

Angels Camp State Route 4 & State Route 49 Gateway and Corridor Study

Angels Camp, California

FINAL REPORT
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bae urban economics



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SR4 Bridge from Murphys Grade Road

Executive Summary

Project Overview

This plan was funded through a partnership planning grant, administered through the California Department of Transportation (Caltrans) in partnership with the Calaveras Council of Governments (CCOG) and the City of Angels Camp (the City). The plan is intended to provide recommended solutions for transportation conflicts at the State Route 4 (SR 4) and State Route 49 (SR 49) intersection through integrated land use and transportation planning, as well as provide a range of strategies to implement the recommendations. The project study area includes a land use focus area specific to the undeveloped land in the northwest quadrant of the City area and a transportation study area that will look at impacts to the overall roadway networks.

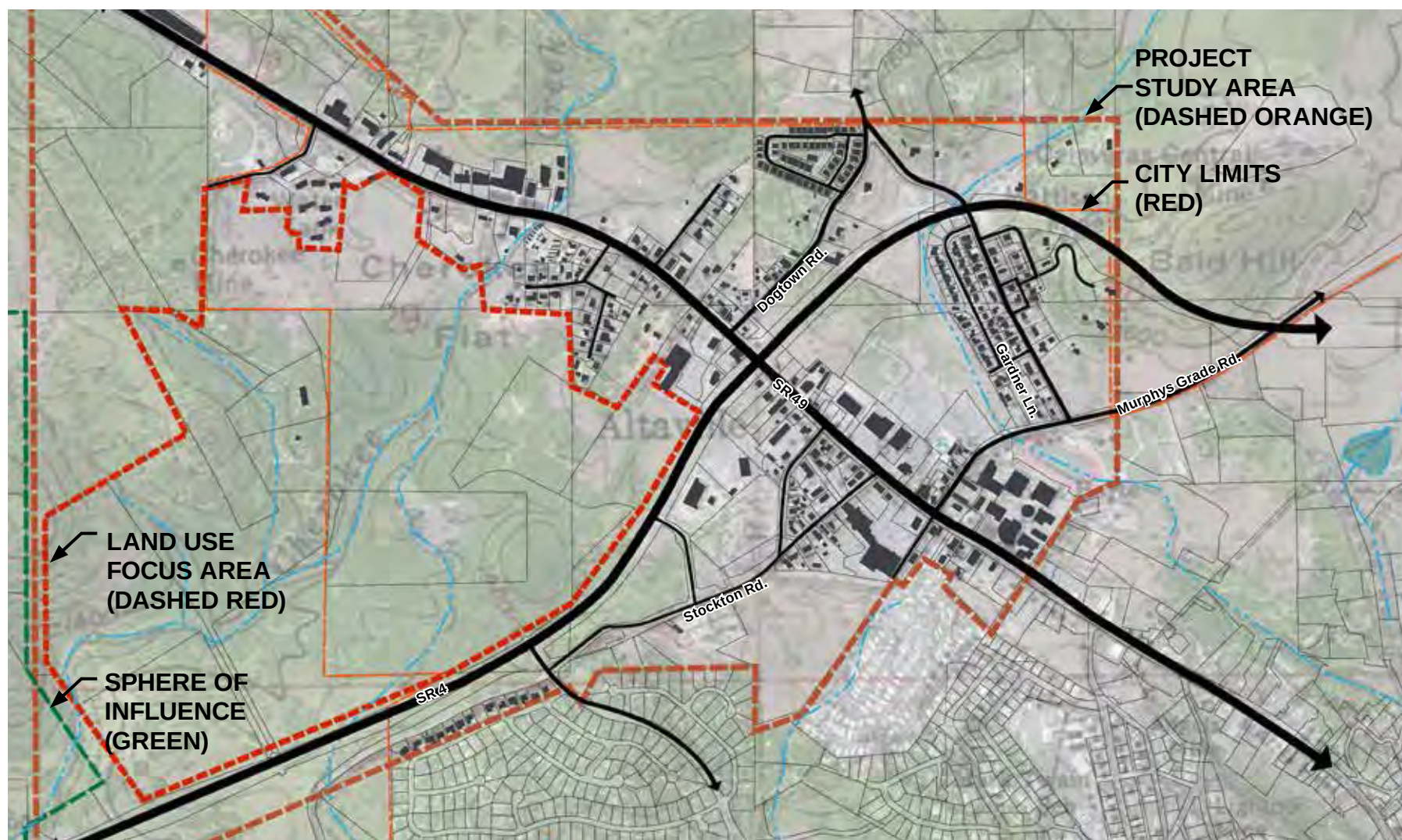
This study will identify potential development along SR 4 in coordination with circulation and access improvements to facilitate community revitalization and improved roadway conditions along the SR 4 and SR 49 corridor in Angels Camp.

The intersection of SR 4 and 49 is the crossroads of the two major roadways in Calaveras County. However, expressway designation on SR 4 limits access onto the roadway, which has limited the opportunities for future development along the SR 4 corridor at the entry to Angels Camp. Limited access onto SR 4 as well as a lack of internal road network has concentrated development and access along SR 49 creating congestion along the corridor that has resulted in poor traffic conditions and safety issues. Future development is desired in Angels Camp, but access at SR 4 is needed to relieve traffic on SR 49 and allow development to occur.

Goals

The following five goals represent opportunities to resolve transportation conflicts and identify growth opportunities that align with the region's current and future objectives.

-  Improved safety and access on SR 4 and SR 49.
-  Build a Connected multi-modal network in Angels Camp.
-  Develop economic opportunities along SR 4 and SR 49.
-  Better define the entry into Angels Camp.
-  Develop a plan that is implementable.



Project Area Map

Project Study Area: Area to be evaluated for local and regional impacts

Land Use Focus Area: Area to be studied in greater detail with an emphasis on potential land uses and their impacts to the project study area



Dogtown Road intersection conflicts need to be resolved for future planning



The Roadway edges along SR 49 across from the Travel Lodge leaving town to the north are undefined and under-valued.

Existing Conditions Overview

Challenges and Opportunities

Transportation and land planning issues are correlated and this study will identify solutions to resolve challenges through an integrated approach for transportation and land use planning. To address the challenges facing the corridor, Angels Camp can leverage a number of opportunities and community assets. The following outlines challenges and opportunities based on the goals outlined by the project;

Challenge: Mobility and Safety

- The minimum distance between intersections along SR 4, and access controlled expressway, is one half mile. This restricts the number of commercial access points along SR 4 forcing all motorists onto SR 49 and placing stress on the existing intersections.
- The number and spacing of driveways and roadways intersecting SR 49 creates too many movement options for motorists. Specifically, within 450 feet of the SR 4/SR 49 intersection a motorist encounters three commercial driveways to Frog Jump Plaza and the Dogtown Road intersection. This results in traffic congestion, impacts the function of the SR 4/SR 49 intersection and increases accidents. Potential for increased collisions with future development and increased traffic volumes needs to be considered through improved access in order to maintain a safe environment for motorists, bicyclists and pedestrians.
- Future growth in the land use focus are will attract more traffic onto both SR 4 and SR 49 as well as local roads.



Opportunity: Improve Mobility and Safety

- Defined or reduced movement patterns along SR 49 near Dogtown Road would limit points of conflict and improve roadway conditions. These movement patterns would need to be mitigated through enhanced local circulation and increased access points along SR 4 and improvements along SR 49.
- Regional and local public transit alternatives could bring visitors into the city as well as provide local connectivity for visitors and local residents. A bus, trolley or bike route along SR 49 could connect points of interest along the corridor from the project area to the downtown area.
- Traffic calming along existing neighborhood collectors including Gardner Lane and Stockton Road could slow traffic through neighborhoods and increase pedestrian safety.
- Reduced vehicular movement patterns at Dogtown Rd. and Frog Jump Plaza could alleviate existing traffic conflicts.
- The highways' regional function will be preserved to maintain mobility, safety and meet performance measures.
- An attractive road network will support pathways and community spaces.
- Multi-modal transportation will encourage including transit, biking and walking and remove vehicle trips on the state highways.

- Improved mobility will provide better and after emergency access routes. The recent Butte Fire highlighted constraints at the SR 4 and SR 49 intersection. It became a bottleneck for emergency vehicles headed north and for vehicular traffic headed south during mandatory evacuation.

Challenge: Limited Roadway Connections

- The majority of neighborhoods are accessed by a few intersections on SR 49 and SR 4 and do not have internal connections between destinations in Angels Camp.
- Sidewalks and trails do not connect neighborhoods to other community destinations, forcing the majority of trips to be taken by car on SR 4 or SR 49.
- Residents walk and bike on the edges of Gardner Lane and Stockton Road without sidewalks.
- Truck traffic regularly uses Gardner Lane, a residential street to avoid intersections such as Dogtown Road and SR 49 that are difficult to maneuver.
- The downtown area is located 1.5 miles from the SR 4/SR 49 intersection creating a disincentive for westbound visitors to stop and experience Historic Angels Camp.



Opportunity: Facilitate Connections to the Community

- Improved pedestrian pathways, Class I bike paths and Class II bike lanes could connect neighborhoods to commercial, civic and recreational areas. An activated streetscape provides an area for residents to interact, thereby strengthening the community.
- Trails could also connect the community to the surrounding landscape through interpretive trails and scenic vistas. Increased recreational trails can link destinations such as Bret Union High School, the library, recreation center and pool, Copello Park and future trails. Long term trail planning could connect SR 4 and SR 49 to the Historic Main Street, providing an amenity to both residents and visitors.
- New development can incorporate public spaces and provide places for events, community information and displays of community pride. These spaces could include informal parks with lawn areas and formal plaza spaces or a mix of both.
- One of the most unique aspects of the City of Angels Camp is the deep connection to history present throughout the community and the project area. Future development has the opportunity to highlight areas of historic value. These historic places could be integrated into the planning process and utilized as a public amenity.
- Safe connections to commercial, residential and recreational areas with sidewalks, paths and trails will reduce traffic and enhance livability.
- Encourage a regionally and locally connected roadway network to provide alternative routes of travel within the community, reducing conflicts with regional traffic.



Current shopping areas are disconnected and LOS is poor



The 'expressway' divides the community and is out of character; ingress/egress points are limited by highway standards



Prime visibility from the roadways and the intersection of two regional corridors create an incredible opportunity for increased economic value at the SR 4/SR 49 intersection



Eastbound SR 4 arrival into Angels Camp offers an opportunity for a community gateway

Challenge: Roadway Constraints Limit Future Development

- Special planning areas determined by the City's 2020 General Plan are relatively undefined in their potential land use and areas outside the sphere of influence are zoned rural residential. This could result in development that is disconnected and does not align with the community's vision negatively impacting the project area.
- There is a significant amount of potentially developable land, but access to lands from SR 4 and SR 49 needs to be resolved before future development can occur.
- Significant retail leakage from Angels Camp to regional areas exists.



Opportunity: Recommend Land Uses for Potential Development that Support Improved Traffic Conditions

- Areas identified for potential development could support a commercial retail area similar in scale to Frog Jump Plaza as identified in the market analysis. With good design and access on SR 4, these planning areas could increase connections and alleviate stress on existing roadway networks.
- Future land use planning could create a synergy and visual gateway with existing and proposed uses including a retail center, civic core and increased community spaces.
- Increased commercial uses will capture a portion of the retail leakage within the City of Angels Camp. Successful retail has the opportunity to attract more commercial development over time and generate revenue for the City.
- The location of the SR 4/SR 49 intersection is ideally located for connectivity to regional destinations. State Route 49 provides a north/south connection and SR 4 an east/west connection. Residents of Murphys, Copperopolis and San Andres drive through this intersection to access retail shopping in Sonora.
- Niche markets and gaps could be identified establish Angels Camp as a regional commercial hub while serving community needs.
- Development opportunities and their potential influence on existing and proposed transportation networks will be validated to understand the overall impacts to the community.
- Land use scenarios need to be developed with flexibility for implementation.

Challenge: Highway Aesthetic at the Northern Gateway

- Three areas of historical significance, Altaville Grammar School, the Cemetery, and the Foundry are located within the study area. Each site is under-celebrated with limited visibility and signage.
- Angels Camp's signage is lost among the clutter of retail and transportation signage along both SR 4 and SR 49. Future gateway signage has been designed as part of a previous study, but has not been implemented.
- Travel along SR 4 does not encourage regional travellers to stop in the City of Angels Camp. The intersection of SR 4/49 is the only access to the historic downtown along the SR 4 bypass and signage does not provide enough time or information for drivers to make a decision to turn and access the amenities Angels Camp has to offer.



Opportunity: Highlight the Unique Character of Angels Camp

- Gateway signage has the opportunity to invite visitors from the SR 4/SR 49 corridor to stay and experience the City of Angels Camp.
- Interpretive and historical signage can elevate the visitor experience and showcase local pride.
- Wayfinding signage will inform and direct visitors to local and regional amenities. Clear wayfinding signage would inform east/westbound traffic of the opportunities within the City of Angels Camp and encourage them to stop and explore. Wayfinding could begin at the gateway and direct motorists and pedestrians to community destinations.
- A secondary visitors center within the project area could direct and inform visitors and provide interpretive, tourism and wayfinding information.

Challenge: Limited Funds for High-Cost Infrastructure Improvements

- The proposed medical center at Dogtown Road and SR 4 attracted a significant amount of public attention in summer 2014 and was ultimately denied by City Council because an solution to the increased traffic on Dogtown Road and SR 49 intersection could not be identified. This exemplifies the importance of resolving the roadway conflicts before any new development can take place.
- The final outcome of the Corridor Study must be supported by the community of Angels Camp and its involved residents for the recommendations to be implemented.
- Development of a feasible solution that is acceptable to Caltrans and the local community, ultimately meeting CTC guidelines.



Opportunity: Develop a Plan that is Implementable

- Future development will provide revenue to the City to support the high cost of public improvements such as improved roads and sidewalks.
- The Corridor Study considers both land use and transportation in coordination to solve multiple challenges with a single coordinated solution.
- The corridor study is being developed in partnership with Caltrans and the CCOG ensuring the Plan leads to a feasible solution.
- Future specific area plans and design guidelines will need to be established to guide development in the Land Use Focus Area.
- A comprehensive approach should be developed by the management team to approach the California Transportation Commission for access rights onto SR 4.
- The process has been inclusive of the community to gain the support of local residents and community leaders.



The rural character and rich history of Angel's Camp create a special opportunity to define the community



There is a need for increased community and pedestrian spaces to relieve the auto-centric character of Angel's Camp

EXECUTIVE SUMMARY



SR 4 and SR 49 Intersection in Angels Camp from the southwest corner.



Existing Sidewalk along SR 49 in Angels Camp



SR 4 arrival into Angels Camp looking west

Public Outreach Overview

Public involvement was an important part of the planning process. An Advisory Committee was established comprised of local leaders in the community to assure the outcomes represent the values of the citizens of Angels Camp. Stakeholder meetings and feedback was solicited throughout the process to align the vision and goals of the community. Two meetings with Caltrans assured the alternatives would be feasible approaches for further study for a Project Study Report. Three public meetings presented information from general to specific at different points of the planning process and public feedback directly influenced the final solutions so that the recommendations in this document represent the interests of the community for the future of Angels Camp. The first public meeting focused on goals and values to develop alternatives, the second meeting presented alternative solutions and gathered feedback and the final meeting presented the preferred alternatives and addressed concern. All meetings were advertised on the website, through social media, local newspapers, flyers and sandwich boards. On average 50-70 people attended the meetings. All participants were encouraged to provide feedback directly to the project team, on comment cards, one sticky notes or online through an online survey. At all meetings participants were asked if they felt the process was headed in the right direction and feedback was overall positive.

Land Use and Transportation Alternatives Overview

Land Use and Transportation were explored in more detail to coordinate potential development with transportation improvements. The transportation analysis confirmed traffic congestion on SR 49 with Frog Jump Plaza and Dogtown Road performing at unacceptable levels of operation, primarily due to peak hour traffic volumes, close spacing of intersections and limited queuing distances. Transportation alternatives looked at alternative roadway networks in the northwest, southwest and northeast quadrants from the 4/49 intersection to reduce the number of cars moving through SR 4 and SR 49 and provide transportation alternatives. Alternatives were developed and presented based on the three primary quadrants of the study area.

Access in the northeast quadrant looked at alternatives to minimize turning conflicts at the existing retail and provide a regional connection for traffic along Dogtown Road. Transportation alternatives for Street A, Dogtown Road and Frog Jump Plaza presented at public meeting #2 included;

- Roundabouts at SR 4 and SR 49 Intersection and Francis Lane, SR 49. Future Street A Extension located along Francis.
- Full cut-off at Clifton Lane and Dogtown Road with Future Street A Extension located 200' North of Francis.
- Future Street A intersection with Future Angel Oaks/Foundry Lane Extension at Middleton's Shopping Center. No change to Dogtown Road/Frog Jump Plaza.

The southwest quadrant focused on improving connections to downtown Angels Camp to remove cars from the

SR 4 and SR 49 intersection. A downtown connection would encourage visitors to visit destinations in Angels Camp and provide circulation alternatives within the community. Alternatives presented at public meeting #2 included;

- Stockton Road/Demerest Street Extension to an improved intersection at SR 49 and Murphys Grade Road.
- Monte Verda Street Extension to a right in right out intersection at SR 49.
- Angel Oaks Drive Extension to a proposed location in downtown Angels Camp.

The alternatives further explored Land Use Focus Area, the undeveloped lands in the northwest quadrant of the Study, to identify development opportunities that would support transportation improvements. The economic analysis confirmed that there is a significant amount retail leakage (money that is spent outside Angels Camp) and the City could support an increase in retail development including general merchandise stores, car services and restaurants. The study also suggests that both single family and multi family residential, a small amount of office space and a hotel would be successful in Angels Camp. Using this information as a guide in addition to developable lands mapping, different land use alternatives were explored to represent differing land use densities on the site. These land use alternatives were coordinated with transportation alternatives to provide access at SR 4 at either Foundry Lane (which requires a design exception) or access at Angel Oaks Drive. Alternatives presented at public meeting #2 included;

- 1A- Right In/Right Out at Foundry Lane with full access at Angel Oaks Drive. Angel Oaks Drive serves as the primary north/south regional connection. Future retail at a lower FAR at both Angel Oaks Drive and Foundry Lane.
- 1B- No access Foundry Lane with full access at Angel Oaks Drive and frontage road to access future retail. Angel Oaks Drive serves as the primary north/south regional connection. Future retail at a lower FAR at both Angel Oaks Drive and Foundry Lane.
- 2A- Roundabout access at Foundry Lane with potential future full access at Angel Oaks Drive. Foundry Lane serves as the primary north/south regional connection. Future retail at a higher FAR concentrated at Foundry Lane with potential long term development at Angel Oaks Drive.
- 2B- No access at Foundry Lane with frontage road connection from Angel Oaks Drive. Foundry Lane serves as the primary north/south regional connection. Future retail at a higher FAR concentrated at Foundry Lane with potential long term development at Angel Oaks Drive.

Transportation Analysis Overview

Based on feedback from the community a single land use plan and three transportation alternatives were identified for further development. Traffic modeling included preliminary stages of the Intersection Control Evaluation (ICE), a process required by Caltrans to evaluate stop control, signal control and roundabout control at each intersection to determine the best alternative. Common elements to the three plans included;

- Northeast quadrant - Right in, Right out at Dogtown Road and Frog Jump Plaza. Street A connection at Francis Street with intersection control.
- Southwest quadrant- Stockton Demarest Street Extension as the primary downtown connection with Monte Verda as a secondary potential connection.
- Foundry Lane as a regional connection with access to SR 49 across from Middleton's shopping center.

Unique elements to the three plans were based on alternative access approaches along SR 4 included;

- Alternative 1- Full access of both Angel Oaks Drive and Foundry Lane along SR 4.
- Alternative 2- Frontage Road access from Angel Oaks Drive to Future Foundry Lane Extension.
- Alternative 3- Right In and Right Out at Foundry Lane with full access at Angel Oaks Drive.

EXECUTIVE SUMMARY

Traffic modeling of the three alternatives eliminated Alternative 3 showing poor traffic operations at SR 4 and SR 49. Two recommended alternatives for Foundry Lane Access and Angel Oaks Access with frontage road will be further developed through a Project Study Report (PSR) following this planning process.

Preferred Land Use and Transportation Recommendations Overview

Based on feedback from the community, the final land use plans represent a mixed-use walkable development with a mix of anchor stores, retail and restaurants with some second story office and a hotel accessed from SR 4. Additional of retail could be accessed from SR 49 with single family and multi family residential being located at the core of the land use focus area. A mid-range hotel and conference center was noted by the community as desired amenity that could be a catalyst for future development in the project area. Recommendations for future development in the study include building massing, design standard and a development pattern that support a more walkable scale of development. This would also support Caltrans district goals of multimodal roadway solutions that look to minimize roadway impacts and provide alternatives. Recommendations are provided to support roadways with or improved bike lanes, sidewalks and public spaces in the planning area to support community connectivity.

Street A, Dogtown Road and Frog Jump Plaza

Improvements in this area recommend access control through a separated median along SR 49 to reduce turning movements and congestion in this area. Street A will provide regional access from the existing Francis Lane intersection, allowing Dogtown Road, Clifton Lane and Gardner Lane to function as local roads serving residential uses. The left turn lanes at the Francis intersection and SR 49 intersections will be extended to accommodate additional vehicle queuing. A potential alternative to be explored is a 'Michigan U turn' which would provide a Mid-block turning alternative that could be implemented in the short term to solve conflicts in the area prior to the development of Street A, which would require future development along SR 49 to support the cost of construction. Infrastructure costs for a Michigan U-Turn and separated medians are estimated to cost \$500,000.00 compared to nearly \$3 million in infrastructure costs for Street A. There is no singular solution for the conflicts along SR 49, however these recommendations represent a coordinated combination of improvements to reduce conflicts and congestion in this area.

