?
- What are the most likely uses for future development, and in what quantities?
- Are there potential methods to capture additional market activity such that additional growth might be sustained in San Andreas?

The Market Analysis provides information on the overall economic makeup of San Andreas and the surrounding area, including statistics on population, household size, household income, commuting patterns, primary industries, and other factors. Building from the existing economic and demographic base, the Market Analysis provides an assessment of the market for housing development based on San Andreas's regional competitive position and likely population growth scenarios, and commercial development given existing retail leakage, retail support from spending from residents, employees, and visitors to the area, and anticipated future levels of employment.

The findings below encapsulate the key observations derived in this Market Analysis. These findings are broken out into three primary categories, including the "Overall Findings" which summarize the likely amount of future growth, "Residential Findings" which pertain to residential growth and "Commercial Findings" which pertain to the market for retail, office, and industrial development. Following these findings, Sections 2, 3, and 4 provide detailed discussions of the data, calculations, and methodologies that form the basis of the Market Analysis. **Appendix A** provides supporting calculations and other more detailed data.

Overall Findings

- **Despite its role as a jobs hub within the County, San Andreas remains a challenged market for new development.** The primary favorable attribute for San Andreas is its relatively large amount of jobs, with concentrations in government and health care. However, employees in these fields are reticent to live in San Andreas-- even though it would allow them to live near their place of work-- because “quality of life” factors such as quality building stock, shopping opportunities, and recreational/ cultural amenities are perceived to be lacking.
- **San Andreas has not captured new residential growth over the last several real estate cycles.** While the County experienced approximately 500 new home sales from 2006 to 2015 (most of which were in Valley Springs and Copperopolis), while San Andreas grew at a much slower pace with only 7 new homes sold during this period. As such, San Andreas continues to rely on existing housing stock, which continues to age and become less modern and desirable.
- **Assuming “business as usual” conditions, San Andreas can expect to experience approximately 180 to 220 units of new residential growth over the next twenty years.** This estimate is based on future expectation of growth in the County, and San Andreas’ current share of countywide growth. If San Andreas is able to capture a larger share of countywide growth by significantly improving its competitive position—or if the County experiences a greater share of growth than is currently anticipated—San Andreas could potentially achieve the higher levels of growth.
- **San Andreas may support up to approximately 20,000 square feet (approximately 2.0 acres) of new retail development over the next twenty years, which could include up to one small “convenience-oriented” shopping center.** This estimate is based San Andreas’ capture of spending from a variety of potential sources, including future residents and employees. A recently-completed market study of the development potential in nearby Angels Camp found that a community-oriented shopping center may be supported by the spending from regional market comprising all of Calaveras County, plus small portions of Amador County and Tuolumne County; however, the geographic position of San Andreas makes it inferior as a potential community-serving retail destination compared to other communities such as Angels Camp, Jackson, and Sonora.
- **Office development is not anticipated to undergo tremendous growth in San Andreas in the near future, but given anticipated growth in employment and population, it is reasonable to expect approximately 2.0 to 4.0 acres of office development in the next twenty years.** In a location as small as San Andreas, it is difficult to predict office and industrial growth with great precision, since the addition of just one or two new users can represent a relatively large impact on growth. However, New Economics has provided these estimates of future growth in these land use categories given historical growth rates, existing building space patterns, and foreseeable levels of future growth in population and employment.

- Similarly to office space, industrial space in San Andreas is tied to residential and employment growth, it is estimated that approximately 1.5 to 3.5 acres of industrial space will be needed by 2035. Again, these estimates are based on likely levels of future growth in San Andreas and County, and do not account for any potential major business relocations or business startups, which could have a substantive impact on results but are difficult to predict.
- Figure 1 below summarizes total expected development in San Andreas by 2035.

1 San Andreas Area Development Projections <i>2016 through 2035</i>		
Item	20-Year Total: 2016 - 2035	
	Moderate Estimate	High Estimate
Residential Growth		
New Residential Units	180	220
Commercial Growth		
Retail Acres	1.8	1.9
Office Acres	1.8	4.1
Industrial Acres	1.5	3.4
Subtotal Commercial Growth (Acres)	5.2	9.5

Prepared by New Economics & Advisory, March 2016.

Source: New Economics

Detailed Findings - Residential

- San Andreas is a small, rural community, with a population of approximately 2,800 residents, which is up from approximately 2,600 residents in 2000.
- At \$40,600, the median household income in San Andreas is lower than the County median and significantly below the statewide median, indicating a relatively poor community.
- As the County seat and location of a regional hospital, San Andreas is a primary employment center for Calaveras County, and San Andreas is characterized by a large degree of commuting activity, in which most residents work in areas outside the community. In 2014, only approximately 7 percent of San Andreas employees lived in San Andreas, and only 13 percent of San Andreas employed residents hold jobs within the community.

- **The housing stock in San Andreas primarily consists of single-family detached units, and over 70 percent of the homes in the community are at least 25 years old.**
- **San Andreas is among the lower-priced communities in the County, with an average sales price in 2015 of \$189,000, as compared to \$235,000 on average throughout the County.**
- **New home development activity in San Andreas has been extremely limited, especially during the past ten years.** Calaveras County overall has undergone a significant slowdown in the amount of new homes built starting in 2006, and although activity appears has picked up slightly in the past two years, sales rates have not yet begun to approach pre-2006 levels. San Andreas' new home growth in particular has been negligible, totaling only seven new units sold over the past ten years.
- **Over the long-term, residential growth in San Andreas has been limited, and its proportion of growth in the region has been declining over the past forty years.** Historical housing unit growth in Calaveras County overall has averaged slightly over 500 units per year since 1970. Of this, San Andreas has accounted for approximately 20 units per year, or 3.6 percent. Much of this growth occurred in the 1970s and 1980's, after which, San Andreas' growth has slowed significantly.
- **Assuming that San Andreas can achieve a similar countywide market share as has occurred over the long-term, it should expect to grow by approximately 0.69 percent per year, accounting for approximately 180 residential units between 2016 and 2035.** If San Andreas is able to achieve a slightly larger capture of regional growth, it may be able to support up to 220 residential units over the next twenty years. Overall, these levels of growth suggest an average rate of 10 to 12 new residential units per year, which will likely occur in short bursts that follow market fluctuations and small projects being constructed in discrete time periods.
- **Although the market for new development in San Andreas is challenged, as the County seat and as the primary job center in the County, it does have an opportunity to attract future development to serve workers who are employed in San Andreas and wish to live close to their place of work.** Some enhancements to certain "quality of life" elements in San Andreas—such as enhanced shopping and cultural opportunities and a new/ improved housing stock—would improve potential buyers' view of the area and may increase San Andreas' prospects to capture additional future demand.

Detailed Findings - Commercial

- **The Primary Trade Area (PTA) for potential retail development is a 6-mile radius around the center of town.** The PTA will capture spending from residents within San Andreas and the immediately-surrounding area. However, it does not include residents of the areas near Jackson and Angels Camp, as these residents are not

likely to travel to San Andreas for shopping purposes since they have a larger selection of shopping opportunities that are more proximate to their home.

- **San Andreas' retail environment is limited to basic necessities. For most shopping, San Andreas residents travel to other areas such as Jackson and Angels Camp.** Other shopping destinations include Lodi, Stockton, and other areas in the Central Valley, which provide a full complement of shopping goods not easily found in the more rural Calaveras County (apparel, furniture, automobiles, etc.).
- **Retail buildings in San Andreas are largely aged and of poor quality by today's standards.** No new retail development has occurred in several decades, and much of the existing retail stock is within buildings that were originally designed and constructed for other purposes.
- **Most existing retail supply in San Andreas consists of small "mom and pop" businesses that cater primarily to the area's residents and to travelers along State Route 49.** The commercial space in San Andreas has a relatively low number of retail vacancies. As a small town, the business offerings in San Andreas are relatively stable and, while some turnover does occur, many of the businesses in San Andreas have been in existence for many years.
- **Given the amount of retail existing leakage to other areas, a small general merchandise discount retailer such as Dollar General or a similar store may be supportable in San Andreas.** Any new retail development that occurs in San Andreas must be well-located, which involves adjacency to State Route 49, high visibility, and easy ingress/ egress.
- **Office space in San Andreas is primarily occupied by a small number of "institutional" users, including the County offices and Mark Twain Medical Center. Other office space in San Andreas is local-serving, such as dentists, real estate offices, insurance, etc.** There may be some limited opportunities for future growth in these types of users as the residential and employee populations expand over time.
- **Industrial space in San Andreas primarily serves the surrounding businesses and residents, and appears to be fairly stable.** Given the existing ratio of industrial space to residents and employees, San Andreas may support up to 3.5 acres of new industrial development by 2035.

Section 2: Economic Context

Geographic Overview

San Andreas is a small, unincorporated, rural community in Calaveras County, located approximately mid-way between the cities of Jackson and Angels Camp along State Route 49 and approximately 40 miles east of the City of Stockton. Being an unincorporated community that has been in existence since the mid-1800's and has undergone several cycles of development, there are several unique definitions of San Andreas. For the purposes of this analysis, New Economics uses the San Andreas Census-Designated Place (CDP) as the geographic definition, which comprises the area shown in **Map 1**. Other geographic definitions of San Andreas were also considered and are referred to as needed during discussions on specific topics in this report, including the San Andreas Census County Division (which comprises a much broader area than the CDP) as well as two separate Community Plan Areas, one of which was adopted in 1988 and another more recent version which has been in various stages of progress for several years, but has not yet been officially adopted by the County.

Map 1 **San Andreas CDP**

[Map 1 to be provided]

Economic Profile

Regional Context

San Andreas comprises a relatively small portion of the County, and there are several other communities that are spread throughout various areas. **Figure 2** below shows population (as of 2010) of each of the census-designated places in the County. As shown, San Andreas represents approximately 6 percent of the total population in the County; while more populous than many of the County's communities, San Andreas is smaller than Rancho Calaveras, Arnold, Angels Camp, Copperopolis, and Valley Springs.