Stockton/Demarest Street Extension

Stockton and Demarest Street extension offers a 'quick win' for increased connectivity and transportation alternatives by removing a nearly 30% of vehicles from the SR 4 and SR 49 intersection. Roadway improvements would include a realigned Angel Oaks Drive intersection to promote Stockton as the primary collector and remove intersection conflicts at the existing Stockton, SR 4 and Angel Oaks Drive intersection. This roadway was identified as an important road for pedestrian improvements, providing walking and biking alternatives from Greenhorn Creek to existing and future retail as well as the High School. Future planning of the area could include gateway monumentation and a potential 'Trailhead' offering information and transit alternatives to destinations in the community such as bike share, trolley to downtown, tour buses or historic driving tours.

Foundry Lane Access Alternative

Foundry Lane access is the most direct access and offers the a lesser total lineal feet of constructed roadway to access the future development area. However, access at SR 4 at this location requires a design exception, which will extend the cost and timing for future development to occur. Based on the ICE process in the preliminary traffic analysis and initial conversations with Caltrans, a roundabout would be a preferred access control at this location as the safest and most effective method of intersection control. An additional roundabout at SR 4 and SR 49 shows increased operations. The next step in obtaining access is to develop a Project Study Report that will require in-depth analysis of intersection alternatives, financing and phasing strategies for access at Foundry Lane.

Angel Oaks Access Alternative

Angel Oaks Access provides an access alternative aligned with Caltrans expressway standards for intersection spacing and would not require a design exception. However, this alternative has a higher cost due to increased length of roadways and is less desirable for future development because it lacks direct views and access to future retail. Preliminary traffic analysis shows 5-7% decreased operations along the roadways with either a signal or a roundabout control offering similar levels of service.

Implementation Strategies

The implementation strategies identified in chapter 7 look at project feasibility, cost analysis and funding sources for future development of the proposed recommendations. The amount of development that the plan can accommodate will likely require 25 years or more to achieve the full vision and successful implementation will require the ability to phase development and construct infrastructure over time. While it is hard to determine where development will take place in the future, if access is granted at SR 4 this location is prime for the first phase of development, with a second phase occurring at a Future Foundry Lane and SR 49 and connecting these development areas in Phase 3 with the bridge construction and increased housing in this area. Analysis suggests that Access at Foundry Lane is more feasible given the reduced lengths of roadway (lower construction cost) and ease of access to future development in the northwest quadrant.

Project Study Report

Next steps following this study should identify a management team to proceed with the development of a Project Study Report (PSR). The PSR process can be lengthy and begins with feasibility studies and ends with a completed project. The process allows for citizens and agencies to comment on the project. A PSR needs to have a clearly defined purpose and need with a scope of work that is clear and obtainable. The primary objective is to achieve consensus from agencies which can take up to 40% of the effort to ensure the needs and purpose are met. This process is outlined as follows;

- Project Initiation Document: Includes scope of work, budget and schedule (6-12 months)
- Secure project programming: Align the timing, funding and planning agencies
- Draft Project Report & Environmental Studies: Preparation includes engineering and consideration of alternatives (Depending on size averages 2-5 Years)
- Secure Project Approval: Approval from regulatory agencies
- Final Design: Obtain Approvals, Permits, ROWS and Prepare Documents for Bid and Construction (2 Years)
- Construction and Project Close out. (6 months)



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ORIGINALS



1

Introduction

This chapter summarizes the current planning context through a review of the current transportation, socioeconomic and land use conditions in the study area to guide the framework for public outreach and transportation alternatives in the next phases. The following sections are included:

1. Project Introduction



This study is a collaborative effort between the Calaveras Council of Governments (CCOG), the City of Angels Camp (The City) and the California Department of Transportation (Caltrans) to coordinate future transportation and planning efforts to increase economic development opportunities and improve roadway conditions along the SR 4 and SR 49 corridors in Angels Camp.

How to Use This Document

This study is a collaborative effort with CCOG, the City of Angels Camp (The City) and the California Department of Transportation (Caltrans) to coordinate future transportation and planning efforts. This document captures the process and outcomes for planning efforts undertaken from July 2014 to November 2015. The document is produced by Design Workshop, BAE Urban Economics, Fehr & Peers and Mark Thomas Associates, in collaboration with the City, CCOG and Caltrans with input from the community at large. The recommendations outline an integrated approach to land use and transportation planning to facilitate redevelopment and community revitalization at the intersection of SR 4 and SR 49.

This study is divided into the following chapters, detailed below:

- Chapter 1 - Introduction: Sets the context for the study including purpose and process.
- Chapter 2 - Existing Conditions and Analysis: An analysis of the current conditions within the project area including a review of prior studies and impacts, current traffic operations, socioeconomic conditions and current land uses to inform the next phases of the planning process.
- Chapter 3- Public Outreach and Planning Alternatives: A summary of outcomes from three public outreach meetings and key findings for informing the planning process.
- Chapter 4 - Transportation and Land Use Alternatives: Recommendations for intersections and roadway segments coordinated with planning areas to correct safety and access deficiencies.
- Chapter 5: Transportation Analysis Summary: Provides alternatives for future land use growth scenarios that support the need for transportation improvements from the traffic recommendations.
- Chapter 6: Preferred Alternatives Recommendations: Provides the outcomes and recommendations for the preferred access alternatives.
- Chapter 7: Funding and Implementation: Describes opportunities for funding and phasing the improvements described in the study.

Chapter 1: Project Introduction

This section is an overview of the project intent and desired outcomes and how they will be achieved.

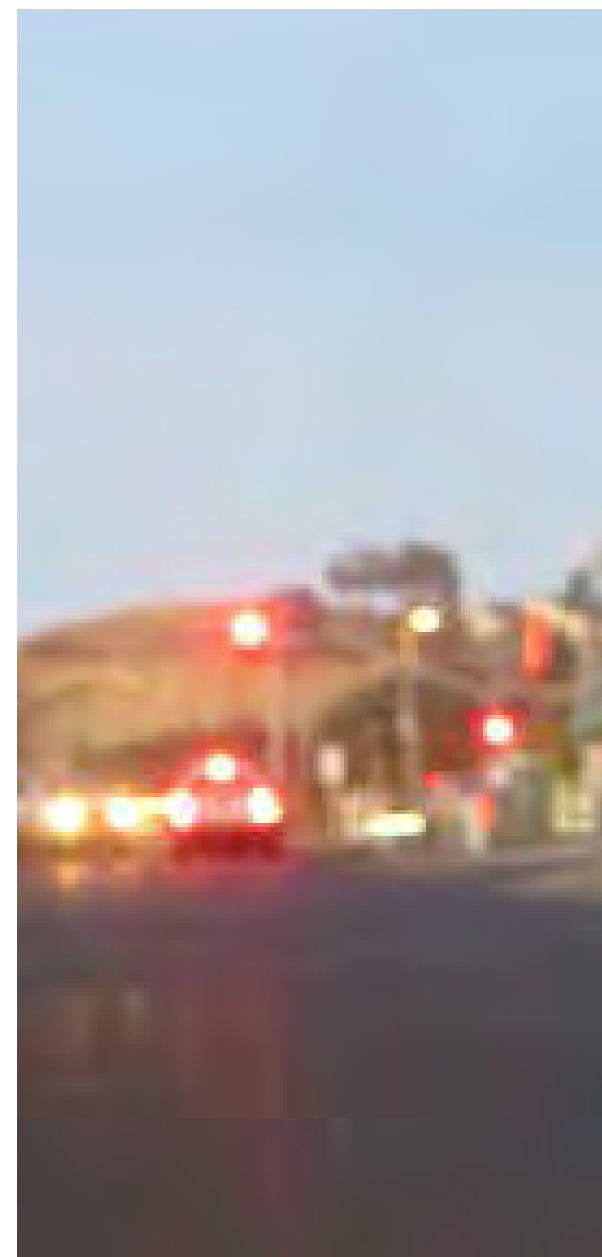
1.1 Purpose & Need

The City of Angels is a small town with a rich history located in the foothills of the Western Sierra Nevada Mountains, 50 miles east of Stockton. The population of the City of Angels is 3,836 with a population density of 1,054.6 people per square mile. Nearly 10 million people live within 100 miles of the City, and an estimated 14 million within 150 miles. Situated at the crossroads of State Routes (SR) 4 and 49, Angels Camp is on a heavily traveled route to and from the higher Sierra bearing the burden of both regional and interregional travel. State Route 49 is a north-south arterial through the Sierra Foothills, designed nearly 100 years ago linking several Gold Rush era towns. State Route 4 is a major east/west expressway that originates in the Bay Area and crosses the Sierras. State Route 4 provides an interregional connection to Stanislaus and San Joaquin Counties and experiences both commuter and recreational traffic. Regional and interregional travel intersects at SR 4/SR 49.

The three mile segment of SR 49, known as Main Street Angels Camp, defines the City core and accommodates millions of visitors looking to experience winter and summer recreation activities or visit other Gold Rush Communities. The Historic Main Street is lined with architecturally interesting and historically significant buildings. Angels Camp is the only incorporated City in Calaveras County, and it serves as a regional hub for commercial activity. The SR 4/SR 49 intersection is at the center of much of this activity.

SR 4 reflects years of planning by the City, Caltrans, CCOG and LTC. SR 4 was built as a bypass between the city limits and was subsequently designated as an expressway. The nature of the Highway 4 expressway, combined with the cultural and economic interests planned for SR 4 & 49 creates challenges to achieving state and local objectives. SR 4 presents challenges, however, without it the traffic impacts from development would overwhelm The City. This study identifies opportunities for adjacent development served a network of roads that allow access to SR 4, while improving the traffic operation on SR 49.

The Gateway and Corridor Study (Corridor Study) will identify and connect future land uses with corresponding and necessary transportation improvements. Outcomes and recommendations will incorporate design solutions that support the vision and values of the local community and enhance the economic vitality of the region while advancing the State's goals for the highway system. A collaborative process between the City, Calaveras Council of Governments (CCOG) and Caltrans and a robust stakeholder and community engagement process will lead to development of an integrated approach to transportation infrastructure and land use opportunities within the project area that will build on the existing assets and unique character of Angels Camp to support a vibrant future for the community.



SR 4/49 Intersection at dusk

1.2 Process

The study consists of three phases; existing conditions and analysis, public outreach and transportation and land use alternatives.

Phase 1 - Existing Conditions and Analysis After review of the project area with the City, Caltrans and CCOG, the design team reviewed the current transportation issues, economic impacts and adjacent land use. The base information established a foundation for the technical analysis used to engage the public in phase 2.

Phase 2 - Public Outreach It is important to understand the needs and concerns of the community in order to develop an outcome that supports their collective goals and values. The Advisory Committee represents local community members and community organizations and understands the community of Angels Camp, acting as the guardian, ensuring that project alternatives are developed with the best interests of the community. Stakeholders include residents, property owners, and local businesses in the project area that will be directly affected by the outcomes of this study. Three public meetings at different stages throughout the process were held to obtain citizen input and gain support for the proposed project alternatives.

Phase 3 - Transportation and Land Use Alternatives The design team developed future growth scenarios and transportation alternatives with input from the Advisory Committee, Stakeholders, Community, and project teams. The alternatives align with the goals and objectives identified through the public engagement process. The alternatives were also vetted with Caltrans, the City, and CCOG to assure the recommended plans are consistent with local and regional objectives and can be implemented.

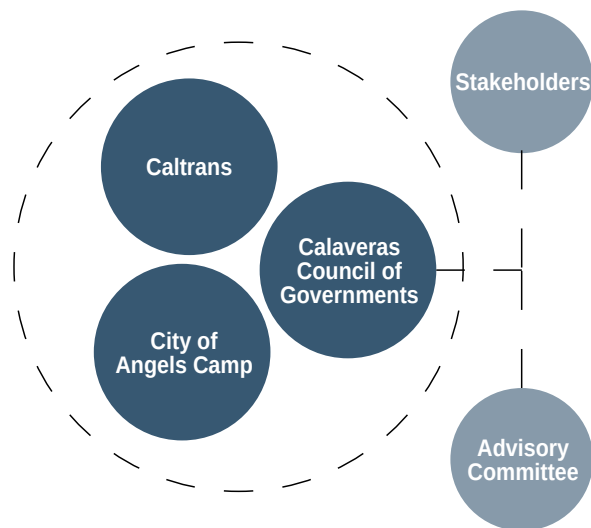


FIGURE 1: THE PROJECT IS A COLLABORATIVE EFFORT BETWEEN AGENCIES, ADVISORY COMMITTEE AND STAKEHOLDERS.

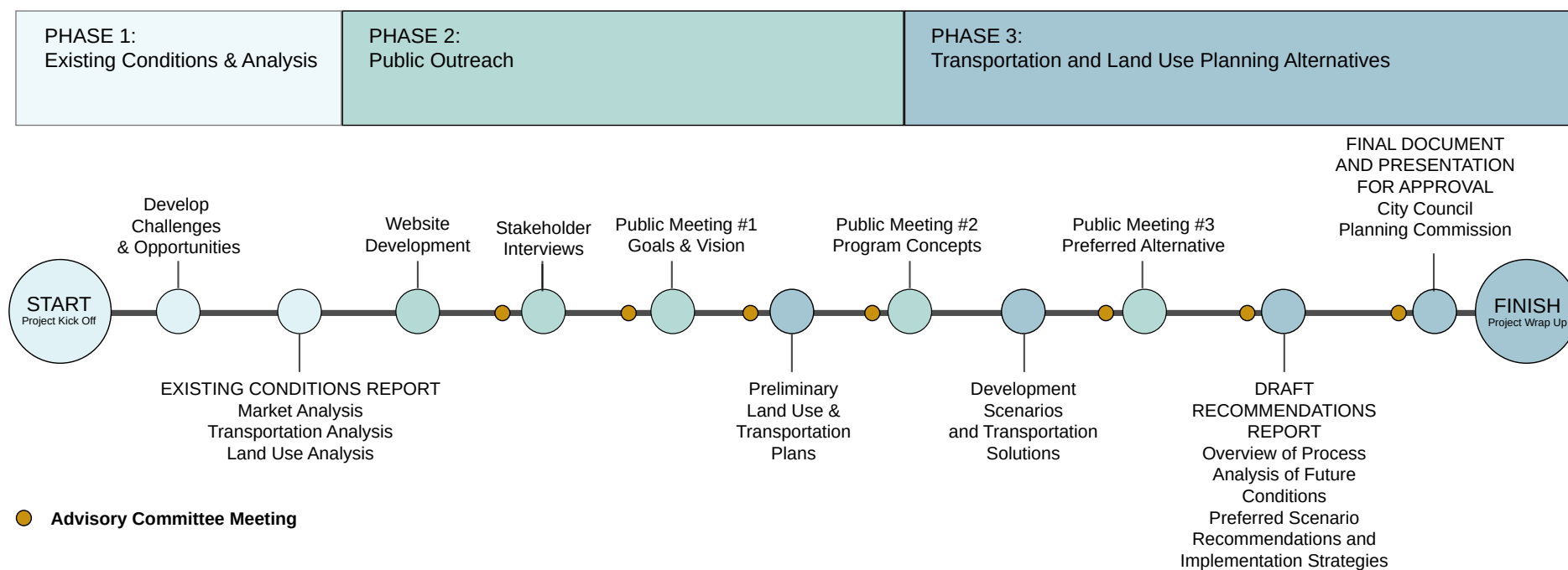


FIGURE 2: PROCESS DIAGRAM

1.3: Goals

This section is an overview of the project goals presented and refined with the Management Team, Stakeholders and community input.



1.3.1 Transportation

Challenges

SR 4 and SR 49 are regional roadways and require a regional solution.

Expressway designation on SR 4 restricts access and requires exceptions for intersections closer than ½ mile.

Local roads do not connect internally, forcing all traffic onto SR 4 and SR 49.

The Dogtown Road and SR 49 intersection is congested – performing at a LOS F in peak traffic conditions.

- Expressway designation on SR 4 restricts access onto the highway and requires an exception for access points less than one-half mile between intersections.
- There are many access points on SR 49 spaced closely together creating safety concerns and access issues.
- Future growth in this area will attract more traffic and exacerbate existing problems.

Opportunities

- Reorganize turn lanes to mitigate conflicts and improve roadway conditions
- Roadway improvements and traffic calming may control traffic and increase safety.
- Regional and local public transit connections could connect points of interest for locals and visitors.

GOAL: Improve Safety and Access on SR 4 and SR 49



1.3.2 Connectivity

Challenges

Roads do not connect internally, forcing all traffic onto SR 4 and SR 49. A lack of connected sidewalks, bike lanes and trails cause most trips to be taken by car.

- Roadways do not connect internally, forcing all traffic onto SR 49.
- A lack of connected sidewalks, trails and bike lanes cause the majority of trips to be taken by car on SR 4 and SR 49.
- Truck traffic avoids congestion by taking 'back roads' through neighborhoods.
- Downtown Angels Camp is 1.5 miles from the SR 4 and SR 49 intersection, which equates to a 1 hour walk, 10 minute bike ride, or 5 minute drive.

Opportunities

- A connected road network would provide improved access to commercial, residential and recreational areas.
- Improved walks, trails and community spaces would provide places for people to socialize and recreate.
- Alternative modes of transportation would support the aging demographic and tourism needs as well as reduce the number of cars on the roads.

GOAL: Build a connected vehicle and pedestrian local network in Angels Camp



1.3.3 Economic

Challenges

An estimated \$50 million in 2014 retail leakage means that the City is missing out on tax revenue from money that could have been spent in Angels Camp.

An aging population and lack of high paying jobs means most residents do not work or work outside Angels Camp.

New development is needed but access issues and restrictions inhibit growth.

- An estimated \$50 Million in retail leakage (lost sales dollars) in 2014.
- Over half the population relies on employment outside Angels Camp.
- Working age people cannot find high paying jobs to live in Angels Camp.
- Angels Camp is under-served for multi-family housing.
- Future development could detract from the historic downtown.

Opportunities

- Ideal location for development at the 'crossroads' of SR 4 and SR 49 and entry into Angels Camp.
- The City of Angels Camp could add around 155 new residents through 2020.
- The City of Angels Camp could add a total of 555 new jobs through 2020.

GOAL: Develop economic opportunities along SR4 & SR49



1.3.4 Gateway

Challenges

The arrival into Angels Camp is under-celebrated.

Gateway signage has been designed but not implemented.

Visitors stop at the SR 4 and 49 intersection without exploring all that Angels Camp has to offer.

- The historic downtown is located 1.5 miles from the intersection of SR4 and SR 49 and does not attract visitors who pass through.
- There is a rich history in Angels Camp – the Altaville Grammar School, three historic cemeteries and the Foundry are located in the study area.
- Entry and Wayfinding Signage has been designed for SR 4 and SR 49 that has not yet been implemented.

Opportunities

- Develop a sense of arrival to invite visitors to stay and experience Angels Camp.
- Enhance the character aesthetic to showcase local pride and unite the community.
- Increase visibility of The City's unique history and scenic beauty.

GOAL: Better define the entry into Angels Camp

The Department of Design established highway design standards to ensure the optimal safety for travelling public and those who work to construct, operate and maintain the State Highway System.

A design exception is a process to justify, approve, and document allowable deviations from the controlling criteria.

1.4: Expressway Standards and Design Exceptions

This section is an overview of expressway standards, what a design expectation is, how to obtain an expectation and why it is needed in this situation. The Design exception process will require in depth analysis demonstrating what would be required to meet the design standard, prove that the regional roadway conditions are not degraded and that there is a feasible financial plan in place to achieve implementation.

A design exception is a process to justify, approve and document allowable deviations from the controlling criteria set forth by the highway design standards. The standards ensure the roads are safe for travellers. SR 4 is designated as a controlled access expressway. Caltrans defines this as;

- Control of Access: The condition where the right of owners or occupants of abutting land or other persons to access in connection with a highway is fully or partially controlled.
- Expressway: An arterial highway for through traffic which may have partial control of access but which may or may not be divided or have grade separations at intersections

1.4.1 Expressway Standards

Angel Oak Drive access meets the ½ mile minimum intersection and public road access standard. Foundry Lane access requires 2 Design Exceptions – one for Foundry Lane and one for Angel Oaks Drive. The existing connection is already a deviation from the standard. Future roadway access to SR 4 for potential development will require a design exception.

1.4.2 How to Get a Design Exception?

- 1) Demonstrate a Need: Show what is required to meet the Standard.
- 2) Provide a regional solution: Do not compound existing traffic issues/improve overall traffic conditions.
- 3) Have a feasible financial plan: Show the means and methods to achieve full implementation.

This study is an opportunity to collaborate with Caltrans to balance roadway safety concerns with economic development at the SR 4 and SR 49 intersection.

Design Exception Process (separate from this process)

- Submit a Project Initiation and Project Study Report (PSR).
- Receive Project Approval.
- Review project alternatives.
- Approval of project report and fact sheets by Caltrans.
- Obtain California Transportation Commission approval for a break in access.
- Develop final design documents and begin construction.

The outcome of this process will position the City to move forward in obtaining access to SR 4 for future development.



FIGURE 3: ACCESS DIAGRAM

1.4.3 Why not Change the Highway Designation?

The City and Caltrans entered into a two-lane, access controlled expressway agreement to help solve the roadway conflicts in Angels Camp. This resulted in a State funded project to provide the SR 4 bypass and reduce congestion in the historic area of downtown Angels Camp. This project succeeded and reduced ADT downtown from nearly 15,000 cars per day to 9,000 cars per day to relieve stress on SR 49 south of town.

Caltrans access control standards are a measure put in place to maintain the safety and function of state funded highways for the State of California. To change the designation through a legislative process would require a legal process at a State level. If successful, the City would be required to take financial responsibility for the SR 4 roadway within the City limits as well and purchase the access rights along SR 4 from Caltrans.

An alternative to changing the designation of the roadway is to request a Design Exception, which is a process Caltrans has developed understanding that often a balance needs to be met between safety and economic development. The recommendations of this study are to proceed with the next steps in the process for a Design Exception at Foundry Lane to receive a break in access. These next steps will be a Project Study Report.