2

**Population of Calaveras County Communities
2010**

Employer	Population	Percent of Total
Rancho Calaveras	5,325	11.7%
Arnold	3,843	8.4%
Angels Camp (City)	3,836	8.4%
Copperopolis	3,671	8.1%
Valley Springs	3,553	7.8%
San Andreas	2,783	6.1%
Murphys	2,213	4.9%
Mountain Ranch	1,628	3.6%
Forest Meadows	1,249	2.7%
West Point	674	1.5%
Avery	646	1.4%
Mokelumne Hill	646	1.4%
Dorrington	609	1.3%
Rail Road Flat	475	1.0%
Vallecito	442	1.0%
Wallace	403	0.9%
All Other Areas	13,582	29.8%
Total Calaveras County	45,578	100.0%

Prepared by NewEconomics & Advisory, March 2016.

Source: US Census Bureau Census 2010

Population Attributes

San Andreas was home to approximately 2,800 residents as of 2010, which was up from approximately 2,600 residents in 2000 according to the US Census Bureau. **Figure 3** below shows various demographic attributes of San Andreas in 2000 and 2010. As shown, San Andreas was home to approximately 1,146 households in 2010, and the average household size was 2.26 (up slightly from a decade before). The median age in San Andreas is 45.7 (significantly older than the state average of 35.2), and the median household income is \$40,600 (which is considerably lower than the state average of 61,500). Approximately 55 percent of San Andreas households own their own home, while 45 percent are renters, which is similar to state averages. Of note, approximately 12.6 percent of housing units were vacant in 2010, which is significantly higher than the state average of 8.1 percent.

3

San Andreas Attributes*San Andreas CDP, 2000 and 2010*

Item	San Andreas CDP			California (2010)
	2000	2010	% Change	
Population	2,615	2,783	6.4%	37,253,956
Households	1,097	1,146	4.5%	12,617,280
Average Household Size	2.24	2.26	0.9%	2.9
Housing Units	1,167	1,311	12.3%	13,680,081
Median Age	42.6	45.7	7.3%	35.2
Median HH Income	\$32,500	\$40,613	25.0%	\$61,489
Tenure				
Rent	43.8%	44.9%		45.2%
Own	56.2%	55.1%		54.8%
Vacant Housing Units	6.0%	12.6%	110.0%	8.1%

Prepared by NewEconomics & Advisory, March 2016.

Source: US Census 2000 and 2010

Commuting Patterns

San Andreas (and Calaveras County in general) is clearly characterized by a large degree of commuting activity, both inward and outward. **Figure 4** shows that only 13.3 percent of employed residents of San Andreas actually work in San Andreas, and that only 7.0 percent of employees who hold jobs in San Andreas live within the community. Some of these workers do commute from or to nearby areas such as Angels Camp, Valley Springs, and Jackson, but it appears that a large portion commutes to and/or from areas outside the vicinity.

4

Calaveras County Commute Patterns

San Andreas - 2014

Employer	Employees	Percent of Total
<u>San Andreas Employed Residents</u>		
Work in San Andreas	135	13.3%
Work in Other Locations	878	86.7%
Total	1,013	100.0%
<u>San Andreas Employees</u>		
Live in San Andreas	135	7.0%
Live in Other Locations	1,792	93.0%
Total	1,927	100.0%

Prepared by NewEconomics & Advisory, March 2016.

Source: US Census Bureau LED/ LEHD

These commute patterns would seem to present several implications and opportunities as related to future growth in and around San Andreas. First, it may be possible to capture additional economic activity from the spending of employees of this area. For example, if employees whose jobs are located in San Andreas were to make purchases in new retail offerings in San Andreas, additional commercial development may be supported. Second, it is possible that through repositioning of San Andreas as a more desirable residential enclave, the area may be able to support enhanced residential development in order to better-serve San Andreas employees who are interested in living near their place of employment. These possibilities will be explored in greater detail in subsequent sections of this report.

Jobs in San Andreas

San Andreas had just over 1,000 employed residents in 2014, up 29 percent from 786 in 2002, as shown in **Figure 5** below. These workers hold jobs in variety of fields (which are primarily located in areas outside of San Andreas, as described above), most prominently including industries such as Health Care, Retail, Public Administration, Accommodations & Food Services, and Education.

5

Employment by Industry of San Andreas Employed Residents*San Andreas CDP, 2002 and 2014*

Sector	2002		2014		% Change 2002 - 2014
	Count	Percent	Count	Percent	
Construction	61	7.8%	66	6.5%	8.2%
Manufacturing	37	4.7%	58	5.7%	56.8%
Wholesale Trade	8	1.0%	44	4.3%	450.0%
Retail Trade	106	13.5%	107	10.6%	0.9%
Admin., Support, Waste Mgt, Remediation Svcs.	31	3.9%	45	4.4%	45.2%
Educational Services	102	13.0%	99	9.8%	-2.9%
Health Care and Social Assistance	96	12.2%	151	14.9%	57.3%
Accommodation and Food Services	86	10.9%	102	10.1%	18.6%
Public Administration	81	10.3%	105	10.4%	29.6%
All Other Sectors [1]	178	22.6%	236	23.3%	32.6%
Total Employment	786	100.0%	1,013	100.0%	28.9%

Prepared by NewEconomics & Advisory, March 2016.

[1] Includes all sectors with less than 5 percent of total employment in 2014.

Source: US Census Bureau LED/ LEHD OnTheMap Application

Figure 6 shows the jobs actually located in San Andreas in 2002 and 2014, organized among the major categories that comprise at least two percent of the total (in 2014). As shown, the jobs located within San Andreas are primarily within the public and quasi-public sectors. By far, the largest sector (at nearly 30 percent of total jobs) is in the Public Administration sector, owing to the County offices and other governmental agencies located in San Andreas. Health Care and Educational Services are also very prominent sectors in San Andreas, owing to the Mark Twain Medical Center, San Andreas Elementary School, and Calaveras High School being located in in San Andreas.

6

San Andreas Jobs by Industry**San Andreas CDP and California, 2014**

Sector	San Andreas CDP		California	San Andreas Employment Concentration [1]
	Count	Percent		
Utilities	80	4.2%	0.7%	565.16%
Construction	112	5.8%	4.5%	129.79%
Retail Trade	54	2.8%	10.2%	27.38%
Information	42	2.2%	3.3%	66.97%
Educational Services	342	17.7%	8.9%	198.55%
Health Care and Social Assistance	499	25.9%	13.0%	198.63%
Accommodation and Food Services	35	1.8%	8.8%	20.69%
Other Services (Except Public Administration)	40	2.1%	3.2%	64.61%
Public Administration	571	29.6%	5.1%	578.96%
All Other Sectors [2]	152	7.9%	42.2%	18.69%
Total Jobs	1,927	100.0%	100.0%	

Prepared by NewEconomics & Advisory, March 2016.

[1] A percentage of 120% or more denotes a concentration in the industry as compared to state averages, and indicates an industry of relative strength. A score below 80% indicates a relative weakness in a particular industry.

[2] Includes all sectors with less than 2 percent of total jobs.

Source: US Census Bureau LED/ LEHD OnTheMap Application

Figure 7 shows the top employers in San Andreas by the number of employees. As shown, every one of the top employers in San Andreas falls within the public or quasi-public category, with a large emphasis on County employment, schools, hospitals, and utilities. There are no private businesses in the top ten employers in San Andreas.

7

Major Employers in San Andreas

San Andreas - 2016

Employer	Number Employed	Category
Mark Twain Medical Center	250-499	Hospital
Forestry & Fire Protection	250-499	Government
Rite-Passage-Sierra Ridge Academy	100-249	Residential Care Homes; School
Calaveras County Human Services	50-99	Government
Calaveras County Sheriff	50-99	Government
Calaveras Water District	50-99	Utility
Calaveras High School	50-99	School
Calaveras Public Works Department	50-99	Libraries-Public
Independent Learning Center	50-99	School
Rail Road Falt Elementary School	50-99	School
West Point Elementary School	50-99	School

Prepared by NewEconomics & Advisory, March 2016.

Source: State of California Employment Development Department, 2016.

Section 3: Residential Real Estate Market

Residential Market Overview

As a residential market, San Andreas is considered to be a submarket of the broader Calaveras County market, which is itself a component of what is commonly referred to as the “Mother Lode” region, which generally refers to the foothill portions of Calaveras, Amador, Mariposa, and Tuolumne Counties. Calaveras County is seen as a charming, quiet, rural county that can provide a “laid back” lifestyle and affordable home prices, yet still be within a reasonable commuting distance to major urban job centers in Stockton, Lodi, and other areas of the Central Valley. Industry in the region has historically been driven by natural resource extraction and processing (primarily timber, aggregate, and precious metals), but are now primarily consist of resident-serving sectors such as health care, retail, and government. The western half of the County comprises the most developed portion that is situated at a lower elevation, offering a pleasant, temperate climate. San Andreas is fairly centrally located amongst the County’s primary developed communities, such as Angels Camp, Murphy’s, Copperopolis, Arnold, and Valley Springs, although there are many other more sparsely-populated enclaves located throughout the County.

The residential real estate supply in San Andreas consists primarily of single-family detached structures, occupied by family households. **Figure 8** below shows that approximately 60 percent of San Andreas’ housing units are single family detached units, while 35 percent are multi-family structures and 5 percent are mobile homes.