↑ Sonora 18
← Murphys 9
Stockton 52 →

Existing Conditions and Analysis

This chapter summarizes the current planning context through a review of the current transportation, socioeconomic and land use conditions in the study area to guide the framework for public outreach and transportation alternatives in the next phases. The following sections are included:

1. Project Context
2. Prior Studies
3. Transportation Analysis
4. Market Analysis
5. Site Inventory and Analysis
6. Summary





Postcard of Historic Angels Camp High School



Angels Camp Museum



Angels Camp Historic Main Street Postcard

Chapter 2: Existing Conditions and Analysis

This section is an overview of the City of Angels Camp, the history and current context to set the framework for the location of the study.

1. Project Context
2. Prior Studies
3. Transportation Analysis
4. Market Analysis
5. Site Inventory and Analysis
6. Summary

2.1: Project Context

This section is an overview of the City of Angels Camp, the history and current context to set the framework for the location of the study

2.1.1 History

The City of Angels Camp was first settled by storekeeper Henry Angell in 1848. Angell set up a trading post on the creek and the post later became a trading center for the local gold and quartz mines and mills. Nearly 4,000 miners inhabited the area between Main Street and Angels Creek and worked in the miles of mines that run beneath the city streets. In 1855, at the historic Angels Hotel, Mark Twain reportedly heard the story of Jim Smiley and the jumping frog which is said to have inspired the short story 'The Jumping Frog of Calaveras County'. Angels Camp is now known as 'Frog Jump USA: Home of the Jumping Frog'. The Jumping Frog Jubilee takes place at the fairgrounds every May bringing many visitors to the area. In 1972, Altaville and Angels Camp were incorporated in the hopes of increased prosperity. Though many of the mines were closed during WWI and WWII, many of the historic mines and historic places are still visible and remind visitors of the unique past of the City and County.

The City of Angels Camp is the only incorporated city in Calaveras County and is situated at the intersection of SR 49 and SR 4. These roadways, established during the Gold Rush, have become primary highways in the county and region. SR 49 runs north/south from Mariposa County to the Yuba River. State Route 4 travels east/west from Ebbetts Pass through the valley and Stockton to San Francisco.

The original route of SR 4 through Angels Camp followed the current alignment of Stockton Road until the first major roadway bypass occurred in the 1980's. Access issues between the City and Caltrans have been discussed and proposed since 1989. In the late 2000's, SR 4 was re-routed around the City's historic downtown to relieve congestion in the commercial area. This bypass changed the designation of SR 4 to an expressway, limiting access points and changing traffic patterns.



Bird's eye view of Angel's Camp, CA

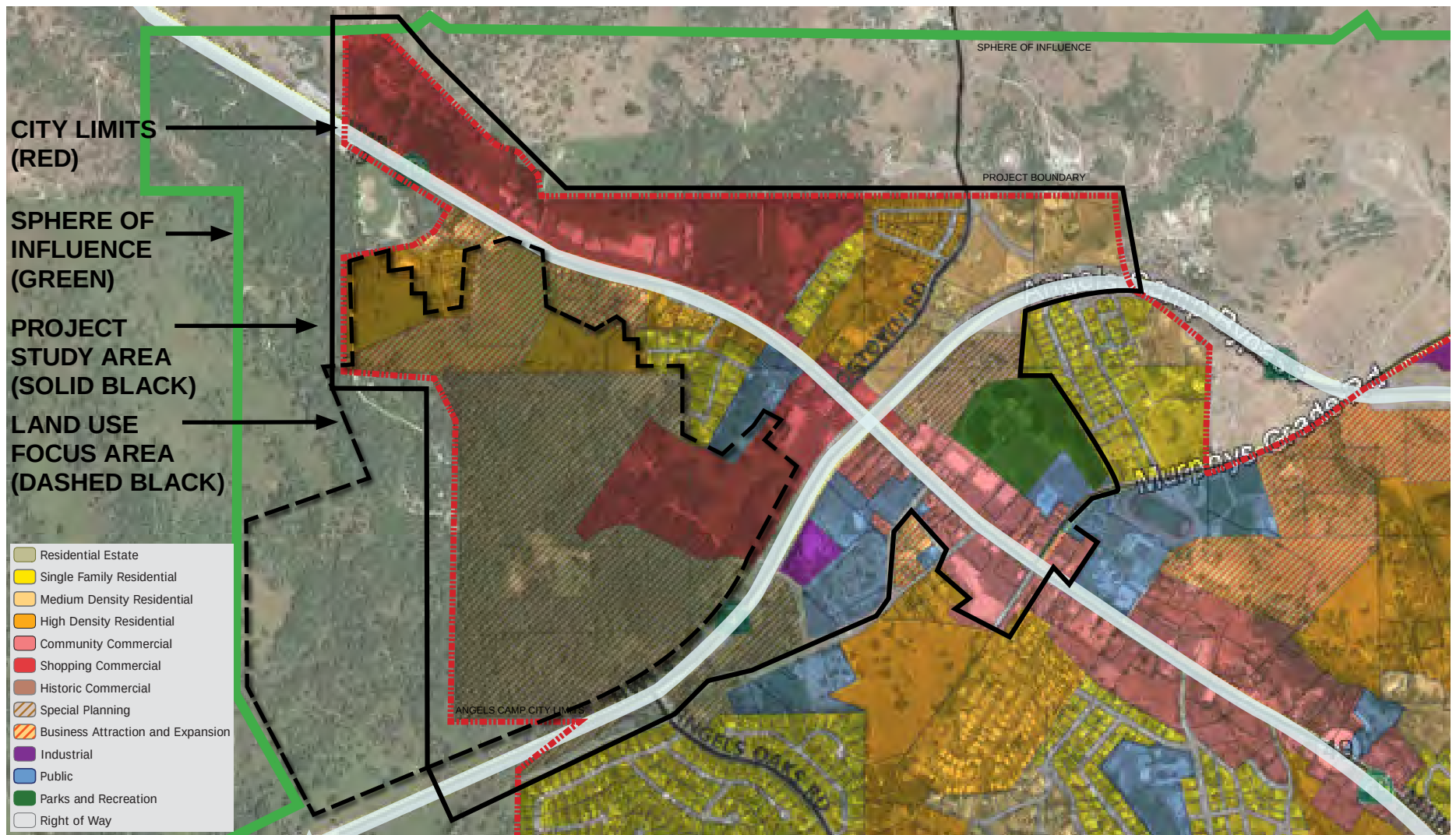


The Cross Shaft, Angels Camp, CA



2.1.2: Regional Context

Angels Camp is nestled in a picturesque landscape of hills, valleys and creeks. As the noted in the 2008 Branding Development and Marketing Action Plan, Angels Camp is the 'base camp to the Sierras'. Popular regional attractions include Caverns, Greenhorn Creek Golf Course, New Melones Lake and Reservoir, and a handful of local wineries.

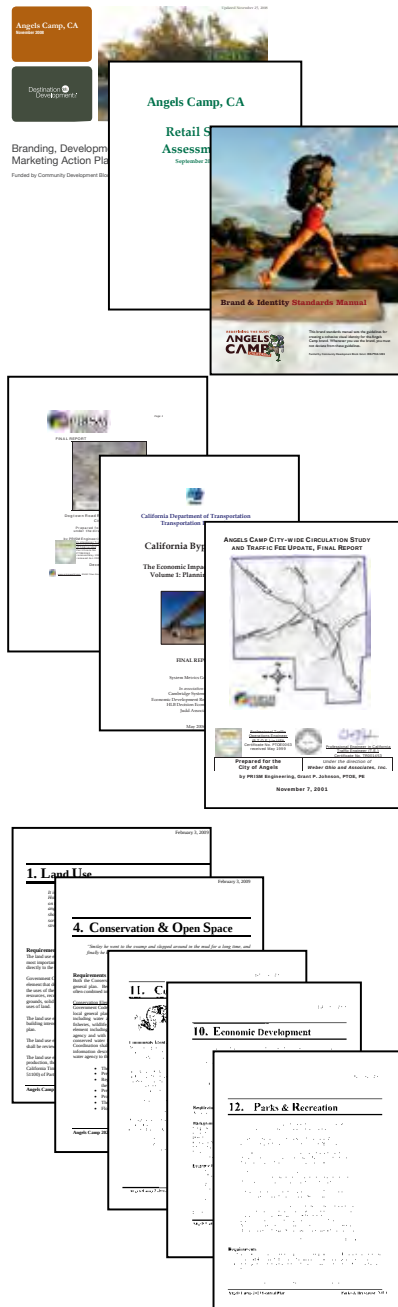


2020 General Plan Map

City Limits: Area of direct City regulation

Sphere of Influence: Probable future City boundary and service area as designated by the 2020 General Plan

PRIOR STUDIES



2.2: Prior Studies

This section reviews a number of studies and documents have been previously conducted to evaluate the corridors.

- 2.2.1 - Prior Studies
- 2.2.2 - Gap Analysis

2.2.1: Prior Studies

This Corridor Plan supports and enhances the ideas identified in previously approved plans. Following is a brief summary of these documents and the items that relate to this study.

Economic and Branding

1. City of Angels Camp 2020 General Plan – Chapter 10 – Economic Analysis, February, 2009
2. Retail Site Assessment, September, 2010
3. Branding Development and Marketing Action Plan, November, 2008
4. Brand and Identity Standards Manual, March 2010

Transportation

5. Angels Camp Citywide Circulation Study, November, 2001
6. Dogtown Road Realignment Study, May 2003
7. California Bypass Study, May 2006
8. City of Angels Camp 2020 General Plan – Chapter 3 – Circulation, February 2009
9. District 10 State Route 4 Corridor System Management Plan, October 2008
10. District 10 State Route 49 Transportation Concept Report (TCR), January 2014
11. District 10 State Route 4 Transportation Concept Report (TCR), January 2014
12. Angels Creek Master Trails Plan, January 2012
13. Calaveras Country Pedestrian Master Plan, September 2007
14. Calaveras Country Coordinated Public Transit-Human Services Transportation Plan, June 2014

Land Use

15. City of Angels Camp 2020 General Plan – Chapter 1 – Land Use, February 2009
16. City of Angels Camp 2020 General Plan – Chapter 4 – Conversation and Open Spaces, February 2009
17. City of Angels Camp 2020 General Plan – Chapter 11 – Community Identity, February 2009
18. City of Angels Camp 2020 General Plan – Chapter 12 – Parks and Recreation, February 2009
19. Angels Camp Wayfinding Plan, December 2011

Economic and Branding

1. City of Angels Camp 2020 General Plan – Chapter 10 – Economic Analysis, February, 2009:

This section of the General Plan provides a snapshot of the economic climate circa 2002. Recommended strategies include identifying areas for expansion, reducing commercial leakage, promoting mid-wage jobs and jobs training, developing affordable housing and mixed-use projects, and maintaining tourism activities. Primary goals include increasing economic vitality, encouraging mid-wage jobs to assist increasing housing accessibility for low to medium income households, and promoting economic opportunities.

2. Retail Site Assessment, September, 2010 – Prepared by Buxton Associates:

The purpose of this study was to understand the profile of the Angels Camp customer within the city and trade area to inform infrastructure investments and focus resources on areas of higher retail development. The assessment identified a retail leakage of \$1.3 million within the primary trade area and a surplus of \$1 billion in the secondary trade area. This suggests a significant need for increased retail within Angels Camp. The downtown retail assessment concluded that the Angels Camp area was leaking sales in most retail categories and that while the secondary trade area experienced significant retail injection, some categories remained under served. The study also identified a number of unique market segments that best characterize the Angels Camp shopper and which can be useful to planners and developers in targeting specific types of businesses to recruit in order to fill existing spaces and spur new development within Angels Camp.

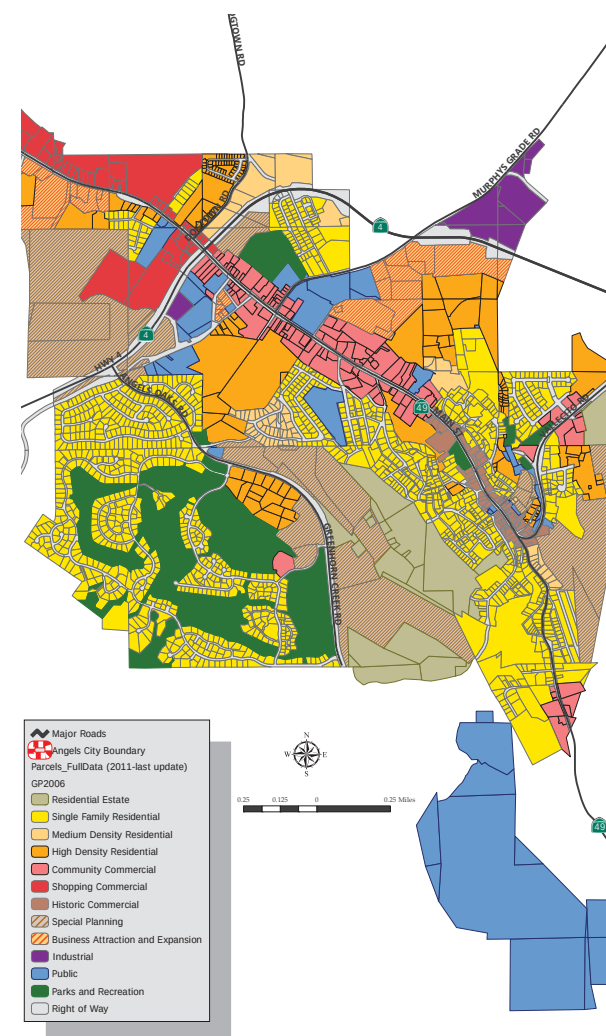
3. Branding Development and Marketing Action Plan, November, 2008 – Prepared by DDI:

Associated with a 2008 marketing and branding campaign for the City of Angels Camp, the action plan aimed at enhancing the city's visibility, encouraging tourism spending and creating a vibrant downtown shopping district. The marketing action strategy focused on leveraging the area's unique outdoor opportunities to make Angels Camp the local home base for mountain sports. The primary vision was developing a comprehensive 'brand' for the city. Stakeholders, existing markets and target markets informed the branding. The logo and brand is defined as "Angels Camp: Redefining the Rush" and outlines how to integrate the branding vision into the community identity. Recommendations included developing a main street master plan with gateways and a destination retail district with additional parking, comprehensive signage and wayfinding programs, pedestrian facilities and public space enhancement.

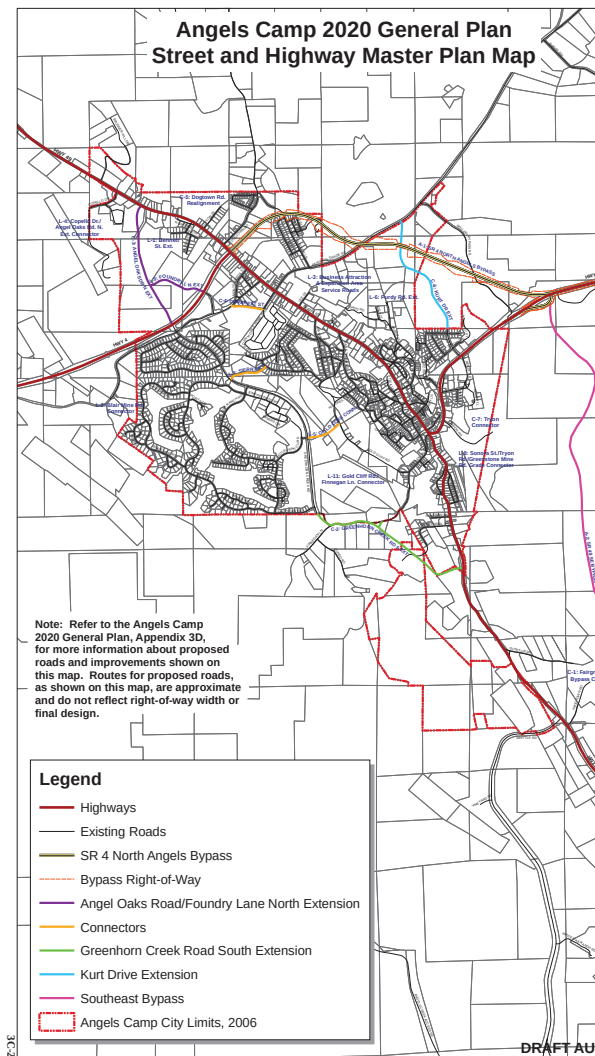
4. Brand and Identity Standards Manual, March 2010:

The Destination Angels Camp Corporation (DAC) is a local non-profit economic development organization working to stimulate economic development through business attraction and retention, implementation of the 2008 branding strategy, support of public-private partnerships, and encouraging infrastructure development. The guidelines describe proper use of the Angels Camp mascot & logo with regards to fonts, colors, proper use and layout for physical signage (including banners poles and street signage) and electronic media. The vision for Angels Camp is "The Base Camp for Mountain Sports in the Sierra".

Transportation



The 2020 General plan identifies a significant portion of the project area as shopping commercial and special planning. This study will explore the economic viability of these areas as well as the opportunity for a mix of uses to support the goals of the 2020 Land Use recommendations. Special planning areas will be further defined for future City planning efforts.



The 2020 Street and Highway Master Plan Map identifies a future extension of Angels Oaks and Foundry Lane as well as an extension of Demerest Street from Stockton. Both of these extensions will be explored as future opportunities within the planning area.

5. Angels Camp Citywide Circulation Study, November, 2001 – produced by Prism Engineering:

The circulation study reviewed a variety of alternative alignments for bypass routes on SR 4 and SR 49. The study identified the need to construct both SR 4 and SR 49 bypasses to mitigate negative traffic impacts in the core. The preferred alternative for SR 4 was constructed. The preferred bypass route for SR 49 was routed along Angel Oaks Drive and was supported by City Council in 2000.

6. Dogtown Road Realignment Study, May 2003 – produced by Prism Engineering:

Four alternatives were examined to increase the level of service (LOS) at Dogtown Road and SR 4 and an overall recommendation was made. Although the study was conducted prior to the construction of SR 4 bypass, the bypass was included as a future roadway. No action was taken after the study was completed. Much of the data is no longer relevant because the study is 10 years old and was completed prior to the construction of Frog Jump Plaza and the SR 4 Bypass. The study identifies Street A as an alternative alignment.

7. California Bypass Study, May 2006 – Produced by System Metrics Group:

Commissioned by Caltrans, this study identifies potential economic impacts of bypasses within the state of California through theoretical research and case studies. The evaluation identifies potential problems bypasses can create and solutions to mitigate outcomes. The study focused on small town, where bypasses are more likely to affect the local economy. Findings showed that highway-oriented towns have a more difficult time transitioning their economies than those that cater to local residents or are tourism-based. Towns that are tourists destinations can benefit from reduced traffic and improved safety and towns that serve regional markets may experience little to no economic impacts.

8. City of Angels Camp 2020 General Plan – Chapter 3 – Circulation, February 2009:

This section of the General Plan identifies primary collectors to connect SR 4 and SR 49. Future Class II and III bike facilities are identified. Public transit service includes five weekday routes. No park and ride facilities currently exist within Angels Camp. Primary goals include: A. Provide an integrated roadway system that is safe and efficient. B. Pursue establishment of bike, pedestrian and low-impact vehicle routes. C. Encourage public transportation. D. Provide adequate parking to serve existing and future development. E. Integrate circulation systems within the city.

Future planning should align with the goals of this plan by considering bike lanes and pedestrian walks, connecting to existing transit lines, and integrating parking into the planning process.

9. District 10 State Route 4 Corridor System Management Plan, October 2008:

The management plan identifies SR 4 as a 'main street highway' which means it is vital to the economic development of the communities through which it passes but the highway is also a main route for trucks, buses and delivery trucks. The plan refers to the 'SR 4' Highway project that will be completed to mitigate the congestion of traffic on SR 4 through downtown Angels Camp as well as an Access Management Plan. However, the new alignment is designated as an expressway.

10. District 10 State Route 49 Transportation Concept Report (TCR), January 2014:

A TCR is a long term planning document Caltrans prepares to determine how a highway will be developed and managed to deliver a targeted level of service (LOS). Overall, the target LOS for the segment south the SR 4 intersection is F and the target for the segment north of the SR 4 intersection is D. The plan recommends special emphasis be placed on low cost improvements such as left turn lanes, intersection improvements, wider shoulders, passing lanes, turn outs and other operational improvements.

11. District 10 State Route 4 Transportation Concept Report (TCR), January 2014:

A TCR is a long term planning document Caltrans prepares to determine how a highway will be developed and managed to deliver a targeted LOS. Overall, the target LOS for the segments east and west of the SR 49 intersection are D. This route has limited bike and pedestrian facilities.

12. Angels Creek Master Trails Plan, January 2012 – produced by RRM Design Group:

The trails plan identifies three phases of a 5.1-mile trail along the SR 4 bypass to the New Melones Reservoir south of Angels Camp. The plan identifies trail alignments, creek crossings, trailheads, maintenance, design guidelines and interpretive features.

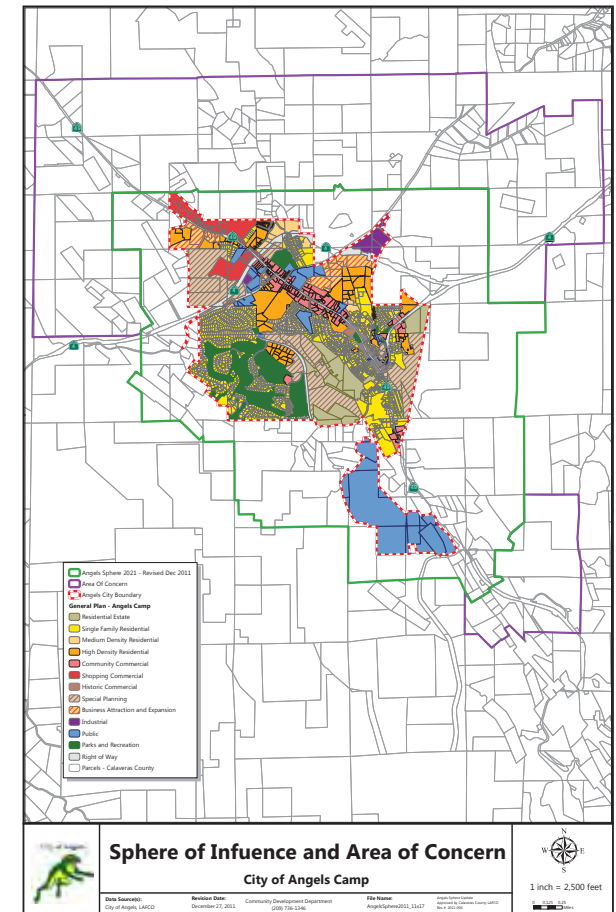
Any future trails or interpretive signage as part of the Corridor Study should consider connections to proposed trails and use a compatible design for wayfinding elements.