8

Housing Units by Building Type

San Andreas CDP, 2010-2014 Estimates

Item	Number of Units	% of Total
<u>Single Family</u>		
Detached	854	59.7%
<u>Multi-Family</u>		
2 units	123	8.6%
3 or 4 units	109	7.6%
5 to 9 units	119	8.3%
10 to 19 units	53	3.7%
20 or more units	102	7.1%
Subtotal Multi-Family	506	35.4%
<u>Other</u>		
Mobile Home	71	5.0%
Total	1,431	100.0%

Prepared by NewEconomics & Advisory, March 2016.

[1] Source: US Census Bureau 2010-2014 American Community Survey 5-Year Estimates.

Much of the housing stock in San Andreas is aged and of marginal quality, according to real estate experts familiar with the area. **Figure 9** below shows that approximately 70 percent of the housing stock in San Andreas was built before 1990, thus being at least 25 years old. Much of this housing was built in the 1950's and 1970's, while approximately 16 percent was built before 1950. Some older structures have undergone restoration and are maintained as charming historic homes; however, according to local experts as well as through New Economics' own review of the building stock, much of the housing stock has become run-down and is in a state of disrepair.

9

Year Housing Units Constructed

San Andreas CDP, 2010-2014 Estimates

Item	Number of Units	% of Total
Built 2010 or Later	0	0.0%
Built 2000 to 2009	126	8.8%
Built 1990 to 1999	303	21.2%
Built 1980 to 1989	193	13.5%
Built 1970 to 1979	292	20.4%
Built 1960 to 1969	31	2.2%
Built 1950 to 1959	259	18.1%
Built 1940 to 1949	102	7.1%
Built 1939 or Earlier	125	8.7%
Total	1,431	100.0%

Prepared by NewEconomics & Advisory, March 2016.

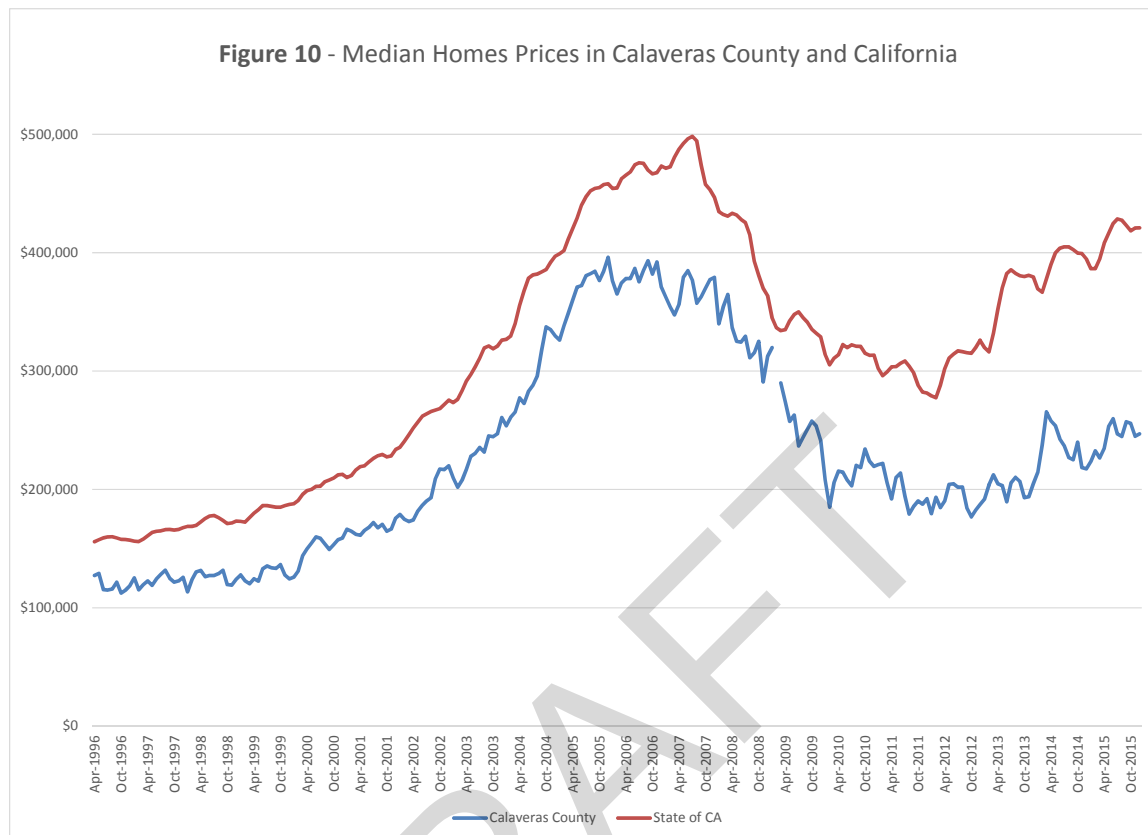
[1] Source: US Census Bureau 2010-2014 American Community Survey 5-Year Estimates.

According to local realtors, buyers of Calaveras County homes fit a variety of customer cohorts, including move-up/ move-down buyers, families who are “fleeing” urban environments for a more rural lifestyle, retirees, and second home buyers. Calaveras County residential real estate is also heavily influenced by the purchase of second homes or vacation homes, largely by buyers in the Central Valley and Bay Area markets. As referenced in **Section 2**, approximately 12.6 percent of homes in San Andreas are “vacant,” according to the US Census Bureau.

Residential Market Activity

Residential real estate has undergone a rather tumultuous period over the past decade in nearly all areas throughout California, as home pricing and sales activity ramped up during the early 2000’s, followed by an extreme reduction of prices and sales rates as the “bubble burst” during the Great Recession which lingered for years before finally regaining some losses more recently. **Figure 10** shows the long-term residential pricing dynamics in California and Calaveras County, which illustrates this trend. As shown, while California has nearly returned to the “peak” pricing levels of 2007, Calaveras County remains approximately 38 percent below its peak value of \$400,000, which occurred in 2006. This trend indicates that Calaveras County is “behind” other areas in

recapturing losses experienced during the Great Recession, and points to its softness as a residential real estate market as compared to other areas in the state.



Currently, the home market in San Andreas and the rest of Calaveras County has begun performing more favorably, with both sales rates and pricing on upward trajectories; San Andreas, however, has shown considerably lower figures in both sales volumes and home pricing than other nearby residential areas. **Figure 11**, below, shows annual residential sales in 2015, and the annual sales over the past ten years, along with median sales price trends over this same period.

As shown, Valley Springs, Arnold, and Copperopolis represent the largest residential submarkets in the County, accounting for approximately 60 percent of real estate sales over the past ten years. Each of these areas generally exhibit higher price points, ranging from \$225,000 to \$304,000, than San Andreas, whose median sale price is \$189,000. Although San Andreas has experienced fairly strong price appreciation since 2006, at a total growth rate of 46.5 percent, this rate is not quite as high as the rate seen in Valley Springs, which experienced nearly 63 percent appreciation.

11

Residential Sales and Pricing

Calaveras County Submarkets [1]

Submarket	Annual Sales		Median Sale Price		
	2015	10-Yr Avg.	2006	2015	% Change
Valley Springs	332	313	\$152,000	\$247,500	62.8%
Arnold	205	196	\$257,500	\$250,000	-2.9%
Copperopolis	132	168	\$229,000	\$304,000	32.8%
Angels Camp	100	74	\$193,000	\$225,000	16.6%
Murphys	85	90	\$253,000	\$311,000	22.9%
Mokelumne Hill	55	36	\$121,000	\$177,500	46.7%
San Andreas	35	39	\$129,000	\$189,000	46.5%
Mountain Ranch	25	24	\$162,500	\$185,000	13.8%
All Other Locations	366	255	n/a	n/a	n/a
County Total/ Average	666	518	\$185,000	\$235,000	27.0%

Prepared by NewEconomics & Advisory, March 2016.

[1] Includes all home types, and both new and existing home sales.

Source: Dataquick

Residential development in the area tends to occur on a marginal, ad-hoc basis and does not typically involve large master-planned development areas that absorb in a concise period of time. Instead, growth is spread among the various geographic areas within the County, although there are certain areas that have experienced more recent development as of late.

New Home Activity

The vast majority of home sales in the County are existing homes, as new home sales have been nearly non-existent in this market area over the past several years, especially in San Andreas. Large-scale production homebuilding has not comprised a significant portion of Calaveras real estate activity in recent years, especially after the Great Recession. Even before the Great Recession, however, Calaveras County did not possess a large amount of new homebuilding. **Figure 12** below shows annual new home sales in Calaveras County in 2006 and 2015. As shown, Calaveras has seen just over 500 new homes sold over the past ten years, at an average rate of 56 per year. San Andreas represents only a very tiny fraction of this activity, seeing only 7 new homes sold during this entire decade. As shown, Copperopolis and Valley Springs have comprised the majority of new home sales, accounting for over two-thirds of the County's total.