13. Calaveras County Pedestrian Master Plan, September 2007 – produced by RRM Design Group and Alta Consulting:

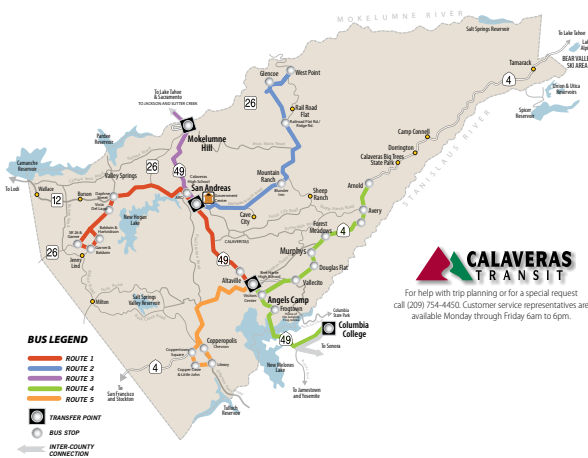
The master plan identifies recommendations for improved pedestrian facilities for Calaveras County. The plan describes mobility gaps and needs within the existing County infrastructure. Within the project area, this study identifies continuous sidewalks along SR 49 from SR 4 to the high school. It also identifies crosswalk enhancements at SR 49 and Murphys Grade to provide high visibility warning signs, ADA accessibility and additional lighting. It recommends repositioning the push buttons at SR 4 and SR 49 intersection.

14. Calaveras Country Coordinated Public Transit-Human Services Transportation Plan, June 2014 – produced by AMMA Transit Planning and Majic Consulting:

The transportation plan was funded by a Federal Transit Administration (FTA) grant to assess and identify strategies for improving transportation for older adults and people with disabilities or limited means. One of the two transit transfer stations in Calaveras County is located in the project area. Therefore, recommendations from the transportation plan should be considered in the Corridor Study. Specifically, the objectives outlined for infrastructure improvements for safe pedestrian access and ADA accessibility should be included when addressing transit in the project area. There is also an opportunity to address signage and information needs at transit stops.



The sphere of Influence has been identified by the City of Angels Camp as areas outside the city limits that are influential to the City as well as the planning process. The sphere of influence has been indicated on all planning maps and is considered relevant to the planning study area.



The Calaveras County Transit Map shows three routes that service the Angels Camp transfer station in the project area. Existing demographics include an older population within Angels Camp and Calaveras County. Therefore, public transit should be considered an opportunity within the project area. (Source http://transit.calaverasgov.us/Portals/transit/Routes/Route_Info_10_7_13.pdf)

Land Use

15. City of Angels Camp 2020 General Plan – Chapter 1 – Land Use, February 2009:

The section of the General Plan identifies future growth and projected needs for the City considering an average growth rate of 2.16 percent. Primary goals include: Provide orderly development and encourage infill that is compact, mixed-use, and pedestrian and transit friendly to reduce the need for cars; Minimize conflicting land uses and protect rural character; Preserve and enhance the city’s natural, scenic and cultural resources; Provide a wide variety of housing types and encourage infill that is compact, mixed-use, and pedestrian and transit friendly; Encourage well-designed commercial development compatible with the rural character; Encourage well-designed business attraction and expansion proposals to contribute to the economic base and balance rural character; Balance new development and provision of public services; Protect land in proximity to the city limits from development inconsistent with the City objectives; Cooperate with county, state, federal, regional, and public agencies to support the objectives of the 2020 plan. Land use alternatives will align with these stated objectives. General Plan implementation programs identify the creation of a Community Commercial District at the northern SR 4/SR 49 intersection.

16. City of Angels Camp 2020 General Plan – Chapter 4 – Conversation and Open Spaces, February 2009:

This section of the General Plan establishes the long range vision of open spaces within the planning area. Primary goals include; Minimize conflicts between existing and future mining; Promote efficient use of energy; Maintain and enhance aesthetics; Conserve resources; Reduce conflicts between urban and agricultural uses; Ensure adequate water quality and quantity; Promote health and safety from natural and man-made hazards.

17. City of Angels Camp 2020 General Plan – Chapter 11 – Community Identity, February 2009:

This section of the General Plan identifies Angels Camp as a Healthy/Sustainable Community and identifies the characteristics of a healthy community. Primary goals include; Provide for the enhancement and preservation of scenic, natural, and cultural resources; Design new development to be compatible with the of scenic, natural, and cultural setting; Design new commercial and industrial development to be compatible with the of scenic, natural, and cultural setting; Preserve and enhance the cultural and historical resources of the community. The plan identifies one of the unique characteristics of Angels Camp as its scenic and historical resources. This Study will identify and highlight these opportunities as assets to the community.

18. City of Angels Camp 2020 General Plan – Chapter 12 – Parks and Recreation, February 2009:

This section of the General Plan identifies four city-owned parks (Gateway Park, Utica Park, Tyron, Park, and Angels Camp Museum Park), non city-owned recreational facilities, school facilities and regional facilities. It identifies a need for 18-21 acres of increased parkland to meet the future growth projections. Primary goals include; Provide acceptable and equal distribution of park facilities to city residents; Encourage low-impact modes of transit; Optimize resources through shared uses; Design to optimize use and minimize conflicts and compatibility with the surrounding context; Promote innovative funding opportunities. This study will keep these objectives in consideration of future land use alternatives.

The Corridor Study should consider the need for 18-21 acres of additional community park space and explore the possibility of addressing identified needs in the plan area to align with the City’s goals for future growth.

19. Angels Camp Wayfinding Plan, December 2011 – produced by Gates and Assoc.:

The wayfinding plan identifies existing signage elements and, with community input, determined the character, locations and design for signage within the city. This included entry monumentation, identification signage, wayfinding signs and kiosks, historic gateway elements, parking signs, and commercial blade signs for the historic district. These sign elements have been approved by city council and will be the precedent for proposed gateways in the planning area.

2.2.2: Gap Analysis

These aforementioned studies were completed by many managing agencies and over different periods of time. The following pages list the key studies, the content covered and resolutions affecting the project area over the past 15 years. Correlations can be seen where multiple documents address similar elements such as Dogtown Road, Street A, roundabouts and pedestrian paths.

This list of studies and proposed alternatives is significant, however, outcomes from the proposed solutions are limited. There has been progression on the branding and identity of Angels Camp through the Basecamp to the Sierras marketing campaign. Some pedestrian improvements such as sidewalks along SR 49 and Murphys Grade Road have been implemented. However, no improvements have been made to the SR 4 and SR 49 intersection as a result of these studies. This Corridor Study will reference which recommendations should be considered as potential or future opportunities and which elements should not continue to move forward.



The Calaveras County Pedestrian Master Plan shows recommendations for proposed walks and improved pedestrian crossings in the project area.

Calaveras County 2014 Coordinated Public Transit – Human Services Transportation Plan			
GOAL	OBJECTIVES	STRATEGIES AND PROJECTS	PERFORMANCE MEASUREMENT
		4.1.4 Evaluate the feasibility of senior-friendly shuttles, jitneys, or circulators to shopping, medical facilities, and other local services. 4.1.5 Explore car sharing options (i.e., car sharing “pods”) for low-income individuals where vehicles are stored in a central location and available for use.	
Goal 4 – Promote Infrastructure Improvements for Pedestrian and ADA Accessibility and Safety			
4.1	Improve access for residents by promoting basic pedestrian safety and pedestrian improvements along Calaveras Transit routes	4.1.1 Support the Safe Routes to Schools work through Public Health and its identification of priority paths of travel 4.1.2 Secure funding to implement pedestrian improvements, including but not limited to sidewalk, crosswalks, pedestrian signals, and bus stop amenities that promote safety and improve accessibility. 4.1.3 Develop a regional Capital Improvement/Replacement Plan to plan and prioritize capital needs	- Number of pedestrian improvements along Calaveras Transit route structure.
4.2	Strengthen Calaveras Transit Capital Plan	4.2.1 Continue to promote the vehicle replacement program for both Calaveras Transit and for specialized transportation programs; ensure vehicles are ADA accessible and prioritize purchase of vehicles with two or more wheelchair spaces on routes that serve a higher number of passengers who utilize a wheelchair or other mobility device. 4.2.2 Compete for Section 5310 funding when projects are eligible; involve substantive coordination that will be competitive in statewide procurements.	- Vehicles within FTA recommended Useful Life guidelines. - Adequate spare ratio
4.3	Enhance ADA access	4.3.1 Provide information among transit and paratransit riders to increase awareness of wheelchair securement issues	- Number of stops with ITS improvements

Calaveras County Coordinated Public Transit-Human Services Transportation Plan recommends an approach for transit improvements and ADA accessibility to consider two transit stops in the project area.

EXISTING STUDIES GAP ANALYSIS		ECONOMIC					TRANSPORTATION											LAND USE				
	Document Name	Chapter 10- Economic Development	Retail Site Assessment	Branding, Development and Marketing Action Plan	Brand & Identity Standards Manual	Angels Camp Citywide Circulation Study	Circulation Study and Traffic Fee Impact	Dogtown Road Realignment Study	California Bypass Study	2020 Plan - Chapter 3- Circulation	2020 Plan - Chapter 10- Transportation	District 10 CSRM	SR49 Transportation Concept Report	SR4 Transportation Concept Report	Angels Creek Trails Master Plan	Calaveras County Pedestrian Master Plan	Calveras County Public Transit- Human Services	2020 Plan - Chapter 1- Land Use	Chapter 4- Conservation and Open Space	Chapter 11- Community Identity	2020 Plan - Chapter 11- Parks and Recreation	Angels Camp Wayfinding Plan
#		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	Project Addressed/Recommended	2010	2010	2008	2010	2001	2001	2003	2006	2010	2009	2008	2014	2014	2012	2007	2014	2010	2010	2010	2010	2011
	Access Management Plan SR49										X											
	Angel Oaks Extension					X				X												
	Basecamp to Sierras			X	X														X			
	Bike-Pedestrian Improvements			X							X											
	Brand Vision			X	X														X			X
	Bypass - SR4					X				X	X											
	Bypass - SR49					X				X												
	Bikeways - Class I, Class II, Class III										X					X	X					
	Demographics	X	X						X							X		X				
	Developable Land																	X				
	Dogtown Road Alignment					X	X															
	Façade Improvements			X																		X
	Future Angels Camp Park and Ride										X											
	Image - Identity																		X			
	Impacts of Roadways - Food Service																					
	Impacts of Roadways - Gas Stations							X														
	Improvements - Clifton						X															
	Improvements - Demarest Street					X																
	Improvements - Foundry Lane						X															
	Improvements - Gardner						X															
	Improvements - Murphys Grade Road					X	X															
	Improvements - Stockton Road					X										X						
	Intersection Improvements					X																
	Land Use										X							X	X			
	LOS Existing					X	X					X	X									
	LOS Future Projections					X																
	Mitigation Development Fees					X																
	Multi-Modal Design						X									X						
	Neighborhood Streets						X									X						
	Parallel Roads - SR49										X					X						
	Parking Recommendations					X																
	Parking Survey					X																
	Pedestrian Safety/Roadway Aesthetics															X	X					X
	Public Transit					X			X			X					X					X
	Raised Median along SR49						X															
	Retail Aesthetics			X																		X
	Retail Leakage	X																				
	Road A/Street A					X	X															
	Roadway - Access									X	X											
	Roadway Improvements - Chicane						X															
	Roadway Improvements - Choker						X															
	Roadway Improvements - Concrete Valleys/Gutters						X															
	Roadway Improvements - Entry Islands						X															
	Roadway Improvements - Raised Intersection						X															
	Roadway Improvements - Raised Median						X															
	Roadway Improvements - Roundabout						X															
	Roadway Improvements - Speed Hump						X															
	Roadway Improvements - Speed Table						X															
	Roadway Improvements -Traffic Circles						X															
	Roadway Safety			X			X															
	Roadways - General Bypass					X		X														

FIGURE 4: GAP ANALYSIS MATRIX

EXISTING STUDIES GAP ANALYSIS		ECONOMIC					TRANSPORTATION										LAND USE					
	Document Name	Chapter 10- Economic Development	Retail Site Assessment	Branding, Development and Marketing Action Plan	Brand & Identity Standards Manual	Angels Camp Citywide Circulation Study	Circulation Study and Traffic Fee Impact	Downtown Road Realignment Study	California Bypass Study	2020 Plan - Chapter 3- Circulation	2020 Plan - Chapter 10- Transportation	District 10 CSRM	SR49 Transportation Concept Report	SR4 Transportation Concept Report	Angels Creek Trails Master Plan	Calaveras County Pedestrian Master Plan	Calaveras County Public Transit- Human Services	2020 Plan - Chapter 1- Land Use	Chapter 4- Conservation and Open Space	Chapter 11- Community Identity	2020 Plan - Chapter 11- Parks and Recreation	Angels Camp Wayfinding Plan
#		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	Project Addressed/Recommended	2010	2010	2008	2010	2001	2001	2003	2006	2010	2009	2008	2014	2014	2012	2007	2014	2010	2010	2010	2010	2011
	Roadway Safety		X				X	X														
	Roadways - General Bypass					X		X														
	Roundabout at SR4/SR49						X				X				X							
	Sidewalk Café Design Guidelines		X																			
	Signage - Bike and Trail					X									X				X			
	Signage - Gateways				X	X									X				X		X	
	Signage - Streets				X														X			
	Signage - Visibility		X					X								X			X		X	
	Signage - Wayfinding		X		X	X		X							X	X			X		X	
	Signage - Welcome				X														X			
	Signal at Clifton							X														
	Trade Area	X																				
	Trails				X										X							



Retail areas can be designed to create more community gathering areas as well as accommodating parking

2.3: Transportation Analysis

This section analysis summarizes existing conditions data collection and analysis for the Angels Camp SR 4 and SR 49 Gateway and Corridor Study. This section summarizes the following information:

- 2.3.1 Data Collection
- 2.3.2 - Roadway Inventory
- 2.3.3 - Analysis Methodology
- 2.3.4 - Existing Traffic Conditions
- 2.3.5 - Community Circulation

2.3.1 Data Collection

Traffic Counts

Intersection and roadway segment counts within the study area were collected the week of September 8, 2014. Weather conditions were generally dry and local schools were in full session.

Intersections

Intersection turning movements and pedestrian and bicycle counts were collected for all study intersections on Thursday, September 11th. Collection times included the AM peak period (7 AM to 9 AM) and PM peak period (4 PM to 6 PM) . Figure 5 shows existing AM and PM peak hour vehicle turning movement counts and turn lane configurations at the study intersections. Figure 3 shows pedestrian and bicycle counts at the study intersections. The observed AM and PM peak hours for the study intersections are shown in Figure 1 - Peak Hour by Intersection on page 23.

Roadways

Roadway segment counts were collected for six days during the week of September 8th, including midweek (Tuesday through Thursday) and weekend (Friday through Sunday) conditions. Roadway segment counts were collected on the following segments of SR 49 and SR 4:

- SR 49 – north of SR 4 (north of Clifton Lane)
- SR 49 – south of SR 4 (south of Murphys Grade Road)
- SR 4 – east of SR 49 (between Foundry Lane and Angel Oaks Drive)
- SR 4 – west of SR 49

Reported Collisions

Study area collision records from the Statewide Integrated Traffic Records System (SWITRS) were collected for the period between January 2005 and January 2013. Vehicle-vehicle and vehicle-pedestrian collisions are identified separately. There were no reported collisions involving bicycles.

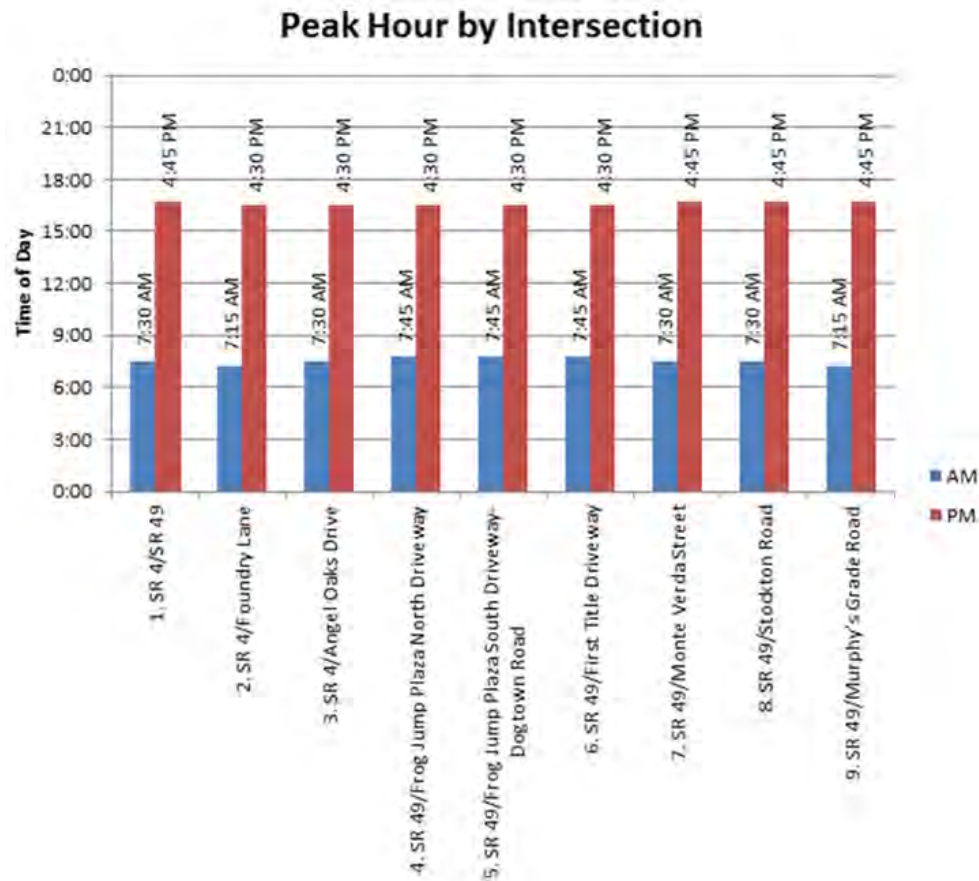


FIGURE 5: EXISTING AM PM PEAK HOUR VEHICLE



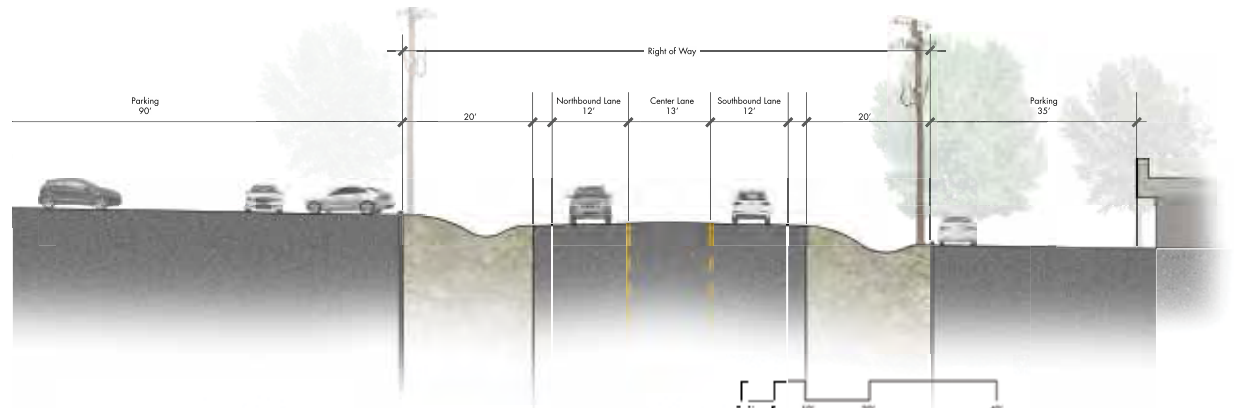
Northbound of the SR 4 intersection, SR 49 currently functions at an appropriate level of service but is impacted by congestion at Dogtown Road

TRANSPORTATION ANALYSIS

2.3.2 Roadway Inventory

An inventory of each roadway was performed to understand the function within the network. For each roadway in the study area a description, section and site photos were taken:

- State Route 4
- State Route 49
- Dogtown Road
- Clifton Lane
- Stockton Road
- Murphys Grade Road
- Gardner Lane



Section- Northbound SR 49



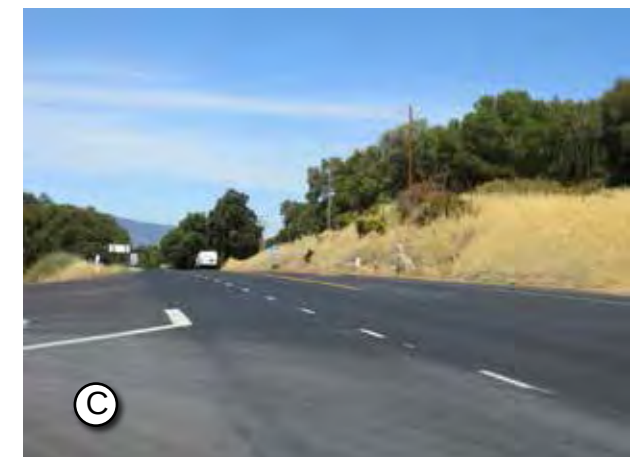
Key Map - Northbound SR 49



Intersection of Dogtown Road and SR 49



North of SR 49 at Mark Twain Center Shopping Plaza



SR 49 looking west

State Route 49 (SR 49)

State Route 49 is the Golden Chain Highway connecting historic gold mining towns along the foothills and providing connections to communities such as Placerville and Lake Tahoe to the north and Yosemite National Park to the south. The overall character is a scenic and rural winding country road connecting historic small towns, vineyards and recreational areas.

A variety of retail fronts both the northbound and southbound lanes of the four mile section of SR 49 through Angels Camp. Parking areas and access drives dominate the roadway edge, slowing traffic and creating congestion. The large number of curb cuts also creates hazard zones for pedestrian and bike travel.



Section- Southbound SR 49



Key Map - Southbound SR 49



Intersection of SR 49 and SR 4



Intersection of SR 49 and Murphys Grade



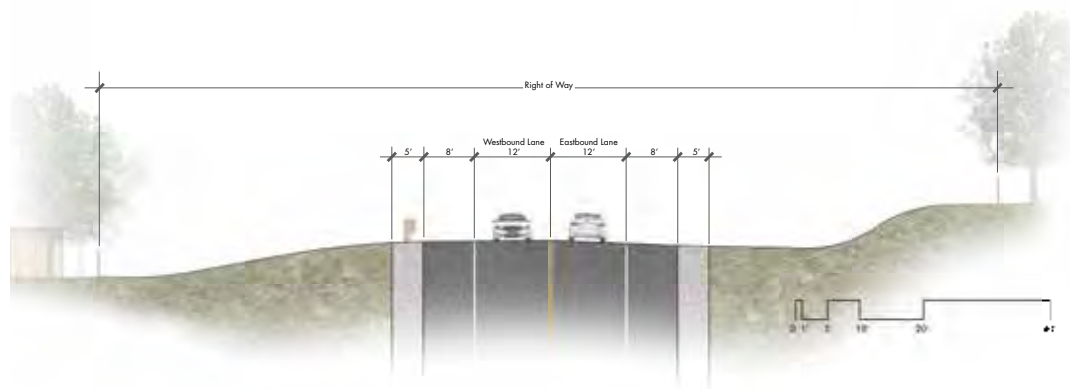
Intersection of SR 49 and Murphys Grade looking north

TRANSPORTATION ANALYSIS

State Route 4 (SR 4)

State Route 4 is the main highway connecting Angels Camp to Stockton to the west and linking the town to recreational destinations such as Bear Valley and Lake Tahoe to the east. In 2004 a bypass was constructed routing the highway around the downtown area. The bypass reconnects to SR 4 two miles east of the SR 4/SR 49 intersection. Implementation of the bypass changed the designation of the SR 4 as an expressway.

West of Angels Camp SR 4 winds through a scenic landscape. The highway straightens as it enters the town from west, allowing motorists to increase speed. Visitors often miss the opportunity to explore downtown Angels Camp due to the lack of gateway signage and wayfinding near the SR 4/SR 49 intersection. This study recommendations will address reducing the motorists' speed as they enter Angles Camp along SR 4 and providing wayfinding signage to direct visitors to downtown commercial areas.



Section- Westbound SR 4



Westbound SR 4



SR 4 looking toward Jumping Frog Plaza



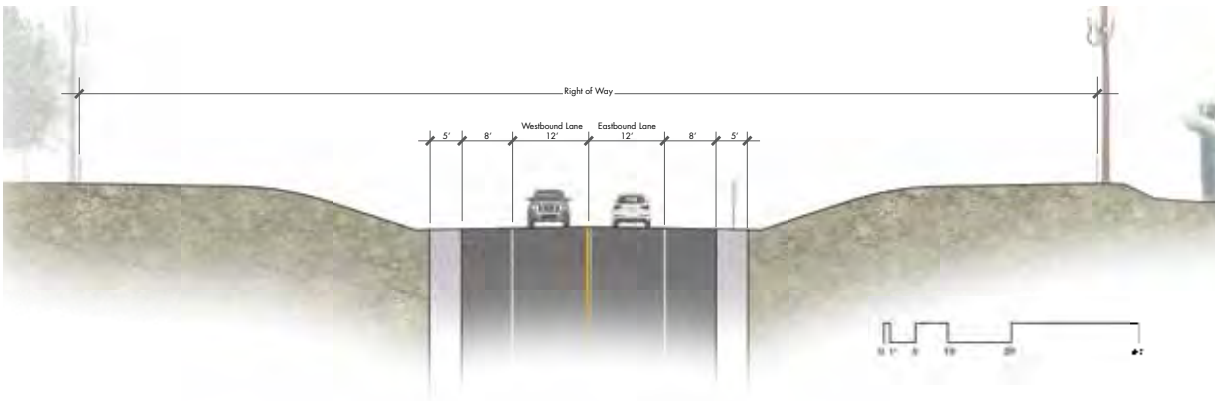
SR 4 leaving Angels Camp to Copperopolis from Foundry Lane



SR 4 Angels Camp to Copperopolis from Stockton Road

Along SR 4 there is a significant right of way allowing the opportunity for increased signage, landscape, and walks. Improvements within this area will need to be coordinated for roadway safety and to match grading changes.

Opportunities exist to slow traffic when entering the City to create a sense of arrival. Traffic calming measures for the roadways will need to be coordinated with future land uses and with Caltrans and the California Transportation Commission.



Section-Eastbound SR 4



Eastbound SR 4



SR 4 bridge towards Murphy's from Murphys Grade Road



SR 4 leaving Angels Camp towards Murphys



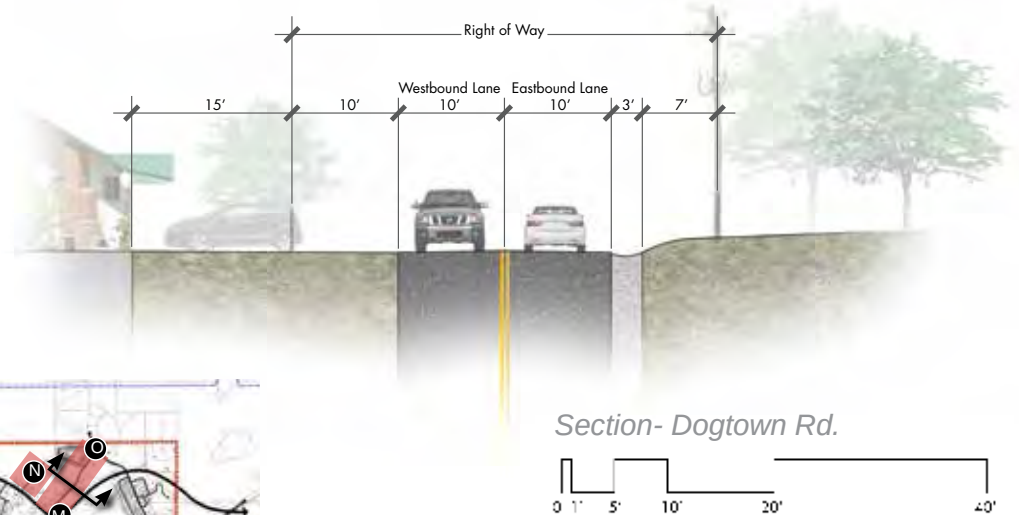
SR 4 arrival to Angels Camp from Murphys

TRANSPORTATION ANALYSIS

Dogtown Road and Clifton Lane

Dogtown Road is located 250 feet northeast of the SR 4/SR 49 intersection. Dogtown Road is primarily rural in character and lined with single family homes for approximately one-half mile in the project area. The road continues to the northeast and connects to large acre lots, ranches, vineyards, agricultural and industrial uses. Since the SR 4 bypass was added, the Dogtown Road/SR 4 intersection has been a concern for residents and truck traffic. New points of access will be explored in the study to mitigate traffic conflicts at the Dogtown Road/SR 49 intersection.

Clifton Lane is a dead end road to the northeast of Dogtown Road. Single family homes front the road to the south and a large vacant parcel is located to the north. A gated road runs 2000' through the parcel, providing access to a private residence located in the hills. Identified in Dogtown Road Realignment Traffic Study, future "Street 'A'" would connect Dogtown Road directly to Clifton Road or to the undeveloped parcel's access road and SR 49.



Key Map - Clifton Lane/Dogtown Road



Dogtown Road looking east



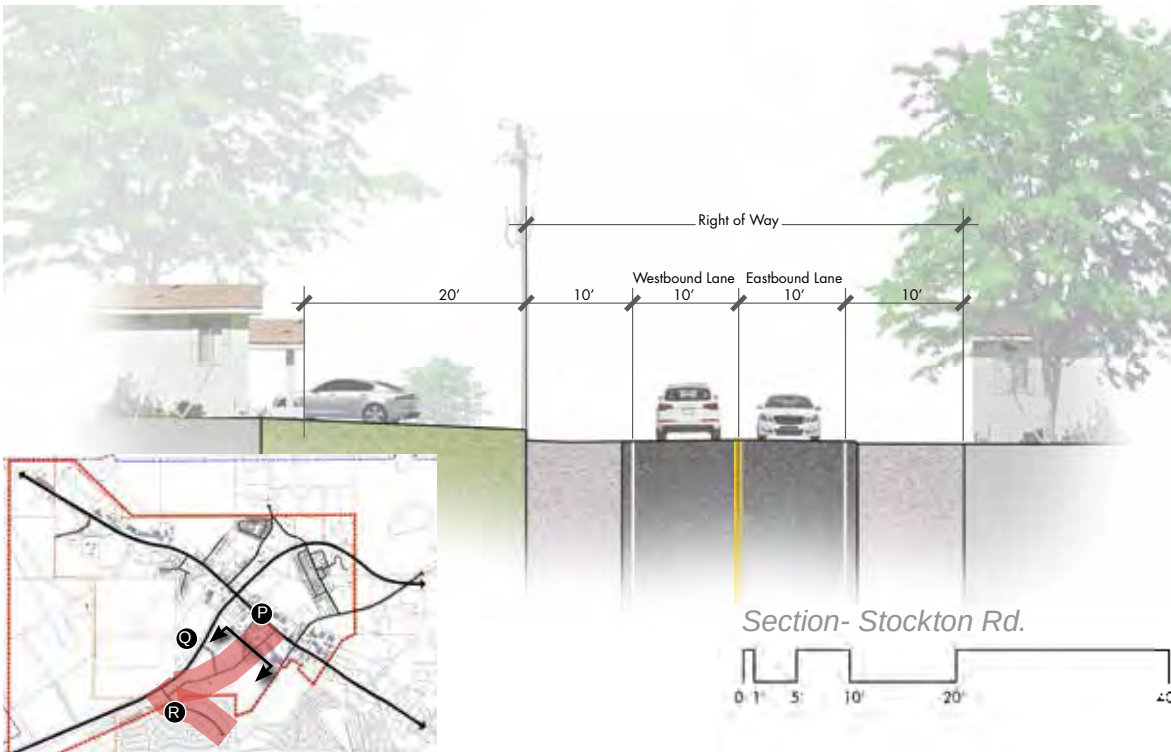
Clifton Lane looking east



Dogtown Road and Gardner Lane

Stockton Road

Stockton Road intersects SR 49 near Towne Center Plaza and roughly parallels SR 4 for two miles to the west. The road functions like a frontage road and intersects both Angel Oaks Drive and Foundry Lane. Current uses along the roadway include three historic cemeteries, civic and industrial uses as well as residential and commercial. Residents use the road to access SR 49 from neighborhoods off Angel Oaks Drive and Greenhorn Creek. A number of scenic views exist along the corridor. The road's wide right-of-way provides an opportunity for landscape and sidewalk/ bicycle facility improvements and create a significant multi-modal corridor within the study area.



Key Map- Stockton Road/Angel Oaks Drive Section



Stockton Road/SR 49 intersection



Foundry Lane/SR 4 intersection

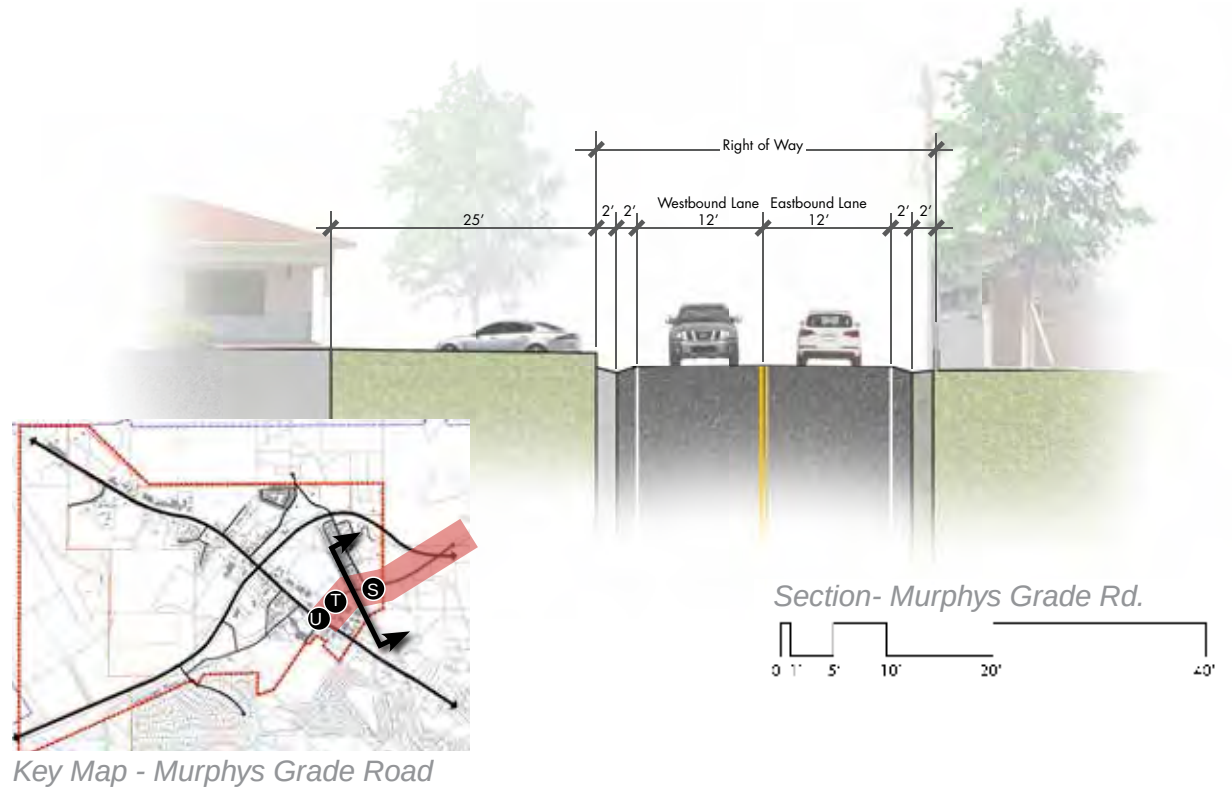


Stockton Road/Angel Oaks Drive intersection

TRANSPORTATION ANALYSIS

Murphys Grade Road

Murphys Grade Road intersects SR 49 near Towne Center Shopping Plaza and Bret Harte Union High School. It travels eastbound through rural and industrial areas into downtown Murphys. A fair amount of truck traffic uses the road. The intersection at SR 49 is signalized as it is surrounded by the high school, shopping area, recreational sports fields and pool. According to Caltrans, this is the most heavily used intersection in the county. This is one of the few roadways with sidewalks within the study area. The Corridor Study will evaluate safe access points and connections to these pedestrian facilities.



Murphys Grade and Gardner Lane intersection looking east



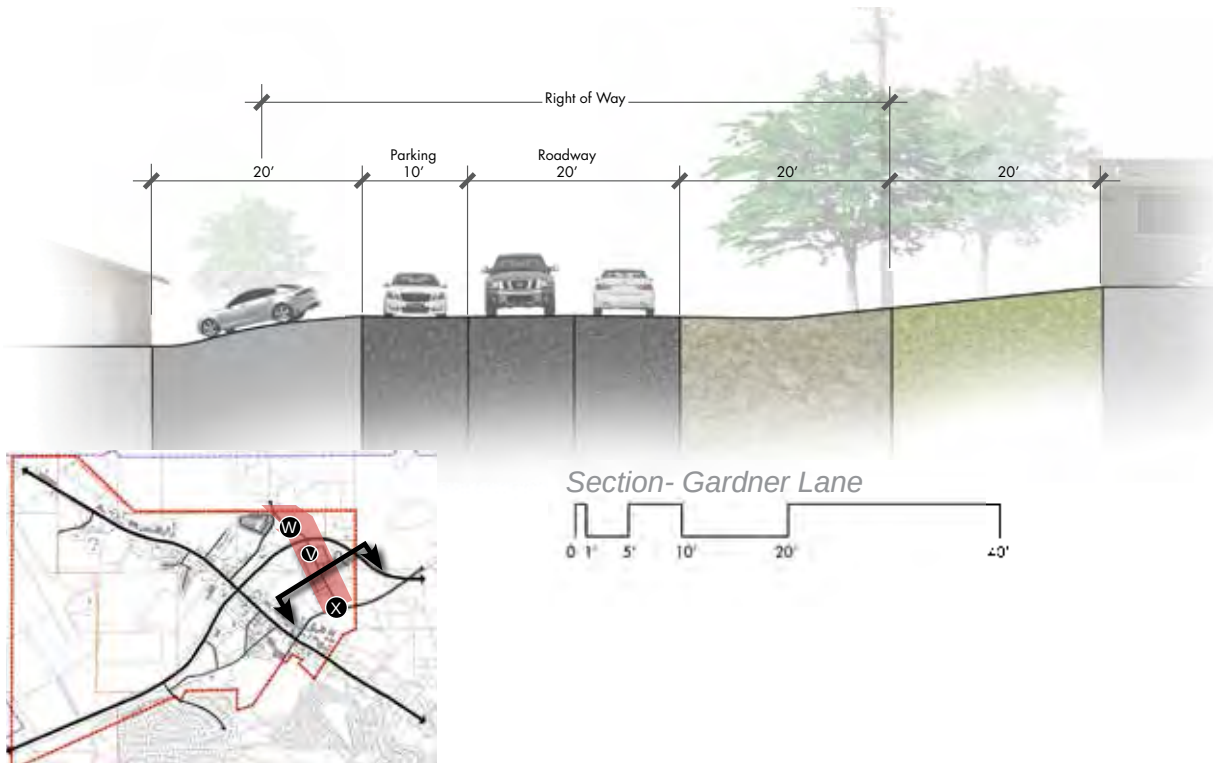
Murphys Grade near high school looking east



Murphys Grade and SR 49 intersection looking west

Gardner Lane

Gardner Lane is a residential street with a wide right-of-way running southeast from Dogtown Road to Murphys Grade Road ending at the high school. As a result of the roadway congestion and safety issues at SR 49, truck traffic from Dogtown Road uses Gardner Lane as a cut-through, which creates conflicts for the residential and school areas. The Corridor Study will review appropriate use of the roadway as a neighborhood collector and reduce truck traffic. Opportunities also exist to increase safe paths to schools and commercial areas from the residential neighborhoods.



Key Map - Gardner Lane



Gardner Lane looking South from Dogtown Rd.