12

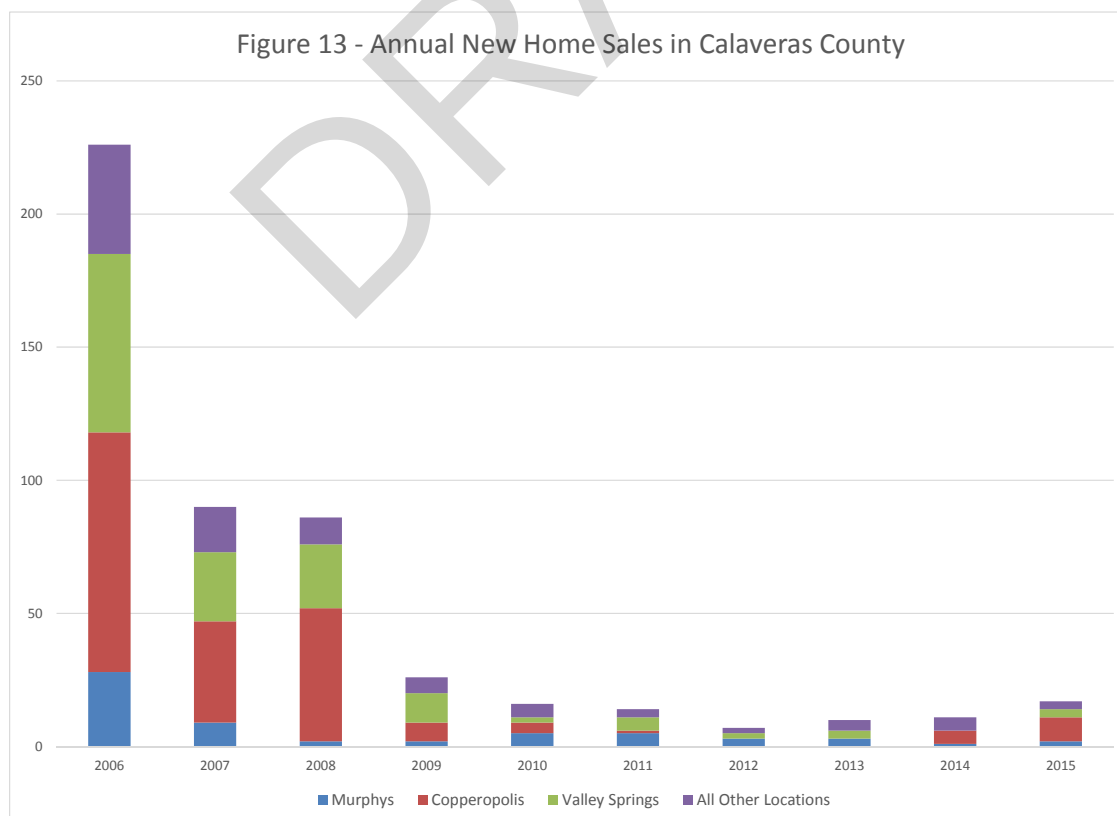
New Home Sales, Calaveras County
2006 through 2015

Submarket	2006	2015	Total 2006-2015	Average Annual
Angels Camp	11	0	23	3
Copperopolis	90	9	204	23
Murphys	28	2	60	7
San Andreas	3	0	7	1
Valley Springs	67	3	143	16
All Other Locations	23	3	55	6
County Total	226	17	503	56

Prepared by NewEconomics & Advisory, March 2016.

Source: Dataquick

Figure 13 shows the annual new home sales in each year beginning in 2006 for each of the major sub-areas within the County. As shown, homebuilding in the County suffered a major decline after 2006, and new home sales have essentially been dormant since 2008. Even more recently, as the national economy has improved and homebuilding activity has recovered nationwide, Calaveras County has not shared in this increased activity.



Planned and Proposed Residential Development

Planned development in the Calaveras County market is essentially non-existent at the current time. As of the writing of this report, there are no major development projects proposed or actively being processed for consideration. This level of inactivity reflects the slow and sluggish nature of development in this area, and the notion that Calaveras is not on the radar for builders or developers as a market poised to experience significant growth. However, many observers interviewed for this study are optimistic that Calaveras County may be able to assert itself in the future as a location where a rural lifestyle can be had (and at an affordable price), but allowing for commuting (or telecommuting) to nearby job centers such as Stockton. To this end, as Calaveras County continues to improve itself as a residential enclave, and to the extent that consumer tastes evolve toward this type of environment, Calaveras County may be able to capture a stronger presence in new residential development.

Future Residential Growth

Predicting the quantity of future residential growth in San Andreas is a challenging and imprecise endeavor. A small and rural area, San Andreas does not have readily available detailed household projection data as would be available in a larger community. In order to frame the potential growth rates in population and employment, New Economics reviewed a variety of economic and market studies pertaining to the area, analyzed historical growth rates that have occurred over a long-term period, and considered the potential for San Andreas to capture varying portions of future regional growth. The following sections display the results of this research and analysis.

Historical Growth Rates

New Economics has carefully analyzed historical growth in the County and San Andreas in order to frame future growth. **Figure 14** below shows historical growth in population and housing units in Calaveras County and the San Andreas CDP. As shown, Calaveras County has grown in population at an average annual rate of just over 3.0 percent from 1970 to 2010. However, San Andreas has experienced much slower growth rates during this period, at just 1.45% annually.

It bears noting that San Andreas' share of population and housing units in the County has been eroding over time, as other development areas have emerged. For instance, in 1970, San Andreas accounted for approximately 11.5 percent of the County's population, but by 2010 it only accounted for 6.1 percent. Furthermore, San Andreas' growth has been slowing over time. While San Andreas' overall average annual population growth rate from 1970 to 2010 was 1.45 percent, it only achieved 0.6 percent annual growth from 2000 to 2010.

14 Historical Population and Housing Units San Andreas and Calaveras County

Item	1970	1980	1990	2000	2010	Avg. Ann. Growth 1970 - 2010
Population						
Calaveras County	13,585	20,710	31,998	40,554	45,578	3.07%
San Andreas CDP	1,564	1,912	2,115	2,615	2,783	1.45%
10-Year Avg. Ann. Growth Rate [1]	n/a	2.0%	1.0%	2.1%	0.6%	
San Andreas CDP as a % of County	11.5%	9.2%	6.6%	6.4%	6.1%	
Housing Units						
Calaveras County	7,037	12,746	19,153	22,946	27,925	3.51%
San Andreas CDP	564	825	985	1,167	1,311	2.13%
10-Year Avg. Ann. Growth Rate [1]	n/a	3.9%	1.8%	1.7%	1.2%	
San Andreas CDP as a % of County	8.0%	6.5%	5.1%	5.1%	4.7%	

Prepared by New Economics & Advisory, March 2016.

[1] Represents the average annual growth rate registered during the preceding ten years.

Source: US Census Bureau

Projections of Population, Household, and Housing Unit Growth

While growth in San Andreas has slowed in recent years, available future projections take an even more subdued outlook. Since detailed and accurate projections for the small sub-county areas are not readily available, New Economics has compiled several population and household projections from various sources that are available on a countywide basis. These various projections are shown in **Figure 15** below.

- County population projections range from average annual growth rates of 0.44 percent per year to 0.85 percent per year. The average among all four sources is 0.69 percent per year.
- County household projections range from average annual growth rates of 0.61 percent per year to 1.11 percent per year. The average among all three sources is 0.69 percent per year.
- ***For the purposes of this analysis and projecting future growth in San Andreas, New Economics has selected the average growth rate for both population and households, at 0.69 percent per year.***

15

Population and Households Projections
Calaveras County

Item	2010	2020	2030	2040	Nominal Growth	Avg. Ann. Growth	Avg. Ann. Growth Rate
Population Projections							
Woods & Poole	45,900	49,930	54,590	59,220	13,320	444	0.85%
DOF	45,654	48,957	53,317	55,881	10,227	341	0.68%
Caltrans	45,457	47,193	50,024	51,820	6,363	212	0.44%
GPU [1]	45,578	49,245	53,206	57,487	11,909	397	0.78%
Average All Estimates	45,647	48,831	52,784	56,102	10,455	348	0.69%
Households Projections							
Woods & Poole	18,850	21,380	23,110	24,610	5,760	192	0.89%
DOF [2]	18,886	21,184	23,546	26,291	7,405	247	1.11%
Caltrans	18,900	19,900	21,600	22,700	3,800	127	0.61%
Average All Estimates	18,879	20,821	22,752	24,534	5,655	188	0.69%

Prepared by New Economics & Advisory, March 2016.

[1] From the GPU Technical Background Report, 2015. Projections provided in GPU are from 2010 to 2035. Annualized via straightline average and interpolated for 2020, 2030, and 2040.

[2] DOF forecast only goes to 2030. 2040 figures were estimated by NEA using the average annual growth rate between 2010 and 2030.

Sources: Woods and Poole 2012 California projections; California Department of Finance State and County Population Projections, December 15, 2014; Caltrans 2015 County-Level Economic Forecast; Calaveras County General Plan Background Report, December 18, 2014.

San Andreas' Share of County Growth

Historically, San Andreas has accounted for between 6.1 percent and 11.5 percent of the County's annual growth, depending on the decade, as shown in **Figure 14** above. This percentage has been declining over time (as described above), as other development areas have grown in market share at the expense of San Andreas. Our projections assume that this decline has "stabilized," and San Andreas will be able to capture similar proportions of County growth as has been registered over the past twenty years, which is approximately 6.0 percent. This is consistent with discussions with local experts, who foresee San Andreas' role in the region as remaining largely static, unless significant changes can be made to the area's "quality of life" factors that would support a larger share. As shown in **Figure 16**, this "stabilized" level of growth and market share would equate to growth of approximately 420 persons from 2016 to 2035, or approximately 20 new residents per year.

New Economics has also considered the potential for San Andreas to capture a larger portion of Calaveras County growth, and thus grow at a slightly faster rate than the "moderate" growth scenario described above. Under this "high growth" scenario, San Andreas would grow at 0.8 percent per year (rather than 0.69 under the "moderate" scenario). If San Andreas is able to achieve this level of growth, it would see population grow by 550 during the next twenty years, or approximately 28 new residents per year.

16

Population Projections
Calaveras County and San Andreas

Item	2016	2035	Nominal Change	Average Annual Change	Average Annual Growth Rate
[1]					
Calaveras County Population [2]	45,539	51,854	6,315	332	0.69%
San Andreas Population					
Moderate Estimate: Same Rate as County	2,868	3,266	380	20	0.69%
High Estimate: 0.8% Avg. Ann. Growth	2,874	3,344	470	25	0.80%

Prepared by NewEconomics & Advisory, March 2016.

[1] 2016 population uses US Census Bureau American Community Survey estimated for 2010-2014, projected to 2016.

[2] Assumes the average growth rate among projections shown in Figure 15.