Gardner Lane looking North



Gardner Lane and Murphys Grade toward High School

Peak Hour Traffic Volumes

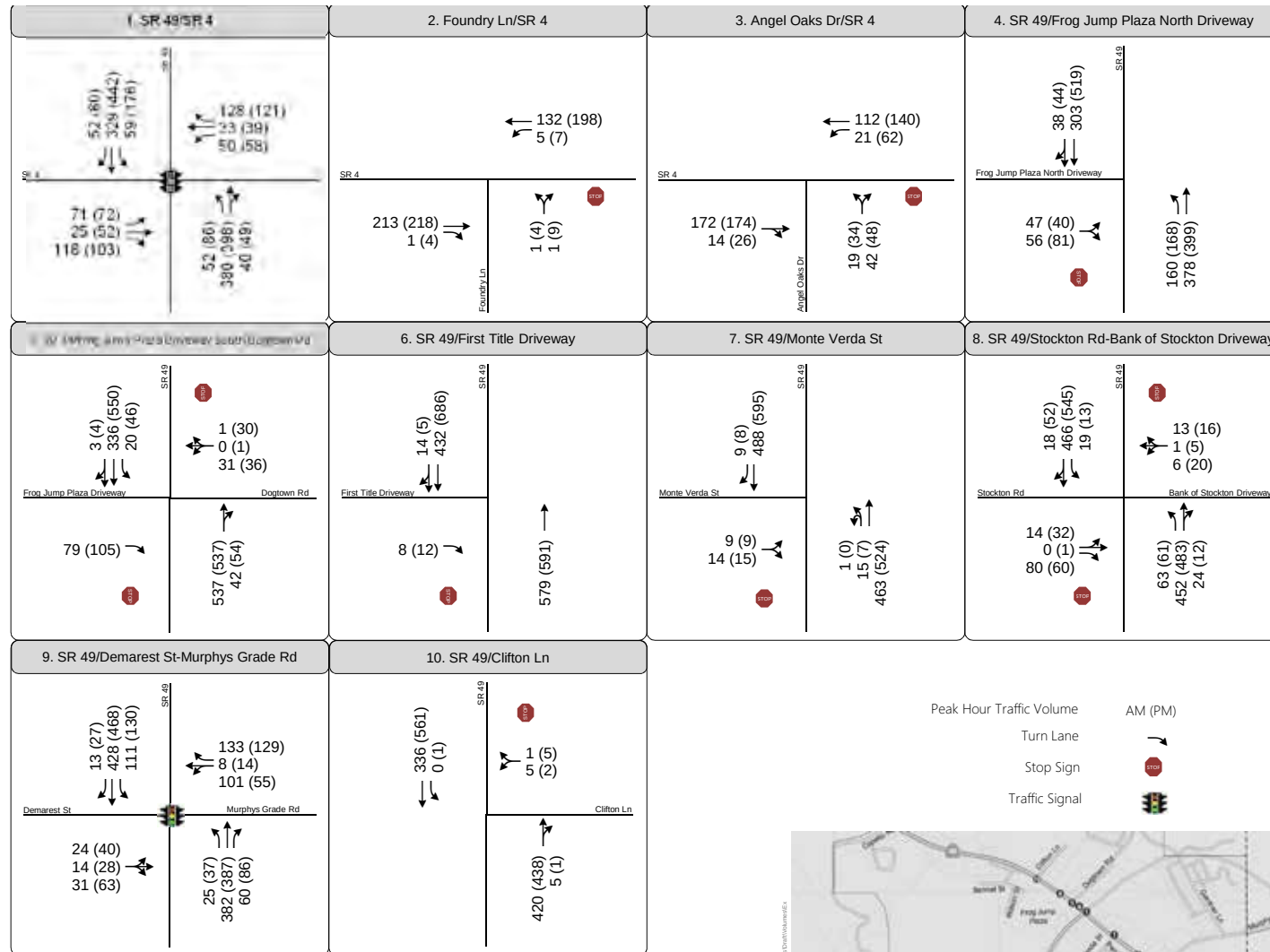
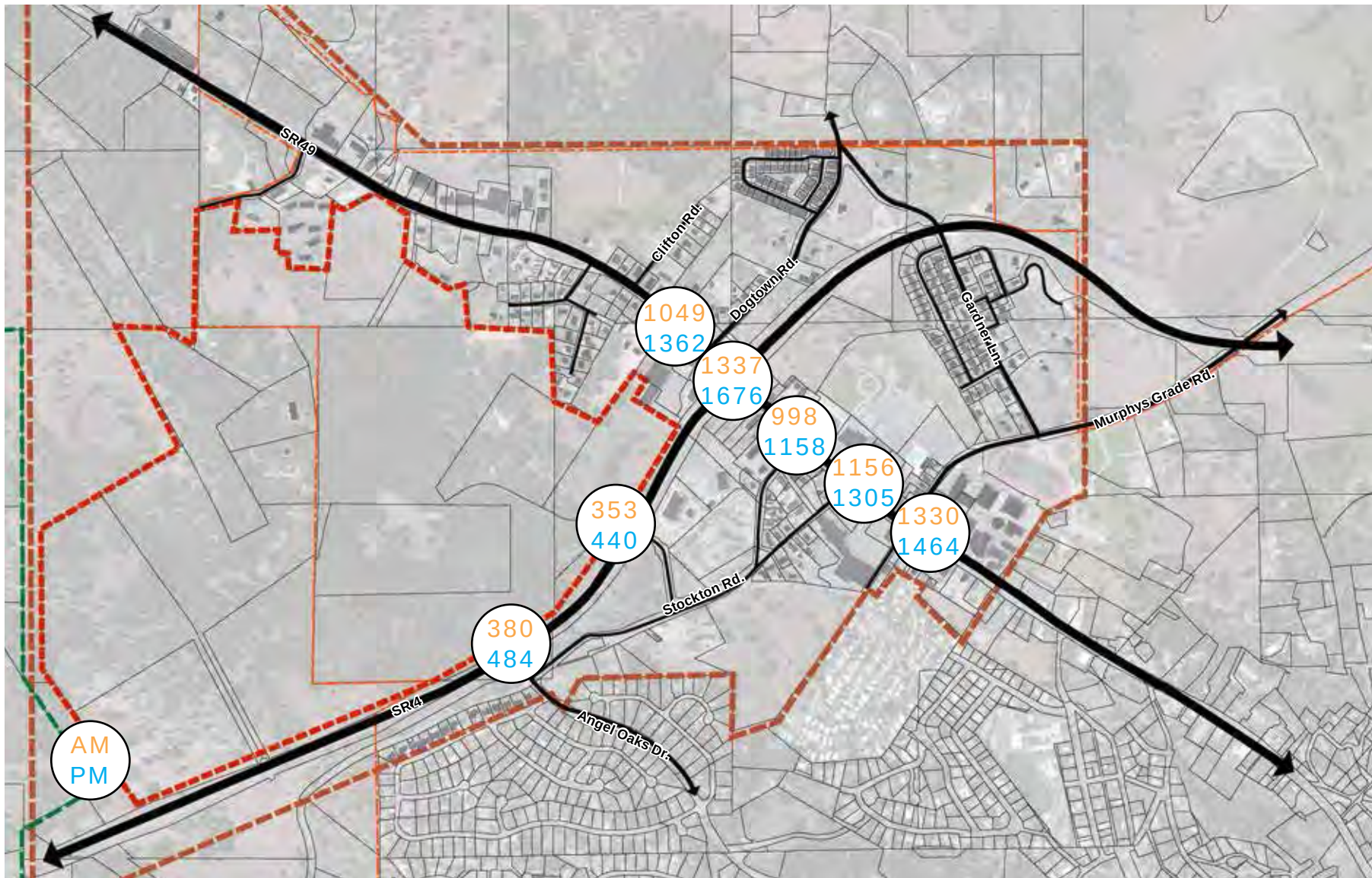


FIGURE 6: PEAK HOUR TRAFFIC VOLUMES - EXISTING CONDITIONS





Existing Peak Hour Traffic Counts

Murphys Grade Intersection at SR 49 and SR 4/49 are some of the busiest intersections in Calaveras County. Access points onto SR 4 demonstrates low traffic use. The data consistently shows more traffic flow in the afternoons than in the mornings.

Peak Hour Pedestrian and Bike Volumes

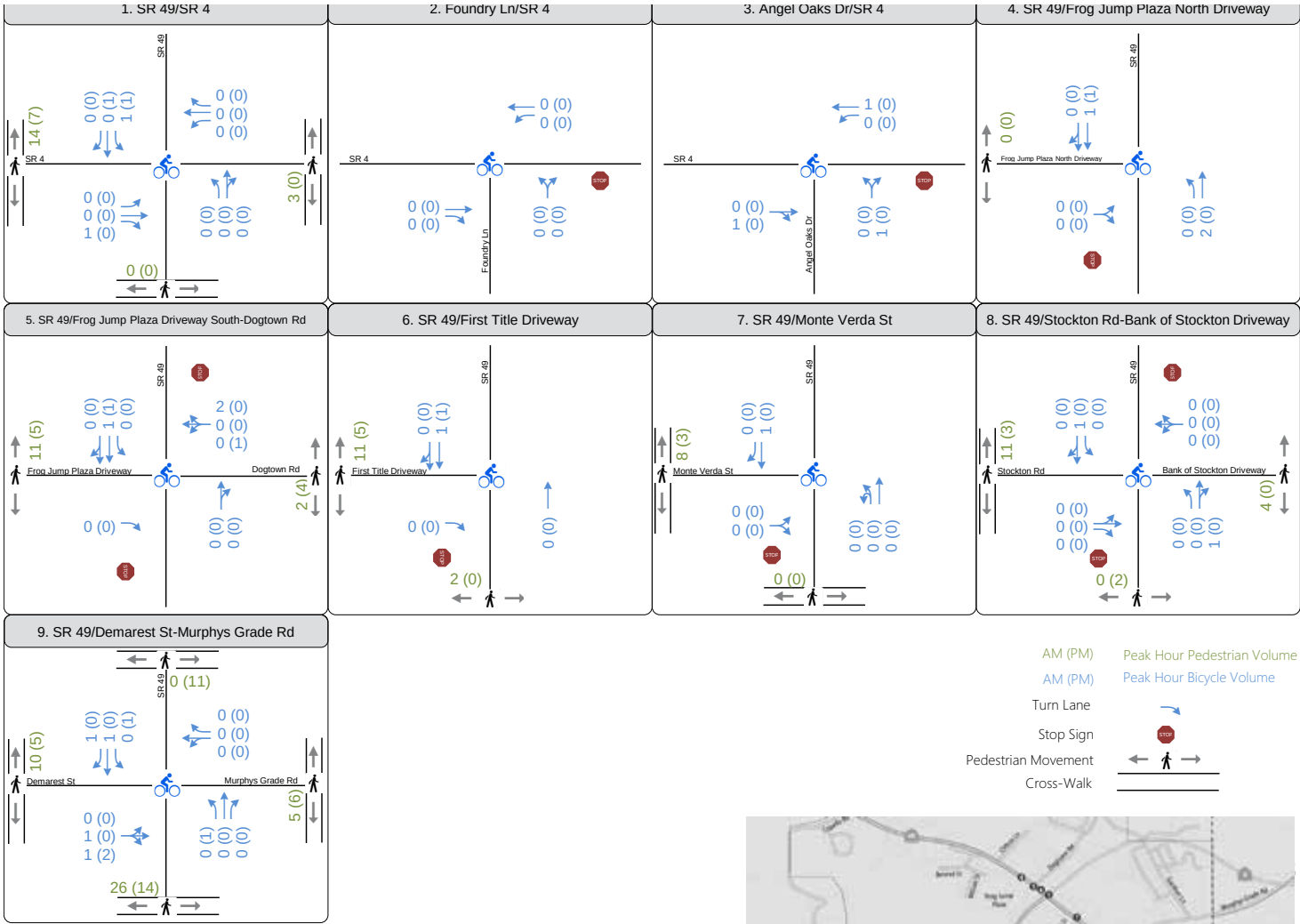
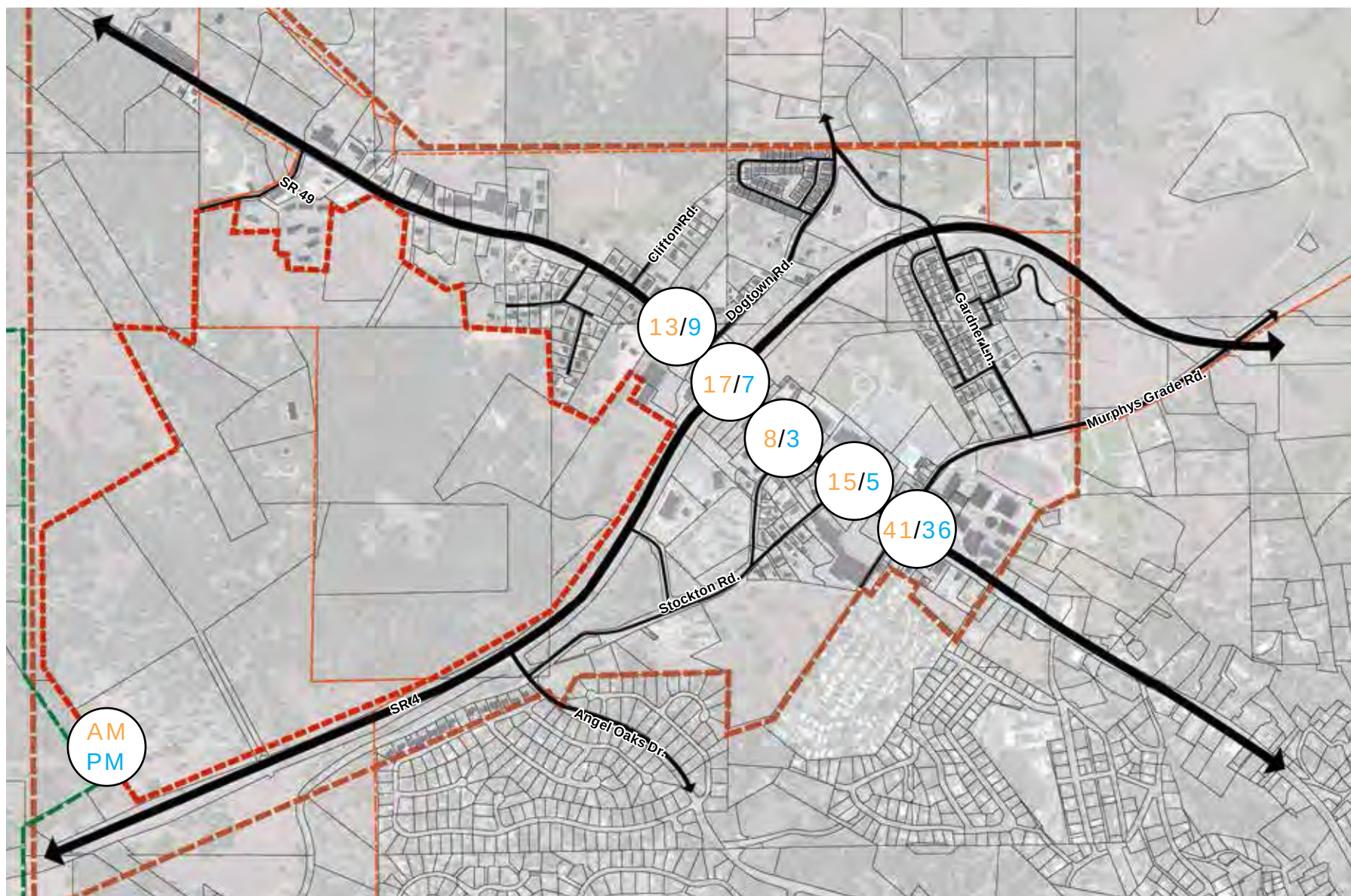


FIGURE 7: PEAK HOUR PEDESTRIAN AND BIKE VOLUMES
- EXISTING CONDITIONS





Existing Peak Hour Pedestrian Counts

Murphys Grade Intersection at SR 49 has the most pedestrian activity corresponding to the High School, regional transit stop and shopping center. Bike use in the study area appears to be minimal.



SR 4 and Dogtown Road intersection operates at LOS C during peak AM traffic and LOS F during peak PM traffic.

2.3.3 Analysis Methodology

This section outlines the analysis methods applied for study roadways and intersections. Each study roadway facility was analyzed using the Level of Service (LOS) concept.

LOS is a qualitative measure of traffic operating conditions whereby a letter grade from A (the best) to F (the worst) is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion and LOS F represents long delays and a facility that is operating at or near its functional capacity.

Intersections

Traffic operations at the study intersections were analyzed using procedures and methodologies contained in the Highway Capacity Manual (HCM), Transportation Research Board, 2010. Table 1 displays the delay range associated with each LOS category for signalized and unsignalized intersections based on the HCM.

TABLE 1: INTERSECTION LEVEL OF SERVICE CRITERIA

Level of Service.....	Signal Control	Stop Control
A.....	≤ 10.0	≤ 10.0
B.....	10.1 – 20.0	10.1 – 15.0
C.....	20.1 – 35.0	15.1 – 25.0
D.....	35.1 – 55.0	25.1 – 35.0
E.....	55.1 – 80.0	35.1 – 50.0
F.....	> 80.0	> 50.0

Notes: Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay.

Source: Highway Capacity Manual, Transportation Research Board, 2010.

The HCM methodology determines the level of service (LOS) at signalized intersections by comparing the average control delay (i.e. delay resulting from initial deceleration, queue move-up time, time actually stopped and final acceleration) per vehicle at the intersection to the established thresholds. The LOS for traffic signal controlled and all-way stop controlled intersections is based on the average control delay for the entire intersection. For side-street stop-controlled intersections, the LOS is evaluated separately for each individual movement with delay reported for the critical (i.e., worst case) turning movement.

SimTraffic Modeling

The HCM methodologies were applied using SimTraffic software packages (Version 8), developed by Trafficware. Consistent with Caltrans District 10 preferences (e.g., required for the SR 4 West, SR 120/McKinley Avenue interchange, and SR 4 Wagon Trail realignment projects), the SimTraffic model was run for the entire peak hour using the following four 15-minute intervals:

- 15-minute – no peak hour factors (PHF)
- 15-minute – with PHF of 0.81 (AM) and 0.92 (PM)
- 15-minute – no PHF
- 15-minute – no PHF

For each scenario, the results of 10 runs were summarized to yield the reported conclusions.

Peak Hour Factors

The PHF observed in the field was determined to range from 0.72 to 0.98 during the AM and PM peak hour conditions. Because SimTraffic was used to analyze intersection performance, a network-wide PHF of .081 and 0.92 was used for the AM and PM peak hours, respectively.

Heavy Vehicles

HCM defines heavy vehicles as any vehicle with more than four wheels on the ground. This definition was used for the SimTraffic model. The Caltrans Traffic Branch 2012 Annual Average Daily Traffic Report documents a heavy vehicle percentage between 4.0% and 4.49% near Post Mile (PM) 8.667 (the SR 4/SR 49 intersection).

Bicycles and Pedestrians

Bicycle and pedestrian volumes were input into the SimTraffic model based on intersection traffic counts collected at the study intersections shown previously in Figure 3.

Level of Service Standards

The following LOS standards are relevant to this study area:

- City of Angels Camp General Plan – LOS D or better operation is acceptable at the intersection of local roads with arterial roads.
- Caltrans – Based on consultations with Caltrans District 10 traffic operations staff, intersections within the Caltrans right-of-way should operate at LOS D or better for all movements.

Based on these sources, LOS D was used to identify acceptable traffic operations at the study intersections.

2.3.4 Existing Traffic Conditions

This section discusses the physical and operational characteristics of the existing transportation system.

Traffic Flow

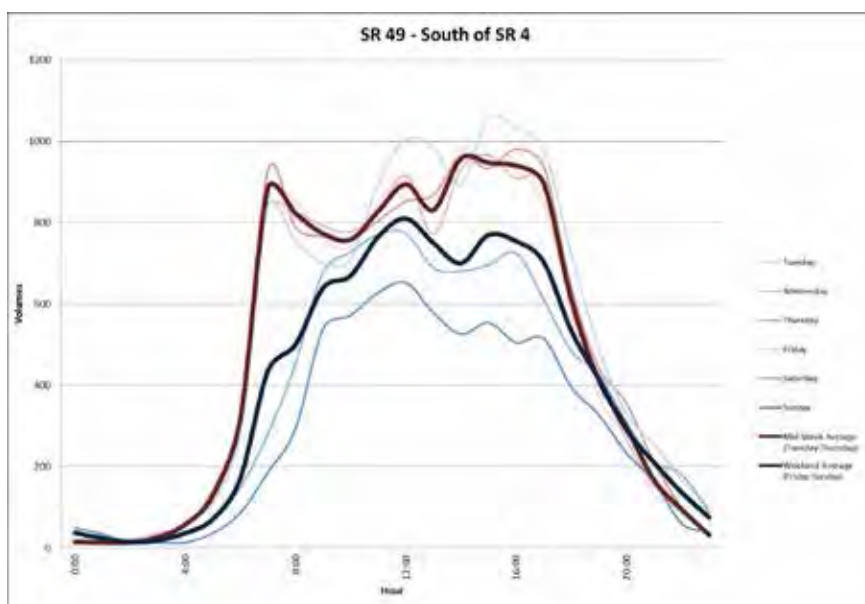
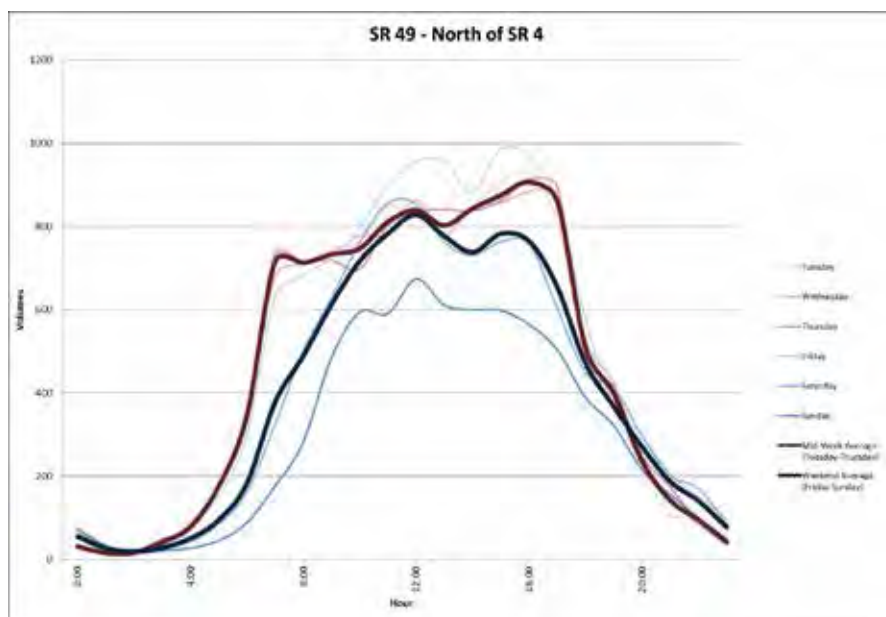
The graphs to the right show midweek (Tuesday through Thursday) and weekend (Friday through Sunday) traffic flow (i.e., volume by hour) on SR 49 and SR 4. The midweek flows are shown in red and the weekend flows are shown in blue. The dark and bold line represents the average of the weekday and weekend days. Travel characteristics of SR 49 and SR 4 are described below. Full-size graphs are included in Appendix B.