Source: Various county growth projections and New Economics

Next, New Economics calculated the amount of new housing unit growth that would be required in order to meet the needs of this projected population growth over the next twenty years. **Figure 17** shows the average persons per housing unit in Calaveras County and San Andreas over the past 40 years. As shown, this metric has been declining in San Andreas for the past forty years, and sits at approximately 2.12 persons per housing unit in 2010.

17

Historical Population and Housing Unit Ratios
San Andreas and Calaveras County

Item	1970	1980	1990	2000	2010
Persons per Housing Unit					
Calaveras County	1.93	1.62	1.67	1.77	1.63
San Andreas CDP	2.77	2.32	2.15	2.24	2.12

Prepared by NewEconomics & Advisory, March 2016.

Source: US Census Bureau

Estimated Residential Growth

By analyzing previous growth levels, projections of future population growth, and population densities, and considering the current and possible future competitive position of San Andreas, we have provided a likely estimate of future growth in housing.

Figure 18 shows that San Andreas is estimated to grow by approximately 180 residential units between 2016 and 2035, under a “moderate” growth scenario in which residential growth in San Andreas occurs in a similar fashion as it has over the past twenty years. A more favorable scenario is also considered, in which over time San Andreas is able to

accomplish a shift in market share, allowing the area to grow more quickly than the baseline projections. Under this scenario, it is reasonable to assume that San Andreas grows at rates that approach those that were experienced over the past 40 years, which included some “lean” years with very little growth, mixed with more “booming” years that included a substantial amount of growth. Given this more aggressive growth rate, San Andreas could grow by up to 220 residential units by 2035.

18

Projected Housing Unit Growth

San Andreas CDP, 2016 - 2035

Item	20-Year Total	
	Moderate Estimate	High Estimate
San Andreas Projected Population Growth	380	470
Assumed Persons per Housing Unit	2.12	2.12
Estimated New Housing Units (Rounded)	180	220
<i>Prepared by NewEconomics & Advisory, March 2016.</i>		
<i>Source: US Census Bureau</i>		

Section 4: Commercial Real Estate Market

New Economics has evaluated the likely levels of future growth in commercial development, including retail, office, and industrial sub-classes.

Retail Development

This sub-section analyzes the market for retail in San Andreas and assesses the prospects for development in the near-term and long-term. Before delving into the detailed specific site characteristics and analysis of retail supply and demand in San Andreas, it is first worth describing some of the permanent changes that have occurred to the retail development industry that have bearing on the Project. Industry experts have documented a number of permanent market changes since the Great Recession that impact land use planning going forward. These trends include:

- **Retail Anchors Are Shrinking.** Prolonged increases in market share by e-commerce businesses, (e.g. Amazon, Staples.com), have caused a reduction of footprint for major retail anchors that sell comparison goods. This trend has been accompanied by the propensity for large-format department stores to venture into the grocery market. Increased competition for grocery (as well as prepared foods) has resulted in both smaller-format traditional grocery stores as well as new, small-format grocery versions of department stores. This trend has manifested itself in rural areas in recent years with the proliferation of “small box” general merchandise stores such as Dollar General which offer convenient locations, small floor plans (typically between 7,000 and 9,000 square feet), and a variety of low-priced goods including groceries, clothing, household cleaners, and more.
- **Retail Centers are Becoming More Aggressive in Considering Options to Expand Revenues.** All types of retail centers, from small neighborhood-serving shopping centers to large regional malls are seeking a wide variety of opportunities to diversify revenues. Retail centers are now more likely to expand their tenanting options to include service providers (gyms, post offices, massage, insurance, small appliance repair), medical uses (urgent care centers, physical rehabilitation, radiology/dialysis centers), and other “non-traditional” users including new/independent retailers that may not have a proven track record of success.¹
- **Retail is Increasingly “Experiential.”** Because shoppers can buy more things on-line that can be delivered in a very short time, shopping is evolving to emphasize an experience, beyond the instant gratification offered by a traditional commercial transaction. For example, these experiences can include outlet/thrift shopping,

¹ “Cultivating Independent Tenants can be a Worthwhile Investment, Panel Says,” Shopping Centers Today, International Council of Shopping Centers, published November, 20 2014.

(finding a unique item for a “steal”), services combined with retail (a bike repair shop with a coffee counter), or a restaurant with exceptional community views.

San Andreas Retail Dynamics

San Andreas currently has approximately 120,000 square feet of retail space, according to Loopnet, as summarized in **Figure A-1** in **Appendix A**. Although there are not any active retail spaces currently being advertised in traditional listing services, lease rates for San Andreas commercial space range generally from around \$1.00 to \$1.25 per square foot. According to commercial brokers familiar with this market, rates tend to be slightly lower than the lease rates that could be achieved in other areas of the County, most notably the “stronger” retail markets of Jackson, Murphys, and Angels Camp.

The retail building space that exists within San Andreas is largely what would be considered highway-oriented strip retail, and much of space exists within older historic buildings that were not designed with retail in mind, and thus are not ideal for today’s type of shopping. However, this type of retail can be conducive to creating a walkable tourism district, although the character of retail in San Andreas is not considered to be as appealing as other nearby tourism/ shopping destinations, such as Angels Camp, Murphy’s, or Sutter Creek.

Surrounding Retail Supply

The closest “standard” community shopping area to San Andreas is in Angels Camp, which is an approximate 15-minute drive south down State Route 49. The Frog Jump Plaza and Angels Towne Center combined provide approximately 121,000 square feet of retail space, and shopping options including grocery (Save Mart), pharmacies, (CVS and Rite Aid), and various restaurants and services. By traveling the opposite direction to Jackson (an approximately 20-minute drive), San Andreas residents can choose from several additional shopping options. Jackson and the adjacent community of Martell offer several shopping center options which comprise nearly 800,000 square feet of building space, and include major general merchandise stores (Walmart and Kmart), a large home supply store (Lowes), four supermarket/ grocery stores, and more. If the selections offered at Angels Camp or Jackson still do not meet the shopping needs of residents of the area for certain types of purchases, the City of Stockton (approximately 40 miles away) and other nearby cities in the Central Valley can provide all essential goods and services, including regional malls, new car dealerships, regional big box food stores (Costco), etc. **Figure 19** shows the major shopping centers that exist in Jackson and Angels Camp, which comprise over 900,000 square feet of leasable area.

19 Surrounding Market Area Shopping Centers

Angels Camp and Jackson/ Martell, 2016

Location/ Center	Address	Leaseable Sqft	Anchor/ Major Tenants
Angels Camp (15-Minute Drive from San Andreas)			
Frog Jump Plaza	51 North Main Street	43,000	CVS Pharmacy, Starbucks, Round Table
Angels Towne Center	260 South Main Street	78,000	Save Mart, Rite Aid, Taco Bell, Burger King
Subtotal Angels Camp		121,000	
Jackson/ Martell (20-Minute Drive from San Andreas)			
Walmart Shopping Center	10355 Wicklow Way	100,000	Walmart
Amador Shopping Plaza	11980 Highway 88	150,000	Save Mart, Big 5 Sporting Goods, Aaron's, Dollar Tree, Baskin Robbins
Kmart	10500 Wicklow Way	85,000	Kmart
Amador Ridge	Hwy 49 and Industry Way	273,000	Lowe's, Safeway, Autozone, Staples, Petco
Jackson Creek Plaza	Hwy 49 and French Bar Rd.	104,000	CVS Pharmacy, Cost Less Food Company
Gold Country Center	711-781 Highway 49	75,000	Raley's, Tractor Supply Co., Payless Shoe Source
Subtotal Jackson/ Martell		787,000	
TOTAL		908,000	

Prepared by NewEconomics & Advisory, March 2016.

Source: Loopnet, Listing Brokers, and New Economics.

Spending Analysis

Because of San Andreas' geographic positioning approximately mid-way between the cities of Jackson and Angels Camp—which each include intersections of prominent state highways that transmit travelers between the rural upland areas and the more urban destinations in the valley—the ability for San Andreas to capture significant shopping from the larger region is limited. Shoppers will likely prefer the more proximate and convenient locations of Jackson to the north and Angels Camp or Sonora to the south.

Because of the limited shopping options for residents of San Andreas and the vicinity, a large degree of retail leakage occurs. In order to assess this issue, New Economics has reviewed geographic nuances of the region, including transportation routes and competing retail supply, and delineated the Primary Trade Area (PTA) from which the majority of spending will originate. In this case, we have defined the PTA as the area within a 6-mile radius around the center of San Andreas. This PTA was chosen upon careful consideration of the geographic facets of San Andreas and the surrounding area and is reflective of the fact that residents who are outside this six-mile radius are close to the communities of Jackson to the north and Angels Camp to the south, and would be unlikely to travel to San Andreas to shop unless there were unique alternatives not found closer to home.

New Economics has collected retail spending and retail sales data that occur within the PTA in order to assess the capture of retail spending, and whether additional retail development to stem retail “leakage” could be supported.

Figure A-2 in **Appendix A** includes retail spending and sales receipts at stores within the PTA. As shown, the 1,700 households with the PTA expend approximately \$51.9 million annually on retail goods, while only approximately \$30.8 million of retail sales occur within the PTA. Thus, approximately \$21.1 million of “net” retail spending from residents within the PTA occurs in other areas (this is referred to as “retail leakage”). The most prominent categories of retail leakage include automobile dealers, grocery stores, clothing stores, and general merchandise/ department stores.

New Economics closely evaluated the various categories of retail leakage, which are summarized **Figure 20** below. As shown, over \$27 million of spending from PTA households in these retail categories occurs in other areas. If San Andreas were able to re-capture a portion of this leakage using reasonable capture rates for each category derived by New Economics, it could support approximately 10,000 square feet of retail building space in San Andreas. It is important to note that this scale of capture would need to occur in a retail format that has the ability to offer goods from multiple categories, mostly notably grocery and general merchandise. Certain other categories, such as restaurants, could be added to the market in a small format.

20

Supportable Retail Building Space*Primary Trade Area: 6-Mile Radius Around San Andreas*

List	Retail Leakage	Annual Sales Per Sqft	Potential Sqft	Estimated Capture	Supportable Sqft
	[1]	[2]		[3]	
Motor Vehicle & Parts Dealers					
Automobile Dealers	(\$7,695,530)	n/a	n/a	0%	0
Furniture & Home Furnishings Stores					
Furniture Stores	(\$830,594)	\$400	2,076	10%	208
Electronics & Appliance Stores	(\$220,653)	\$400	552	10%	55
Food & Beverage Stores					
Grocery Stores	(\$4,895,169)	\$400	12,238	25%	3,059
Specialty Food Stores	(\$643,789)	\$400	1,609	25%	402
Beer, Wine & Liquor Stores	(\$249,198)	\$400	623	25%	156
Gasoline Stations	(\$98)	\$400	0	0%	0
Clothing & Clothing Accessories Stores					
Clothing Stores	(\$1,804,283)	\$400	4,511	10%	451
Shoe Stores	(\$322,066)	\$400	805	10%	81
Jewelry, Luggage & Leather Goods Stores	(\$462,555)	\$400	1,156	10%	116
Sporting Goods, Hobby, Book & Music Stores					
Sporting Goods/Hobby/Musical Instr Stores	(\$541,126)	\$400	1,353	10%	135
Book, Periodical & Music Stores	(\$149,883)	\$400	375	10%	37
General Merchandise Stores					
Department Stores Excluding Leased Depts.	(\$4,665,589)	\$400	11,664	25%	2,916
Other General Merchandise Stores	(\$2,447,845)	\$400	6,120	25%	1,530
Miscellaneous Store Retailers					
Office Supplies, Stationery & Gift Stores	(\$234,468)	\$400	586	10%	59
Other Miscellaneous Store Retailers	(\$911,197)	\$400	2,278	10%	228
Food Services & Drinking Places					
Full-Service Restaurants	(\$724,439)	\$400	1,811	25%	453
Limited-Service Eating Places	(\$610,451)	\$400	1,526	25%	382
Special Food Services	(\$38,459)	\$400	96	25%	24
Drinking Places - Alcoholic Beverages	(\$47,130)	\$400	118	25%	29
Total (Rounded)	(\$27,494,522)		49,500		10,300
Potential Supportable Retail/ Comm. Acres [4]			4.5		0.9

Prepared by NewEconomics & Advisory, March 2016.

[1] Only categories that are estimated to incur leakage are shown. See Figure A-1 for full detailed spending data for the PTA.

[2] Estimated sales per square foot from the ULI Dollars & Cents of Shopping Centers for Neighborhood Shopping Centers in the West. Inflated to 2016 dollars.

[3] New Economics has provided an estimate of the potential amount of retail spending among each category that could reasonably be expected to occur in San Andreas. Preliminary assumption subject to refinement.

[4] Assumes a 25% FAR.

Source: ESRI, ULI, and New Economics

Future Growth

New Economics has assessed the amount of new retail development that could be supported from the spending from new residents of San Andreas as the area continues to grow over time. As discussed in the Residential Market Section above, New

Economics has estimated that San Andreas will grow by between 180 and 220 housing units between 2016 and 2035. We have estimated the amount of new household spending that the residents of these housing units will bring, the likely amounts that could be “captured” within San Andreas, and the resulting retail building space that could be supported by this spending. **Figure 21** below shows that the spending from new residents could bring support for up to 0.5 acres of new retail development by 2035.

21

Support for Retail Space From Future Growth 2016-2035

Item	Moderate Estimate	High Estimate
Assumptions		
Number of New Housing Units by 2035 [1]	180	220
Average Household Income [2]	\$68,000	\$68,000
TOTAL SUPPORTABLE RETAIL SPACE		
Portion of HH Income Spent on Brick & Mortar Retail [3]	31%	31%
Total Retail Spending Power	\$3,794,400	\$4,637,600
Median Sales Per Sq. Ft. (Rounded) [4]	\$400	\$400
Total Supportable Brick & Mortar Retail (Rounded)	9,000	12,000
Additional Services Demand (33%) [5]	3,000	4,000
Total Supportable Commercial Space	12,000	16,000
Assumed San Andreas Capture (33%)	3,960	5,280
Assumed San Andreas Capture (Rounded)	4,000	5,300
Potential Supportable Retail/ Comm. Acres [6]	0.4	0.5

Prepared by New Economics & Advisory, March 2016.

[1] See Figure 18.

[2] Estimated annual income for new households in San Andreas, who would purchase newly-constructed homes. Income estimate is based upon the approximate income required to purchase a \$250,000 home.

[3] This estimate is from spending patterns as tracked by the Consumer Expenditure Survey, for households between \$60,000 - \$90,000 in annual income.

[4] Average sales per sq. ft. for a neighborhood supermarket from ULI. Reflects Western region figures. Inflated to 2016 dollars.

[5] This planning-level estimate reflects the portion of commercial space that is dedicated to services, such as fitness, personal services, medical/dental, banking, etc. that constitute an increasing presence in retail centers.

[6] Assumes a 25% FAR.

Source: BLS, ULI, and New Economics

Employee Spending

Employees who hold jobs in San Andreas represent another source of demand that supports retail space in San Andreas. We have considered the spending that these employees, and potential future spending that could be captured if new and unique retail spaces were added to the supply, as well as the spending from new employees who are estimated to be added in San Andreas by 2035. **Figure 22** below shows the results of this analysis, which estimates that an additional 5,600 square feet (or approximately 0.5 acres) could be added to accommodate existing and future employee spending by 2035.

Sector	22 Demand for Commercial Space from San Andreas Employees 2016-2035		
	Existing Employees	New Employees (2016-2035)	Total
San Andreas Employees [1]	1,927	406	2,333
Assumed Spending per Work Day [2]	\$15	\$15	
Total Spending [3]	\$7,322,600	\$1,542,800	\$8,865,400
Assumed San Andreas Capture	75%	75%	75%
Estimated Employee Spending in San Andreas	\$5,491,950	\$1,157,100	\$6,649,050
Retail Sales per Sq. Ft. [4]	\$400	\$400	\$400
Total Supportable Retail Sq. Ft. From Emp. Spending	13,730	2,893	16,623
Assumed Portion Already Spent in San Andreas [5]	80%	0%	
Estimated Supportable Retail Sq. Ft. (Rounded)	2,700	2,900	5,600
Acres	0.2	0.3	0.5

Prepared by New Economics & Advisory, May 2015.

[1] Employment projections are from Caltrans. Assumes that San Andreas accounts for 20% of future employment in the County, which is San Andreas' approximate share of countywide employment over the past ten years. See Figure A-3 for details.

[2] From ICSC "Office Worker Retail Spending in a Digital Age," 2012. Represents total daily employee spending (less transportation and online) in rural areas with limited offerings.

[3] Assumes 250 work days per year.

[4] Average sales per sq. ft. for a neighborhood supermarket from ULI. Reflects Western region figures. Inflated to 2016 dollars.

[5] Assumes that most existing employee spending already occurs in San Andreas retail space, but that some additional spending could occur if new offerings were provided. New employees added in future years represent "net new" demand.

Source: ULI and New Economics

Visitor Spending

Visitor spending is another segment of retail demand, which could potentially be expanded upon in future years. San Andreas is not seen as a primary tourism destination in the County at the current time, but it does serve as an outpost for visitors

who are traveling through the County to or from various destinations. However, given its historic nature, its downtown environment, and its proximity to the Central Valley markets, San Andreas could potentially increase its tourism base in future years by leveraging some of its promising attributes. Growth in tourism spending is difficult to quantify, since the quantity of potential spending will be dependent on many uncertain variables and primarily will rely on the ability to attract visitors by offering a compelling draw. Murphys provides a good example of a community that was able to establish such a draw and has been successful in increasing tourism in recent years. Murphys offers a pleasant downtown, various shopping and dining opportunities, wine tasting and related activities, and a large degree of visitation occurs to the Ironstone Vineyards Amphitheater, which holds music performances and other events that provide a regional draw. If San Andreas were to work to enhance its tourist amenities in a way similar to Murphys has, it is possible that it can tap into future tourism spending. Nonetheless, this prospect is speculative, and New Economics has not quantified the potential amount of retail spending or retail space that could be captured by future growth in visitation. If San Andreas is successful in capturing additional tourism spending in future years, it may be able to support a greater amount of retail space within its boundaries than is shown in this Market Analysis.

Summary of Retail Market Analysis

Figure 23 summarizes the potential retail support that could be supported in San Andreas from existing leakage within the PTA, future residential growth, and employee spending. As shown, up to 21,000 square feet (or 1.9 acres) of new retail development is estimated to be supportable in San Andreas by 2035 from these spending categories.

23

Estimated Supportable Retail Development

San Andreas, 2016 - 2035

Item	Moderate Estimate		High Estimate	
	(sqft)	(acres)	(sqft)	(acres)
Supportable Retail From Existing Leakage	10,300	0.9	10,300	0.9
Supportable Retail From New Development (2016 - 2035)	4,000	0.4	5,300	0.5
Supportable Retail from Employee Spending	5,600	0.5	5,600	0.5
Total Long-Term Supportable Retail	19,900	1.8	21,200	1.9

Prepared by NewEconomics & Advisory, March 2016.

Source: New Economics & Advisory

It should be acknowledged that a recent report prepared by BAE Urban Economics as part of a planning process underway in Angels Camp considered a larger "Market Area" that could pull shoppers from the larger geographic area that comprises all of Calaveras

County and portions of Amador and Tuolumne Counties. This study suggested that this entire trade area could support up to 1,000,000 square feet of retail, and that Angels Camp could reasonably expect to accommodate a community shopping center of approximately 100,000 to 200,000 square feet.