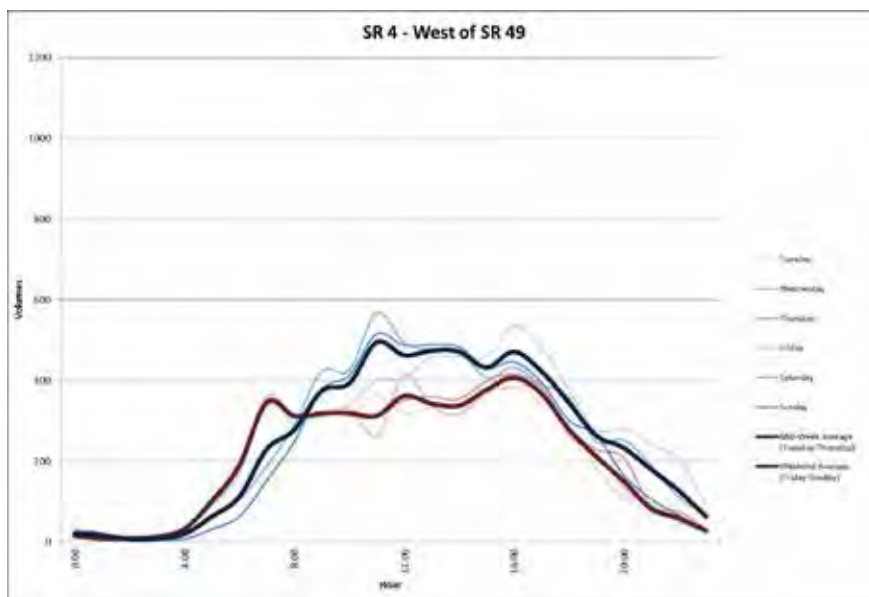
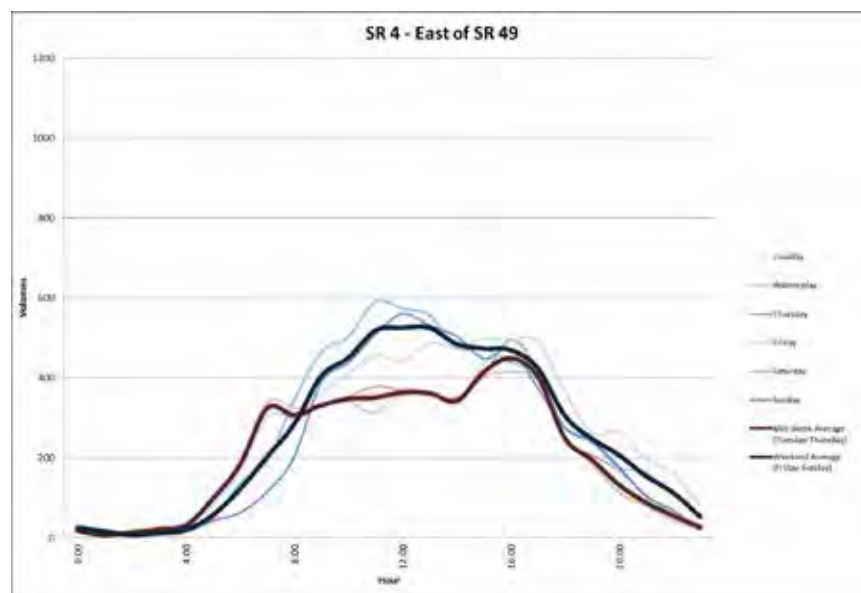
SR 49

Average midweek traffic flows are higher than the average weekend flows for SR 49. Peak flow south of SR 4 occurs around 2:00 PM due to Bret Harte Union High School.

There is little variation in midweek flow and significant variation in weekend flow.

The highest peak flows occur on Friday (about 1,100 vehicles) with two distinct peaks due to weekday commutes and recreational travel. The lowest peak flow occurs Sunday around 12:00 PM.





SR 4

Peak flow on SR 4 is about 600 vehicles compared to SR 49's peak flow of about 1,100 vehicles.

Average midweek traffic flows are lower than average weekend flows with less variation in midweek and weekend flow compared to SR 49.

The highest peak flows occur on Saturdays around 12:00 PM.

Friday peak flow occurs around 4:00 PM. Compared to other days more travel occurs on Friday after 4:00 PM, characteristic of recreational travel.

Comparison

Table 2 summarizes daily two-way traffic volumes on SR 49 and SR 4 for midweek (Tuesday through Thursday) and weekend (Friday through Sunday). For each segment of SR 49 and SR 4, the lowest (green shading) and highest (blue shading) daily traffic volumes are identified.

As shown in Table 2, the highest volumes occurred on Friday for both SR 49 and SR 4. On SR 49, the lowest daily traffic volumes occurred on Sunday. On SR 4, the lowest volumes occurred on Wednesday (east of SR 49) and Tuesday (west of SR 49).

Improvements associated with the SR 4 Wagon Trail realignment project may result in a larger share of regional recreational/tourist travel using SR 4 (i.e., as an alternative to SR 12) due to improved design speed.



Heavy Truck traffic

Intersections

The operation of study area intersections influence a drivers overall experience. Examples of situations that may negatively affect drivers traveling throughout the study area include the following:

- Delay from traffic control – waiting at the SR 4/SR 49 traffic signal)
- Delay from vehicle queuing – waiting for queued vehicles to clear before being able to make an right-turn from Frog Jump Plaza
- Delay from site access – waiting for drivers accessing local development

Table 3 summarizes the LOS and delay of study area intersections. Table 4 summarizes maximum vehicle queue lengths at the SR 49/SR 4 intersection.

As shown in Table 3, most study intersections operate acceptably at LOS C or better during the AM and PM peak hours based on the existing study intersection AM and PM peak hour turning movement volumes shown in Figure 2. The following side street stop controlled intersections have movements that operate worse than LOS D:

- SR 49/Frog Jump Plaza North Driveway – the eastbound left-turn movement from the Frog Jump Plaza drive operates at LOS E during the PM peak hour.
- SR 49/Frog Jump Plaza South Driveway/Dogtown Road – the westbound left-turn movement from Dogtown Road operates at LOS F during the PM peak hour.
- SR 49/First Title Driveway – The eastbound right-turn movement from the First Title Driveway operates at LOS F during the PM peak hour.

These results are consistent with the maximum vehicle queues shown in Table 4 at the SR 49/SR 4 intersection.

Poor operation for these turn movements is due to peak hour traffic volumes and the close spacing of the intersections/driveways on SR 49 north of SR 4. Vehicle queuing on southbound SR 49 and competing turning movements from vehicles exiting and entering adjacent development along northbound and southbound SR 49 make it difficult for drivers to exit these side streets.

Appendix A includes the SimTraffic analysis results, including maximum vehicle queues at other study area intersections.

As discussed above, the SR 49/SR 4 intersection operates acceptably at LOS C or better during AM and PM peak hours. However, the driveways and intersections just north of the intersection operate at LOS E and F due to close intersection spacing, limited storage for queued vehicles and the number of permitted turn movements. Planned growth in Angels Camp, Calaveras County and neighboring communities will exacerbate operations in this area.

TABLE 2:
DAILY TRAFFIC VOLUME (TWO-WAY TOTAL) – SR 49 AND SR 4

Roadway	Segment	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
SR 49	North of SR 4	10,940	10,950	11,040	11,670	9,600	7,210
	South of SR 4	11,640	11,610	11,910	12,450	9,130	7,010
SR 4	East of SR 49	5,070	5,010	5,280	6,390	6,310	5,320
	West of SR 49	4,900	4,950	5,150	6,330	6,060	5,550

Notes: Traffic counts conducted the week of September 8, 2014.

Source: Fehr & Peers, 2014

TABLE 3:
PEAK HOUR INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Control	AM Peak Hour	PM Peak Hour
1. SR 49/SR 4	Signal	B / 18	C / 28
2. SR 4/Foundry Lane	Side Street Stop	A / 4 (WBL)	A / 6 (NBL)
3. SR 4/Angel Oaks Drive	Side Street Stop	A / 7 (NBL)	A / 6 (NBL)
4. SR 49/Frog Jump Plaza North Driveway	Side Street Stop	C / 18 (EBL)	E / 48 (EBL)
5. SR 49/Frog Jump Plaza South Driveway-Dogtown Road	Side Street Stop	C / 18 (WBL)	F / 102 (WBL)
6. SR 49/First Title Driveway	Side Street Stop	A / 6 (EBR)	F / 150 (EBR)
7. SR 49/Monte Verda Street	Side Street Stop	B / 14 (EBL)	C / 22 (EBL)
8. SR 49/Stockton Road	Side Street Stop	C / 27 (WBL)	C / 25 (WBT)
9. SR 49/Murphy's Grade Road	Signal	B / 17	B / 16
10. SR 49/Clifton Lane	Side Street Stop	A / 8 (WBL)	B / 10 (WBL)

Notes: For signalized and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for the overall intersection. For side street controlled intersections, average delay for the worst movement is reported in seconds per vehicle and the movement is listed in parentheses. All results are rounded to the nearest second.

Bold indicates operations worse than LOS D.

Source: Fehr & Peers, 2014

TRANSPORTATION ANALYSIS

Collision Records

Figures 4 summarizes available reported collisions in the study area for the eight year period from January 2005 through December 2012, using collision records from the Statewide Integrated Traffic Records System (SWITRS). Collisions involving pedestrians are identified separately on Figure 4. There were no reported collisions involving bicycles. During this period, 39 collisions were reported in the study area, with three collisions involving pedestrians. All but three of the 39 reported collisions occurred on SR 49.

Each incident involving pedestrians occurred near the SR 49/Murphy's Grade Road intersection. Eleven collisions, most of which were broadside incidents, occurred on SR 49 (north of SR 4) at the Dogtown Road and Frog Jump Plaza driveways. The collisions are consistent with the delay experienced by drivers on the side streets and observed traffic movement (i.e. lane changing and exiting/entering) conditions on this segment of SR 49.

Table 5 compares the collision rate for reported collisions to statewide average accident rates for similar facilities. As shown, the calculated rate of collisions from 2005 to 2012 is lower than the rate for similar facilities. Although the collision rate on SR 49 (north of SR 4) is lower than similar facilities, the cluster of collisions just north of SR 4 is due to the operational characteristics outlined above. Potential improvements in the study area should consider providing alternatives to this area for local travelers and a reduction in conflict points (i.e., potential collision points).

**TABLE 4:
PEAK HOUR MAXIMUM QUEUE LENGTH – EXISTING CONDITIONS**

Intersection	Movement	Storage	AM Peak Hour	PM Peak Hour
1. SR 49/SR 4	Eastbound Left	440 ft	100 ft	125 ft
	Eastbound Through	1,330 ft	50 ft	100 ft
	Eastbound Right	440 ft	75 ft	100 ft
	Westbound Left	420 ft	75 ft	125 ft
	Westbound Through	570 ft	50 ft	75 ft
	Westbound Right	440 ft	75 ft	100 ft
	Northbound Left	105 ft	100 ft	150 ft
	Northbound Through	620 ft	275 ft	400 ft
	Northbound Right	105 ft	100 ft	150 ft
	Southbound Left	110 ft	75 ft	700 ft
	Southbound Through	120 ft	300 ft	700 ft
	Southbound Right	120 ft	75 ft	75 ft

Notes: **Bold and underline** font indicates the average maximum queue length is greater than the storage length. Storage length is the pocket length or the distance to the upstream study intersection. All results are rounded up to the nearest 25 feet (about one car length).

Source: Fehr & Peers, 2014

**TABLE 5:
COLLISION SUMMARY SR 4 AND SR 49 – 2005 THROUGH 2012**

		Segment Length [Miles]	Number of Collisions			Collision Rate [Collisions/Million Vehicle Miles]					
						Actual			State Average		
			Segment	Total	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total	Fatal
SR 4	West of SR 49	1.2	0	0	0	0	0	0	1.15	0.04	0.56
	East of SR 49	0.6	0	0	0	0	0	0	1.15	0.04	0.56
SR 49	North of SR 4	1.1	17	0	5	0.65	0	0.19	1.00	0.03	0.48
	South of SR 4	0.5	19	0	4	0.82	0	0.17	1.00	0.03	0.48

Notes: Collision records from the Statewide Integrated Traffic Records System (SWITRS) for the period from January 2005 through December 2012.

Source: Fehr & Peers, 2014



FIGURE 8: REPORTED COLLISIONS 2005-2012



Children walking to sports practice along SR 49 shoulder

Pedestrian, Bicycle and Transit

Sidewalks are located on improved frontages but are not continuous along SR 49, as shown on Figure 5. The location and control of pedestrian crosswalks is summarized below:

- SR 49/SR 4 – traffic signal-controlled crosswalks located on the south, west and east legs of the intersection.
- SR 49/Monte Verde Street – uncontrolled crosswalk located on the south leg of the intersection.
- SR 49/Murphy's Grade Road – traffic signal-controlled crosswalks on all legs of the intersection.

Figure 3, on page 34, summarizes AM and PM peak hour pedestrian and bicycle flows at each study intersection. As shown, most north/south pedestrian travel occurs on the west side of SR 49 between Frog Jump Plaza and destinations to the south with the highest observed crossing volume (14 pedestrians) occurring during the AM peak hour. The level of pedestrian travel and lack of sidewalk continuity reinforces the need for improved pedestrian facilities. Enhanced connectivity may also attract additional transit users.

Most east/west pedestrian travel occurs along Murphys Grade Road. Pedestrians were observed crossing at unmarked crosswalks at the SR 49/First Title Driveway and at the SR 49/Stockton Road intersections.

Figure 5 also shows study area transit service provided by Calaveras Transit. The following three transit routes are accessible from a transfer station located on the west side of SR 49 north of Murphys Grade Road:

- Route 1 – provides service to San Andreas and Valley Springs with the option to transfer to Route 2 and Route 3.
- Route 4 – provides service to Arnold and Columbia College.
- Route 5 – provides service to Copperopolis.



Truck Parking

Trucks sometimes park along the wide, undefined existing shoulders on SR 49. This should not be allowed and the public has requested a short term recommendation to enforce illegal truck parking.



TRANSPORTATION ANALYSIS

2.3.5 Community Circulation

Access to schools, retail shopping and recreational opportunities are important amenities in the community. Improved walks along roadways within the existing right-of-way or separate greenway and trail studies advanced by the City could improve connectivity and mobility. This section will identify potential improvement areas and opportunities for new development and how to incorporate circulation improvements into the plans.

Safety and Access

The numerous ingress/egress points along SR 49 create an irregular flow of traffic and unsafe pedestrian conditions as many cars turn in and out and are not looking for pedestrians and bicyclists. The Corridor Study will explore opportunities to create a defined pedestrian zone to create a safer and more comfortable space to walk.

Pedestrian Facilities

Sidewalks play an important role for safety and access, as well as connecting the community. Existing walks are disconnected and often end abruptly. Shopping and retail areas have heavy traffic yet provide few safe pathways. A quarter mile is generally understood to be an easy walking distance for most people. Since much of the retail in the project area is within a one-quarter mile area there is an opportunity to create a more connected pedestrian network. This will encourage fewer car trips and facilitate more places for community members to meet and engage with one another. It will also enhance the visual quality of the corridor. The 2007 Calaveras Pedestrian Plan designates sidewalks and improved crossings along both sides of SR 49 through the project area.

Bicyclist Facilities

There is a notable deficiency of bike paths and bike lanes in the project area. No bike parking exists at retail stores and there are no dedicated Class II bike lanes or Class I bike paths. The area is highly dependent on vehicular travel. However, bike riding and touring has increased significantly throughout the region. In addition to improved facilities, bike share programs could create a connection from the future planning area to historic attractions within Angels Camp and contribute to the tourism industry.

Public Transit

Public transit is important to provide equal opportunities for all residents. A transfer point is located on southbound SR 49 outside Town Center Plaza that connects to regional Calaveras Transit routes 1 (to San Andreas), 4 (to Murphys) and 5 (to Copperopolis). Route 4 connects to the downtown visitors center. However, there are only nine daily round trips on route 1, five daily trips on route 4 and two daily round trips on route 5. Public transit should be considered an asset to the accessibility of future economic activity. The 2014 Calaveras County Coordinated Public Transit-Human Services Transportation Plan determined there is an unmet trip need and the development of more frequent trips and better access to bus stops which will be considered as part of this study.