In theory, San Andreas stands to tap into this potential demand, if it were successful in drawing enough residents to San Andreas such that it could attract a major retail center. However, San Andreas' relatively remote location hinders its ability to attract such a retail, as San Andreas is considered an inferior retail destination as compared to its closest neighbors to the north (Jackson) and south (Angels Camp). In particular, the intersection of Highway 4 and Highway 49 in Angels Camp may present a more compelling location for larger-scale retail development, as it is a "hard corner" that sits in the confluence of two heavily-traveled state highways, offers good visibility and synergy with existing retail shopping centers, and is at the center of Angels Camp which is itself a larger residential population base. Since San Andreas is more "out of the way" and presents neither the traffic volumes nor the population base available in other nearby areas, its ability to attract a major retail center will be challenged.

Office Development

San Andreas has approximately 160,000 square feet of office space, according to Loopnet (as summarized in **Figure A-4** in **Appendix A**). At the current time, there are no active office listings in San Andreas, but brokers familiar with office space in the region have indicated that lease rates typically run between \$1.00 and \$1.50 per square foot per year, and that most of the office space in San Andreas is occupied by County administration buildings.

New Economics has assessed the scale of potential new office space development that is likely to be supported in San Andreas over the next twenty years. Forecasting the demand for office space in a small rural area such as San Andreas can be a difficult endeavor, as one or two new users who locate in San Andreas for one reason or another can have a large impact on the overall rate of office growth. Since such events are speculative and difficult to predict, we have based our estimate upon likely levels of future growth in both employment and population. Essentially, we have tied the amount of office space to the existing amount of users (both residents and employees), and then forecast future levels assuming that these ratios remain constant into the future.

Figure 23 provides two illustrative approaches to forecasting the demand for new office space:

- **Approach #1** calculates the existing level of office space per housing unit (111 sq. ft.). This ratio implies that future office space in San Andreas will be mostly local-serving and will grow proportionately to existing office space ratios as new homes are added to the community. As such, Approach #1 applies this office space to housing unit ratio to projected housing growth between 2016 and 2035 to calculate

the amount of new office space that would need to be added to maintain this ratio as the population grows.

- **Approach #2** calculates the level of office space per job as of 2014 (82 sq. ft.). In reality, jobs occur in a variety of spaces, including retail, industrial, government, owner-occupied space, etc. This ratio should be viewed as an illustrative metric. Approach #2 assumes that the proportion of office space to overall jobs will remain the same over time and applies this ratio to projected housing growth between 2016 and 2035 to calculate the amount of new office space that would need to be added to maintain this ratio as the number of employees grows.

While each of the approaches described above reflects a potential range of growth, together they frame a reasonable range of the amount of office development that San Andreas can expect over the next 20 years. The resulting projections indicate that San Andreas could experience demand in the range of 20,000 to 45,000 square feet of new office space between 2016 and 2035, or between 1.8 and 4.1 acres.

24

Estimated Demand for New Office Space San Andreas, 2016 - 2035

Projection	Amount		
Approach #1: Constant Space Ratio Per Housing Unit			
Office Inventory (sqft), 2016 [1]	158,429		
Number of Housing Units, 2014 [2]	1,431		
Office Inventory Swft per Housing Unit, 2016	111		
	<u>Housing</u>	<u>Office Space</u>	<u>Office Space</u>
Projected Office Space Growth: 2015-2035	<u>Growth</u>	<u>Growth (Sqft)</u>	<u>Growth (Acres) [3]</u>
Moderate Projection	180	19,900	1.8
High Projection	220	24,400	2.2
Approach #2 Constant Space Ratio per Job			
Office Inventory (sqft), 2016 [1]	158,429		
Number of Jobs, 2014 [4]	1,927		
Office Inventory Sqft per Job 2014	82		
	<u>Job Growth</u>	<u>Office Space</u>	<u>Office Space</u>
Projected Office Space Growth: 2016-2035		<u>Growth (Sqft)</u>	<u>Growth (Acres) [3]</u>
Base Projection [5]	406	44,900	4.1

Prepared by NewEconomics & Advisory, March 2016.

[1] From Loopnet.

[2] From US Census Bureau American Community Survey, 5-year estimated for 2010-2014.

[3] Assumes a 25% FAR.

[4] From US Census Bureau LED/ LEHD employment estimates.

[5] Employment projections from Caltrans and assumes San Andreas retains current share of Countywide growth.

Source: Loopnet, various population and growth projections, and New Economics & Advisory.

Industrial Development

San Andreas has a very small amount of industrial space, which is primarily occupied by businesses that serve local residents, such as automobile repair shops, metal fabrication, warehouse/ storage areas, etc. **Figure A-5** in **Appendix A** shows the total industrial space present within San Andreas, which totals approximately 104,000 square feet. Listing brokers for industrial spaces in San Andreas state that the asking rates for industrial can vary depending on the quality, location, and amenities offered at each individual property, but that lease rates generally range from \$0.30 to \$0.80 per square foot (per month), and are holding steady. According to Loopnet, most of the industrial building space in San Andreas is at least 25 years old, and no new industrial space has been developed since 2004, which reflects the slow and unsteady nature of this property type.

New Economics has assessed the future amount of industrial development in the same way as office development. As with office, industrial development can be difficult to predict with extreme precision in an area as small as San Andreas, as one or two new users can have a greatly impact on the number of industrial space required. In order to frame the likely amount of new industrial space that will be needed over the next ten years, New Economics tied the amount of industrial space to both population growth and employment growth, using existing building space ratios. As shown, depending upon the approach utilized to estimate space, it is expected that San Andreas can support between 13,000 and 30,000 square feet of new industrial space (or 1.5 to 3.5 acres) by 2035.

25

Estimated Demand for New Industrial Space San Andreas, 2016 - 2035

Projection	Amount		
Approach #1: Constant Space Ratio Per Housing Unit			
Industrial Inventory (sqft), 2016 [1]	104,463		
Number of Housing Units, 2014 [2]	1,431		
Industrial Inventory Sq. Ft. per Housing Unit, 2016	73		
Projected Industrial Space Growth: 2016-2035	<u>Housing Growth</u>	<u>Industrial Space Growth (Sqft)</u>	<u>Industrial Space Growth (Acres) [3]</u>
Moderate Projection	180	13,100	1.5
High Projection	220	16,100	1.8
Approach #2 Constant Space Ratio per Job			
Industrial Inventory, (sqft), 2016	104,463		
Number of Jobs, 2014 [4]	1,927		
Industrial Inventory Sqft per Job 2014	54		
Projected Industrial Space Growth: 2016-2035	<u>Job Growth</u>	<u>Industrial Space Growth (Sqft)</u>	<u>Industrial Space Growth (Acres) [3]</u>
Base Projection [5]	406	29,600	3.4

Prepared by NewEconomics & Advisory, March 2016.

[1] From Loopnet.

[2] From US Census Bureau American Community Survey, 5-year estimated for 2010-2014.

[3] Assumes a 20% FAR.

[4] From US Census Bureau LED/ LEHD employment estimates.

[5] Employment projections from Caltrans and assumes San Andreas retains current share of Countywide growth.

Source: Loopnet, various population and growth projections, and New Economics & Advisory.

Appendix A: Technical Support

A-1 Retail Building Supply San Andreas, 2016

#	Address	Building Size	Year Built	Lot Size
1	282 E. St. Charles Street	3,000	n/a	0.00
2	833 Highway 49	24,709	1989	45.64
3	146 W. St. Charles Street	7,980	1948	0.69
4	197 W. St. Charles Street	660	1900	0.51
5	23 E. St. Charles Street	15,000	1959	0.25
6	440 W. St. Charles Street	n/a	1900	0.60
7	376 Russel Road	5,472	1955	0.45
8	126 W. St. Charles Street	15,850	1900	0.58
9	57 W. St. Charles Street	n/a	1900	0.04
10	95 W. St. Charles Street	n/a	1900	0.09
11	162 Bell Street	n/a	1900	0.07
12	35 Main Street	n/a	1900	0.24
13	37 St. Charles Street	n/a	1900	0.09
14	577 W. St. Charles Street	1,179	1940	0.79
15	345 W. St. Charles Street	1,464	1983	0.23
16	632 W. St. Charles Street	2,400	2001	0.61
17	309 W. St. Charles Street	1,210	1950	0.08
18	326 W. St. Charles Street	1,500	1973	0.31
19	314 W. St. Charles Street	4,064	1988	0.44
20	238 W. St. Charles Street	n/a	n/a	0.34
21	332 W. St. Charles Street	1,204	1948	0.25
22	608 W. St. Charles Street	1,124	1946	0.19
23	698 W. St. Charles Street	1,333	1949	0.33
24	317 E. St. Charles Street	1,800	n/a	n/a
25	314 E. St. Charles Street	1,000	n/a	n/a
26	284 W. St. Charles Street	2,000	n/a	0.48
27	319 E. St. Charles Street	n/a	n/a	n/a
28	440 E. St. Charles Street	2,500	1965	0.69
29	81 W. St. Charles Street	1,958	n/a	0.48
30	282 E. St. Charles Street	3,000	1997	0.60
31	72 St. Charles Street	n/a	1900	0.32
32	373 W. St. Charles Street	3,200	1988	0.35
33	327 E. St. Charles Street	2,710	1946	0.15
34	282 W. St. Charles Street	2,032	n/a	0.58
35	146 E. St. Charles Street	8,040	n/a	0.55
TOTAL/ AVERAGE		116,389	1943	57.02

Prepared by New Economics & Advisory, March 2016.

Source: Loopnet

A-2 Retail Supply and Demand

Primary Trade Area: 6-Mile Radius Around San Andreas

Item/ Retail Category	Supply (Retail Sales)	Demand (Retail Potential)	Retail Gap
2015 Population	4,106		
2015 Households	1,715		
2015 Median HH Income	\$97,276		
2015 Per Capita Income	\$50,859		
Motor Vehicle & Parts Dealers	\$4,919,571	\$10,562,879	(\$5,643,308)
Automobile Dealers	\$940,526	\$8,636,056	(\$7,695,530)
Other Motor Vehicle Dealers	\$2,089,503	\$1,304,567	\$784,936
Auto Parts, Accessories & Tire Stores	\$1,889,543	\$622,255	\$1,267,288
Furniture & Home Furnishings Stores	\$1,469,377	\$1,546,229	(\$76,852)
Furniture Stores	\$0	\$830,594	(\$830,594)
Home Furnishings Stores	\$1,469,377	\$715,635	\$753,742
Electronics & Appliance Stores	\$2,200,117	\$2,420,770	(\$220,653)
Bldg Materials, Garden Equip. & Supply Stores	\$4,192,786	\$2,283,644	\$1,909,142
Bldg Material & Supplies Dealers	\$3,764,140	\$2,018,552	\$1,745,588
Lawn & Garden Equip & Supply Stores	\$428,646	\$265,091	\$163,555
Food & Beverage Stores	\$3,233,668	\$9,021,825	(\$5,788,157)
Grocery Stores	\$2,857,940	\$7,753,109	(\$4,895,169)
Specialty Food Stores	\$181,580	\$825,369	(\$643,789)
Beer, Wine & Liquor Stores	\$194,148	\$443,346	(\$249,198)
Health & Personal Care Stores	\$4,346,338	\$3,258,716	\$1,087,622
Gasoline Stations	\$2,914,406	\$2,914,504	(\$98)
Clothing & Clothing Accessories Stores	\$410,683	\$2,999,588	(\$2,588,905)
Clothing Stores	\$362,978	\$2,167,261	(\$1,804,283)
Shoe Stores	\$0	\$322,066	(\$322,066)
Jewelry, Luggage & Leather Goods Stores	\$47,705	\$510,260	(\$462,555)
Sporting Goods, Hobby, Book & Music Stores	\$655,418	\$1,346,426	(\$691,008)
Sporting Goods/Hobby/Musical Instr Stores	\$630,717	\$1,171,843	(\$541,126)
Book, Periodical & Music Stores	\$24,701	\$174,584	(\$149,883)
General Merchandise Stores	\$0	\$7,113,435	(\$7,113,435)
Department Stores Excluding Leased Depts.	\$0	\$4,665,589	(\$4,665,589)
Other General Merchandise Stores	\$0	\$2,447,845	(\$2,447,845)
Miscellaneous Store Retailers	\$1,564,241	\$2,563,980	(\$999,739)
Florists	\$168,465	\$97,473	\$70,992
Office Supplies, Stationery & Gift Stores	\$117,477	\$351,945	(\$234,468)
Used Merchandise Stores	\$232,687	\$157,753	\$74,934
Other Miscellaneous Store Retailers	\$1,045,612	\$1,956,809	(\$911,197)
Nonstore Retailers	\$1,636,020	\$1,184,029	\$451,991
Electronic Shopping & Mail-Order Houses	\$1,455,458	\$915,694	\$539,764
Vending Machine Operators	\$180,562	\$26,494	\$154,068
Direct Selling Establishments	\$0	\$241,842	(\$241,842)
Food Services & Drinking Places	\$3,289,346	\$4,709,825	(\$1,420,479)
Full-Service Restaurants	\$1,901,873	\$2,626,312	(\$724,439)
Limited-Service Eating Places	\$1,298,444	\$1,908,895	(\$610,451)
Special Food Services	\$56,760	\$95,219	(\$38,459)
Drinking Places - Alcoholic Beverages	\$32,269	\$79,399	(\$47,130)
Total	\$30,831,973	\$51,925,849	(\$21,093,876)

Prepared by New Economics & Advisory, March 2016.

Source: ESRI and New Economics

A-3 *Employment Projections* Calaveras County

Item	2010	2020	2030	2035	2040	Avg. Ann. Growth 2010 - 2040
County Employment						
Caltrans [1]	7,820	9,260	9,630	9,850	10,070	0.85%
San Andreas as a % of County	20%	20%	20%	20%	20%	
San Andreas Emploment	1,564	1,852	1,926	1,970	2,014	0.85%
New Employees	0	288	362	406	450	

Prepared by New Economics & Advisory, March 2016.

[1] Caltrans projections are only available for 2020, 2030, and 2040. New Economics estimated the projected employment in 2035 by taking the mid-point between the 2030 and 2040 projections.

Sources: Caltrans 2015 County-Level Economic Forecast, and New Economics

A-4 *Office Building Supply* *San Andreas, 2016*

Page 1 of 2

#	Property	Building Size	Year Built	Lot Size
1	130 St. Charles Street	3,662	1950	0.47
2	486 W. St. Charles Street	1,134	1950	0.79
3	16 Main Street	2,000	1900	0.04
4	53 W. St. Charles Street	1,500	1930	0.05
5	65 W. St. Charles Street	1,952	1900	0.09
6	700 Mountain Ranch Road	18,000	2006	1.78
7	Address Not Available	1,200	1952	0.09
8	556 Toyon Drive	7,600	1965	0.44
9	52 Main Street	3,880	1989	0.24
10	692 Marshall Avenue	1,932	1978	0.26
11	704 Mountain Ranch Road	n/a	2005	1.16
12	702 Mountain Ranch Road	7,518	2005	0.79
13	900 Mountain Ranch Road	7,632	1966	2.54
14	75 Main Street	744	1945	0.20
15	891 Mountain Ranch Road	n/a	1900	12.64
16	272 W. St. Charles Street	1,140	1974	0.12
17	45 Church Hill Street	n/a	1900	0.11
18	785 Mountain Ranch Road	n/a	1900	2.50
19	596 Mountain Ranch Road	760	1950	0.10
20	677 W. St. Charles Street	1,052	1940	0.36
21	509 E. St. Charles Street	31,271	2001	3.33
22	749 Mountain Ranch Road	6,232	1982	1.75
23	372 Luddy Lane	911	1979	0.15
24	20 E. St. Charles Street	3,128	1961	0.28
25	40 St. Charles Street	1,131	1961	0.06
26	394 E. St. Charles Street	2,018	1942	0.48
27	30 Main Street	n/a	1900	0.46
28	1074 Calaveritas Road	n/a	1900	11.06
29	1107 Mountain Ranch	n/a	1900	35.00
30	505 Pope St.	n/a	1900	0.29
31	105 St. Charles Street	n/a	1900	0.16
32	43 Main Street	n/a	1900	0.06
33	171 N. California Street	n/a	1900	0.29
34	98 Main Street	n/a	1900	0.40
35	45 St. Charles Street	n/a	1900	0.13
36	46 Main Street	n/a	1900	0.21
37	231 Bell View Street	n/a	1900	0.43
38	564 Mountain Ranch Road	n/a	n/a	0.71

A-4 *Office Building Supply* *San Andreas, 2016*

Page 2 of 2

#	Property	Building Size	Year Built	Lot Size
39	40 Main Street	n/a	n/a	0.06
40	3 Main Street	n/a	n/a	0.20
41	127 Bellview Street	1,266	1952	0.45
42	103 W. St. Charles Street	1,130	1955	0.11
43	990 Park Drive	924	1982	15.13
44	576 St. Charles Street	13,068	1954	0.21
45	990 Mountain Ranch Road	5,280	1992	2.13
46	169 W. St. Charles Street	5,495	1968	1.08
47	105 W. St. Charles Street	3,872	1955	0.16
48	462 W. St. Charles Street	1,440	1994	0.70
49	184 W. St. Charles Street	6,000	1960	0.89
50	444 E. St. Charles Street	4,007	1992	0.65
51	579 Highway 49	7,070	n/a	0.71
52	378 W. St. Charles Street	n/a	n/a	n/a
53	596 E. St. Charles Street	1,280	1960	0.05
54	Address Not Available	n/a	n/a	n/a
55	96 E. St. Charles Street	1,200	1952	0.09
56	Address Not Available	n/a	n/a	0.02
57	Address Not Available	n/a	n/a	15.80
58	Address Not Available	n/a	n/a	0.04
59	Address Not Available	n/a	n/a	0.10
60	Address Not Available	n/a	n/a	0.03
61	Address Not Available	n/a	n/a	0.76
62	Address Not Available	n/a	n/a	0.16
63	Address Not Available	n/a	n/a	0.15
64	Address Not Available	n/a	n/a	0.18
TOTAL/ AVERAGE		158,429	1946	119.88

Prepared by New Economics & Advisory, March 2016.

Source: Loopnet

A-5 Industrial Building Supply

San Andreas, 2016

#	Property	Building Size	Year Built
1	182 N. California Street	4,380	1980
2	812 Church Hill Street	12,100	1986
3	884 Highway 49	776	1945
4	806 Pool Station Road	n/a	1900
5	709 Pool Station Road	14,000	1900
6	3397 Highway 12	8,090	1987
7	3365 Highway 12	2,000	1980
8	2918 Highway 12	3,300	1963
9	2685 Highway 12	n/a	1900
10	1033 Highway 49	5,500	1900
11	1031 Highway 49	28,100	2001
12	812 Church Hill Road	12,100	1986
13	144 Truck Street	1,872	1999
14	160 Wendell Court	6,000	n/a
15	270 George Reed Drive	2,300	2004
16	4566 California Highway 12	3,945	n/a
TOTAL/ AVERAGE		104,463	1959

Prepared by New Economics & Advisory, March 2016.

Source: Loopnet