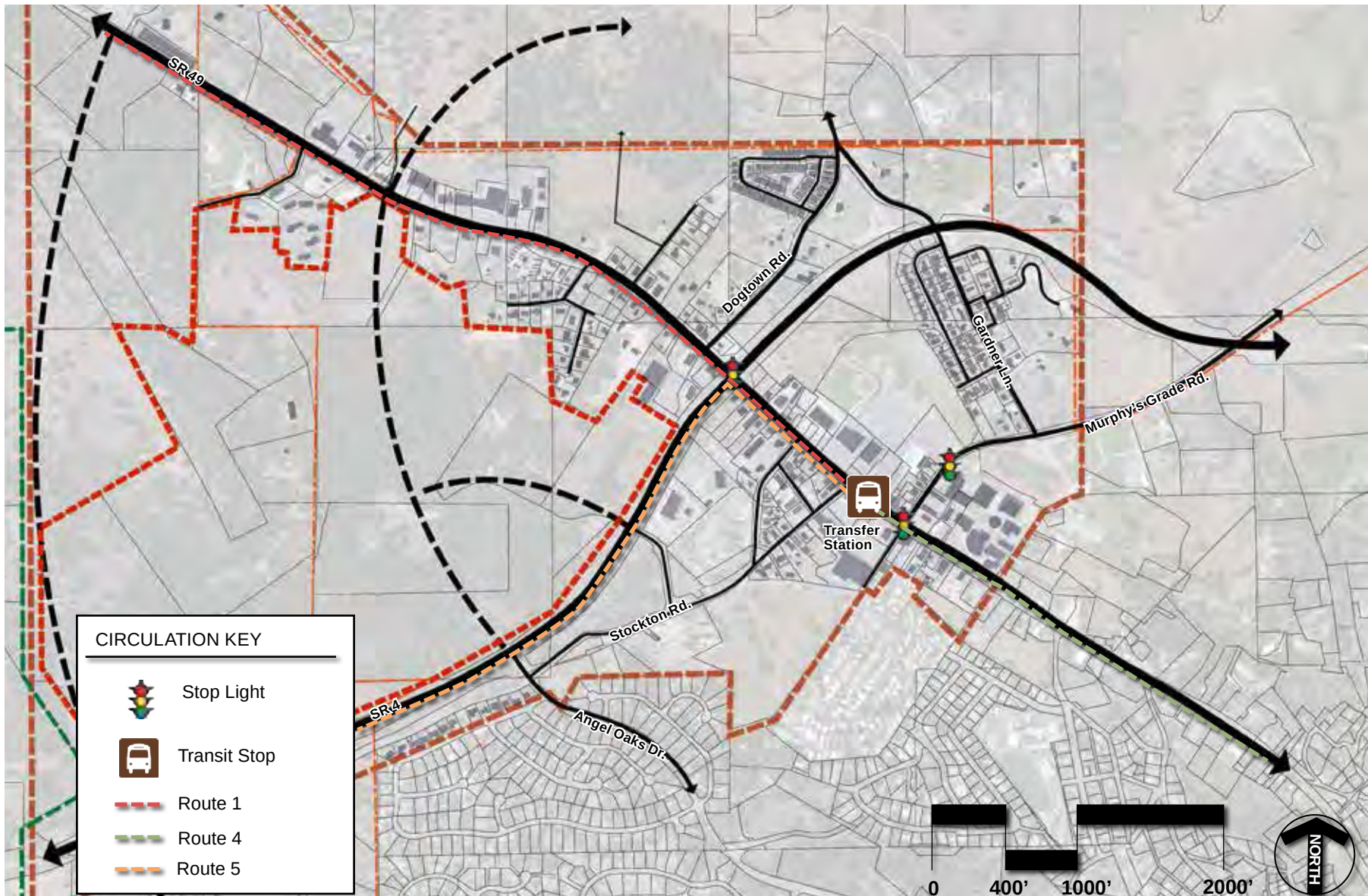
Transit Stop in Project Area



Undefined Pedestrian Zone

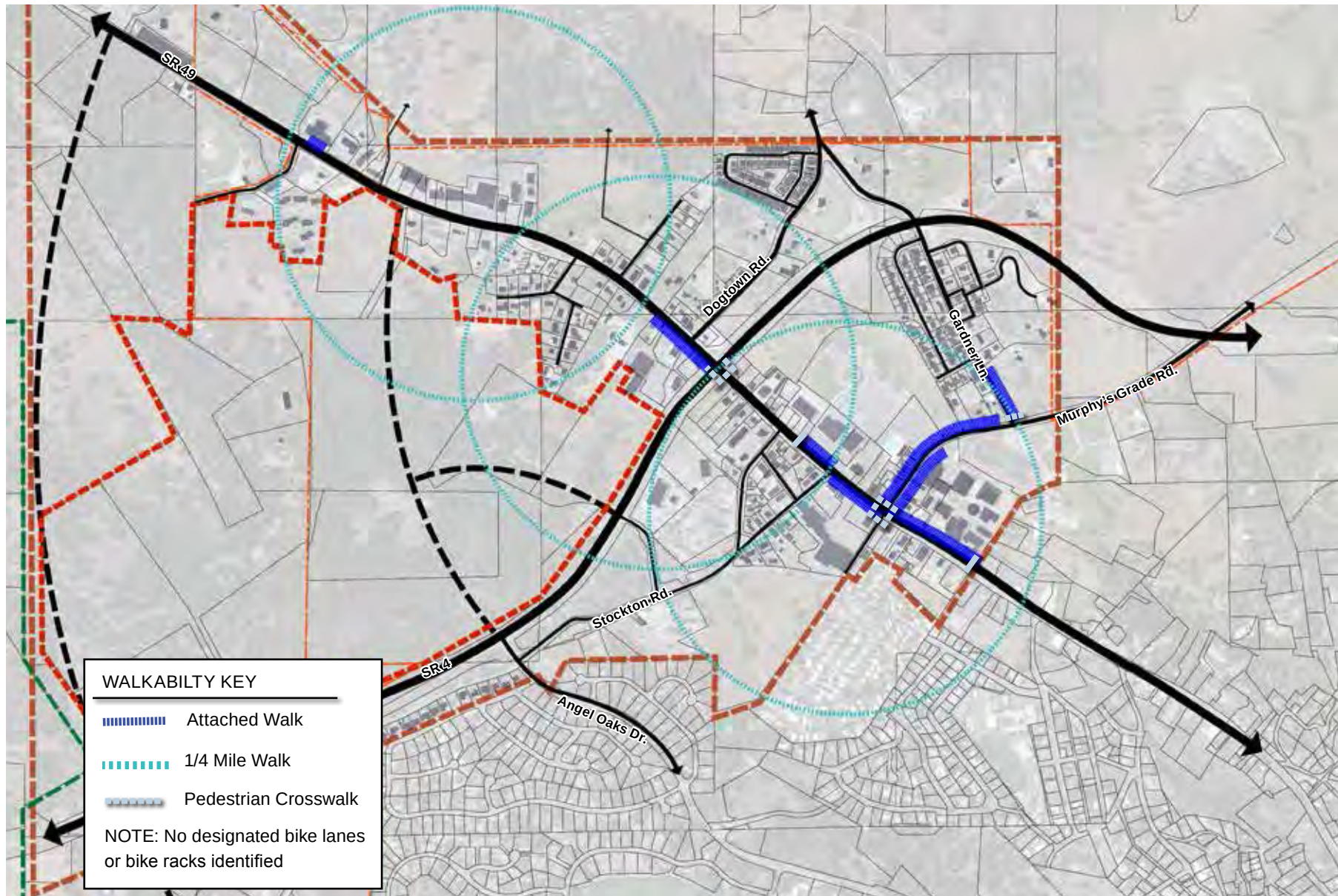


Inconsistent Sidewalks



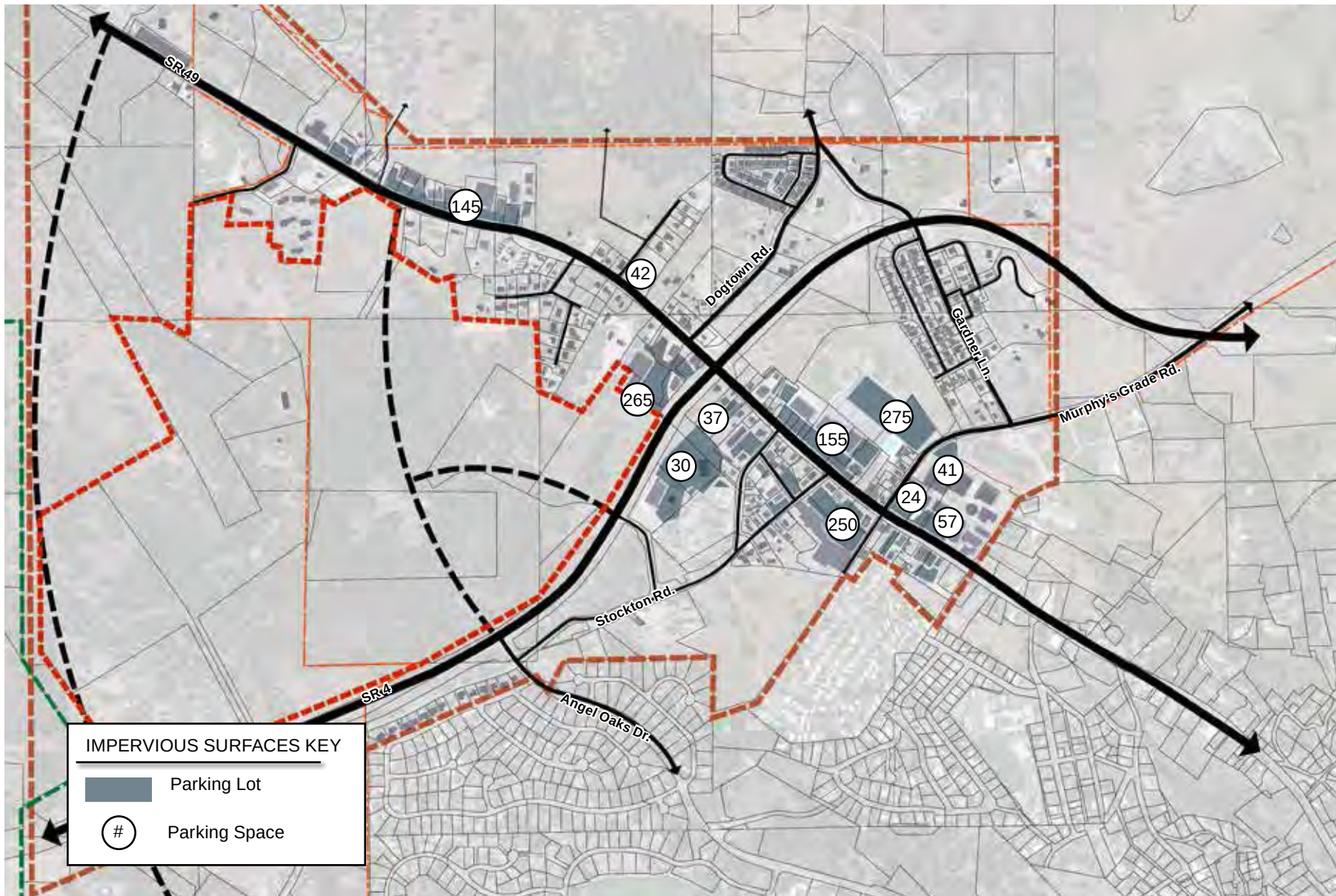
Circulation and Connectivity

Three regional transit lines stop at the transfer station at Murphys Grade and SR 49 is an important regional transportation connection. Angel Oaks is located one-half mile from the SR 4/49 intersection and poses less concern. All future roadways are shown on privately owned parcels and will need to be coordinated with property owners.



Safety and Walkability

One-quarter mile walking radii show the study area is a walkable scale from one destination to another. However, current development patterns do not create consistent pedestrian connections between destinations. This study could explore a park once strategy to improve pedestrian conditions and offer relief to roadway congestion.



Impervious Surface

A significant amount of parking lots exist adjacent to the SR 49 roadway. Ample parking is available in the retail areas as well as a parking lot adjacent to the High School and Recreation area on Murphy's Grade that is full during special events but under-utilized at off-peak times.



There are three major commercial centers in the project area

2.4: Market Analysis Summary

This section of the Existing Conditions and Analysis Report summarizes the market assessment that is included as Appendix B. The market assessment estimates the potential range of demand within several land use types that could be targeted for development in the vicinity of the SR 4/SR 49 intersection.

In order to inform land use planning the market assessment provides an order of magnitude estimate of real estate demand that could be captured in the area. This will help the City of Angels Camp plan for new development that is appropriate in size and consistent with local economic development goals.

The market assessment includes:

- 2.4.1 - Existing and Forecasted Socioeconomic Conditions: A review of existing demographic and socioeconomic conditions and trends, including population and household growth, resident age distribution, household income distribution, educational attainment, employment status and labor force participation, jobs by industry, regional commute flows, and projected population, housing and employment growth
- 2.4.2 - Analysis of Retail Development Potential: An assessment of taxable sales trends followed by a more detailed retail leakage analysis.
- 2.4.3 - Real Estate Market Conditions and Development Potential by Use Type: A review of existing real estate market conditions by land use type and an estimate demand within several land use categories that could potentially be captured.
-

2.4.1 Existing and Forecasted Socioeconomic Conditions

Following is a summary of the existing and forecasted economic and demographic conditions in the City of Angels Camp.

Population and Household Growth

- Angels Camp grew from a total of 3,004 residents in 2000 to 3,836 in 2010, which equals a growth rate of 2.5 percent per year. This is higher than Calaveras County and the State of California.
- The total population decreased between 2010 and 2014, for a decline of 0.7 percent per year.
- Household growth has remained consistent with population growth seeing 2.5 percent growth per year and then a decline to 0.1 percent per year between 2010-2014.
- The average household size of 2.23 persons in 2014 is about average for Calaveras County but considerably smaller than average for the State of California. Household size has seen a steady downward trend since 2000.

The findings suggest the general trend for population growth is on the decline, likely due to economic stress from the Great Recession. The population demographic is aging, suggesting many retirees live in Angels Camp.

Resident Age Distribution

- The median age in Angels Camp is 46.9 years, which is significantly higher than the statewide median, but somewhat lower than the county.
- Only 19.5 percent of the citywide population is below the age of 18, compared to 24.2 percent statewide, this group grew rapidly from 2000 to 2010.
- While family households are the most common household type in Angels Camp, the city has a smaller share of households with children, compared to the state.

The findings suggest that with efforts to grow the local economy and attract well-paying jobs the city is well situated to attract young adults. The city is also positioned to continue its role as a lifestyle and retirement center destination.

Educational Attainment

- Residents in Calaveras County, including the City of Angel's Camp, have lower levels of educational attainment than the State of California.
- The high school graduation rates are notably higher than the statewide average.

The findings suggest that young people cannot find higher paying jobs in Angels Camp. Local jobs need to be created to attract and retain an educated youth.

Household Composition and Tenure

- Family households are the most common type of household. However, family households are proportionally lower than the State and County. Therefore there is a higher than average amount of single-person and two-person households.
- There is a lower prevalence of households with children and a higher prevalence of households with adults over 60 corresponding to the population demographics of the city and county's higher median age.
- The majority, 64.4 percent, of the housing stock in Angels Camp is owner occupied, which is higher than the statewide average.
- 3.7 percent of the total housing stock is available for short- or long-term lease.

The findings suggest the primary demographic is an older population, living alone or as a couples, in a home they own. The high rate of ownership suggests housing is more affordable compared to urbanized areas. Additionally, the limited job opportunities and limited rental properties does not attract a younger demographic to live in the City.



SR 49 has a significant amount of existing commercial development

Household Income Distribution

- The median income is notably lower than the county and state at \$43,377.00.
- However, there has been a slight (inflation-adjusted) increase to the median income since 2000.

Household Occupancy and Vacancy Status

- There are approximately 349 vacant housing units in Angels Camp which is about 15 percent of housing.
- 8.3 percent of housing is for seasonal or recreational use compared to 25.2 percent in the county.

The findings suggest while there is a relatively strong market for second homes in Calaveras County, the City of Angels Camp is quite low comparatively.

Housing Stock Characteristics

- Seventy-three percent of homes in Angels Camp are single family, with a higher proportion of mobile and manufactured units than in the county.
- Multifamily housing provides 11 percent of the housing stock in Angels Camp, higher than the 3.8 percent in Calaveras County, but lower than the 30 percent in California statewide.
- The average home age is 31 years, which is newer than the statewide average. This corresponds to the population and housing growth in 2000-2010.

The findings suggests both the city and the county are under served for multifamily housing.

Affordability of Housing

- A low percentage of households overpay for housing, corresponding to the high amounts of owner-occupied units.
- The Regional Housing Needs Allocation (CCOG 2014-2019) requires that 161 affordable housing units should be provided within the City of Angels Camp . Forty percent of these would be allocated to low income residents and 60 percent to median income residents.

The findings suggest that owner-occupied households face less excessive cost burdens than renters, supporting a need for increased affordable housing.

Labor Force Participation

- The average annual unemployment rate in Angels Camp was 12.1 percent in 2013, significantly higher than both county and state levels. In August of 2014, unemployment decreased to 9.6 percent which is improved but still higher than county and state levels.
- The labor force in Angels Camp consistently falls below county and statewide average. Although the population has grown, the number of people participating in the labor force has declined since 2002.

The findings are consistent with the population demographic of older households that have left the labor force.

Resident Employment by Occupation and Industry

- Seventy-eight percent of the labor force in Angel's Camp works in natural resources, construction, and maintenance, sales or office, service industries, business, management and finance.

Jobs by Major Industry Sector & Major Employers

- Local employers are government, leisure and hospitality, retail, and education.
- The number of jobs for mining and construction, professional business services, retail trade, and financial activities has decreased.
- Major local employers are: Bret Harte Union High School; Foothills Village; and Worldmark by Wyndham. Other notable regional employers are: Bear Valley Ski Resort, Ironstone Vineyard and Big Trees Market.

The findings show that the major employers function as a direct draw or provide products and services to visitors travelling SR 4.

Ratio of Jobs to Employed Residents & Regional Commuting Patterns

- The average ratio of jobs to residents in 0.49 to 1.
- 47.4 percent of employed residents commute to work outside Calaveras County.

The findings show that half the employed residents of Angels Camp depend on jobs outside the community.

Population by Employment Projections

- Future projects within the county could add 9,159 new residents and 2,370 jobs by 2040.
- The City of Angels Camp could add around 155 new residents through 2020, and up to 764 through 2040.
- The City of Angels Camp could add a total of 555 new jobs through 2020, or around 1,000 new jobs through 2040.



Historic Main Street in Angels Camp features a few restaurants and local shopping

2.4.2 Analysis of Retail Development Potential

The following summarizes existing trends in regional retail sales and reports the results of a comprehensive retail leakage analysis.

Total and Per Capita Retail Sales Trends

- Angels Camp and Calaveras County show retail sales growth, although that growth occurred at a slower rate than for the state as a whole.
- Angels Camp has per capita taxable sales that is higher than the statewide average.
- Angels Camp has above average sales in food and beverage, food services and drinking places.

Retail Leakage Analysis

Retail leakage is defined as money spent outside the community. Estimated leakage can help identify retail categories that are over or under supplied in the project area.

- The primary market area, which includes Angels Camp and the surrounding area, experienced an estimated net retail leakage of \$50.9 million in 2014.
- The greatest leakage was in the categories of general merchandise stores, building materials, food and beverage stores, miscellaneous retail stores, and sporting goods, hobby and book stores.

Based on the existing retail demand and supply profile and market area characteristics, Angels Camp could reasonably expect to capture a sufficient portion of the existing leakage to support new retail development approximately equivalent to an additional community shopping center, on the order of 100,000 to 200,000 square feet of retail space. Angels Camp should not expect to capture all the leakage because current unmet demand is likely to spread throughout the trade area.

A center of this size is similar in scale to the existing Frog Jump Plaza and would capture approximately one-third of the current leakage in the existing market area. Because downtown Angels Camp is also trying to revitalize as an entertainment destination it is important to consider a retail mix that does not detract from the downtown.

The findings show an under-representation for retail shopping and residents must go outside of the county to meet needs for clothing and accessories, motor vehicles, home furnishings and appliances, and general merchandise purchases.

Supportable Retail Demand in Primary Market Area

Retail leakage from the primary market area could support a maximum of 655,200 SF of additional retail space, assuming 100 percent capture. This could include:

- 360,000 square feet of general merchandise;
- 88,100 square feet of food service and drinking places;
- 68,900 square feet clothing and accessories;
- 35,300 square feet health and personal stores;
- Approximately 25,000 square feet each of electronics and appliance stores, food service and drinking, sporting goods, hobby, book, and misc. stores.

The primary market area also has sufficient existing leakage to accommodate a maximum of three acres of development in the gasoline stations category and up to five acres in the motor vehicles and parts dealers category.

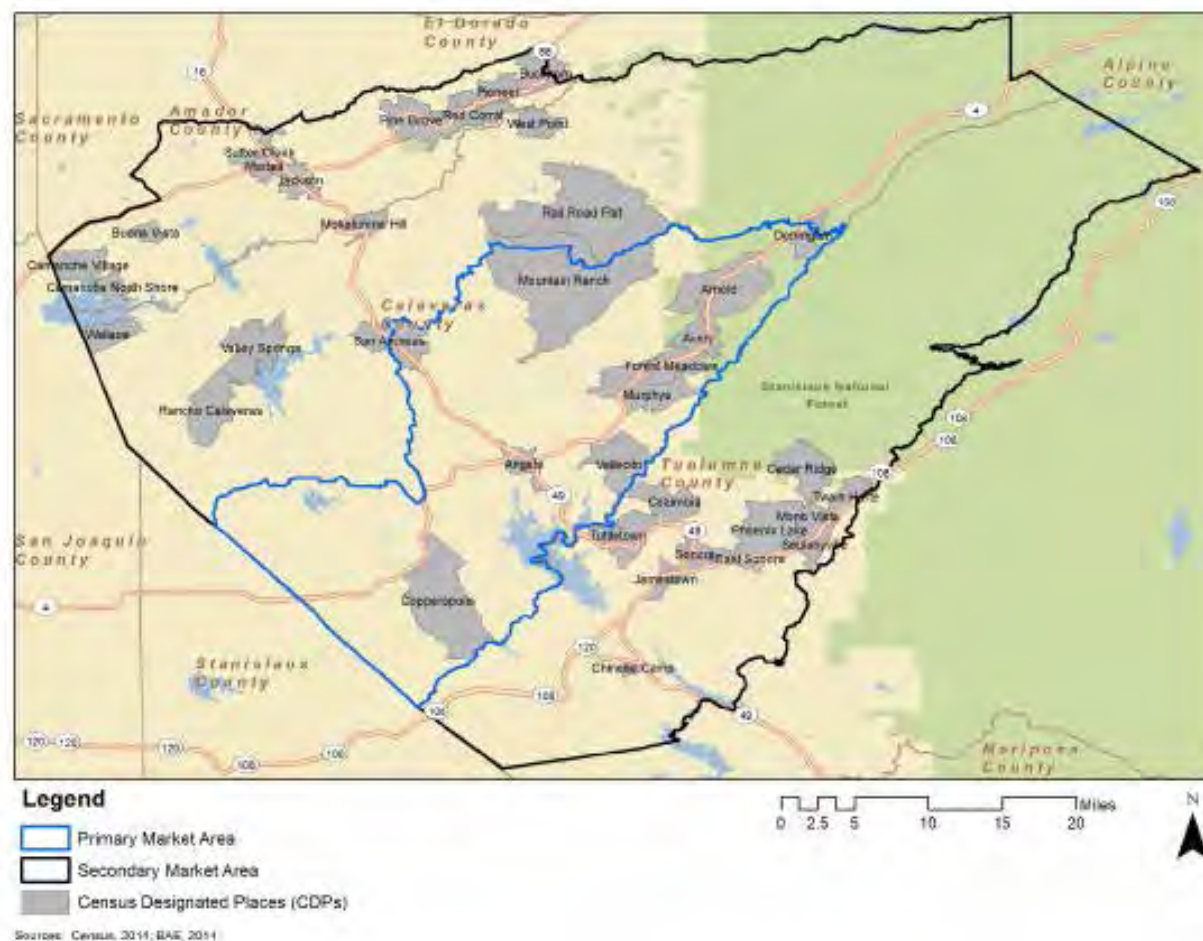


FIGURE 9: TRADE AREA MAP



The SR 4/SR 49 intersection is an ideal location for future regional commercial uses

2.4.3 Real Estate Market Conditions and Development Potential by Use Type

The market assessment evaluated existing real estate market conditions in Angels Camp and the surrounding area. Where possible, the analysis identified existing market opportunities and discusses the likely development potential of the SR 4 and 49 intersection.

Retail Real Estate Conditions

Although the inventory of retail space is fairly well occupied, the declining average asking rents and low net absorption suggest underlying softness in the market. More specifically, the retail real estate market in Angels Camp has a vacancy rate of 3.7 percent but also has a relatively low lease average rate of \$1.25 per square foot, which represents a 16 percent decrease from 2009. Brokers also cited weak marketing, lack of updated products and few destination attractions as being causes of slow sales. Angels Camp could gain 155 new residents by 2020 which could translate to an additional \$2.6 million in taxable sales.

Retail real estate brokers were relatively optimistic regarding the SR 4/SR 49 junction, reinforcing that the primary market area is lacking in apparel and footwear, general merchandise, and national chain restaurants but suggesting it is unlikely for retailers to develop here unless granted access onto SR 4.

Office Real Estate Conditions

The existing office vacancy rate is significantly higher than what is considered healthy. With relatively little projected growth in employment in office-based sectors, additional office development would not be a highest and best use for future development at the SR 4/SR 49 junction. However, given the growing senior population in Angels Camp and demographics indicating this as a destination for retirees, the location is ideal for a modestly-sized medical office complex.

Residential Real Estate Conditions

For Sale Residential

The residential market has been on a steady incline and the current median home sales prices are \$217,000 for an average 1,800 square foot, single family, 3-4 bedroom home. However, this trend does not match the robust housing boom from 2000-2007.

For Lease Residential

Less than one percent of the residential development that occurred since 2000 included multifamily housing, which currently represents only 11 percent of the citywide housing stock. Given this existing low percentage, and the trends toward an aging population and smaller proportions of households with children, there may be an under supply of multifamily housing units suitable for smaller households over the longer term.

Estimated Capacity

Angels Camp could gain 155 new residents by 2020. Existing residential developments currently planned or proposed in Angels Camp and the surrounding area include a total of 812 single-family detached units. Projected

household growth could generate sufficient demand for approximately 530 new housing units through 2040. Currently there is also one planned housing development in the Greenhorn Creek area that could accommodate 55 housing units.

Angels Camp is underrepresented in terms of multifamily units that could provide housing for seniors and single households without children. The SR 4/SR 49 intersection would be an ideal location for higher density housing with access to local goods and services and public transit.

Lodging Real Estate Conditions

Tourism in Angels Camp is primarily driven by seasonal culture and tourism activities. The primary capture is Wynham Worldmark and overnight travellers. The city's 154 hotel/motel rooms perform better and more consistently than the surrounding unincorporated area. The potential future Utica hotel in downtown offers a boutique hotel that could fill any gaps in the existing need. Long term projections could also support one large low-end motel or up to three medium and high end motels by 2040.

The range of real estate demand that the City could potentially plan to capture in the vicinity of the SR 4/49 junction by 2040 includes:

- Approximately 655,200 square feet of retail for the entire market area.
- Up to 3 acres of service station use and 5 Acres of Car Dealership
- 476 Residential units; including 290 to 335 single-family units, 60 to 160 multi-family units, 20 to 80 mobile or manufactured units.
- Approximately 15,000 square feet of medical office space.
- Between 32 and 128 rooms of additional lodging development to satisfy increased demand from visitor growth.

2.5: Site Inventory and Analysis

This section summarizes the current land use and environmental impacts to the study area.

- 2.5.1 - Existing Land Use
- 2.5.2 - Land Use Potential
- 2.5.3 - Landscape and Amenities
- 2.5.4 - Signage and Wayfinding
- 2.5.5 - Baseline Studies

2.5.1 Existing Land Use

The 2020 General Plan primarily describes study area land uses as future commercial and special planning areas. This Study will explore the arrangement of a mix of uses based on the recommendations from the economic study, including public services, office and a variety of residential types. The best arrangement of uses will be considered in order to create places of significance within the existing community.

Commercial

There are three primary shopping centers within the project area and significant retail along SR 49. State Route 4 is relatively undeveloped with the exception of Frog Jump Plaza. These commercial centers provide a mix of uses that are within a central location for local residents (grocery, pharmacy) as well as a number of chain restaurants (Starbucks, Taco Bell, Burger King) that attract both residents and visitors. Specialty stores such as antiques, small businesses and small local retail stores are also assets for the area.

Civic

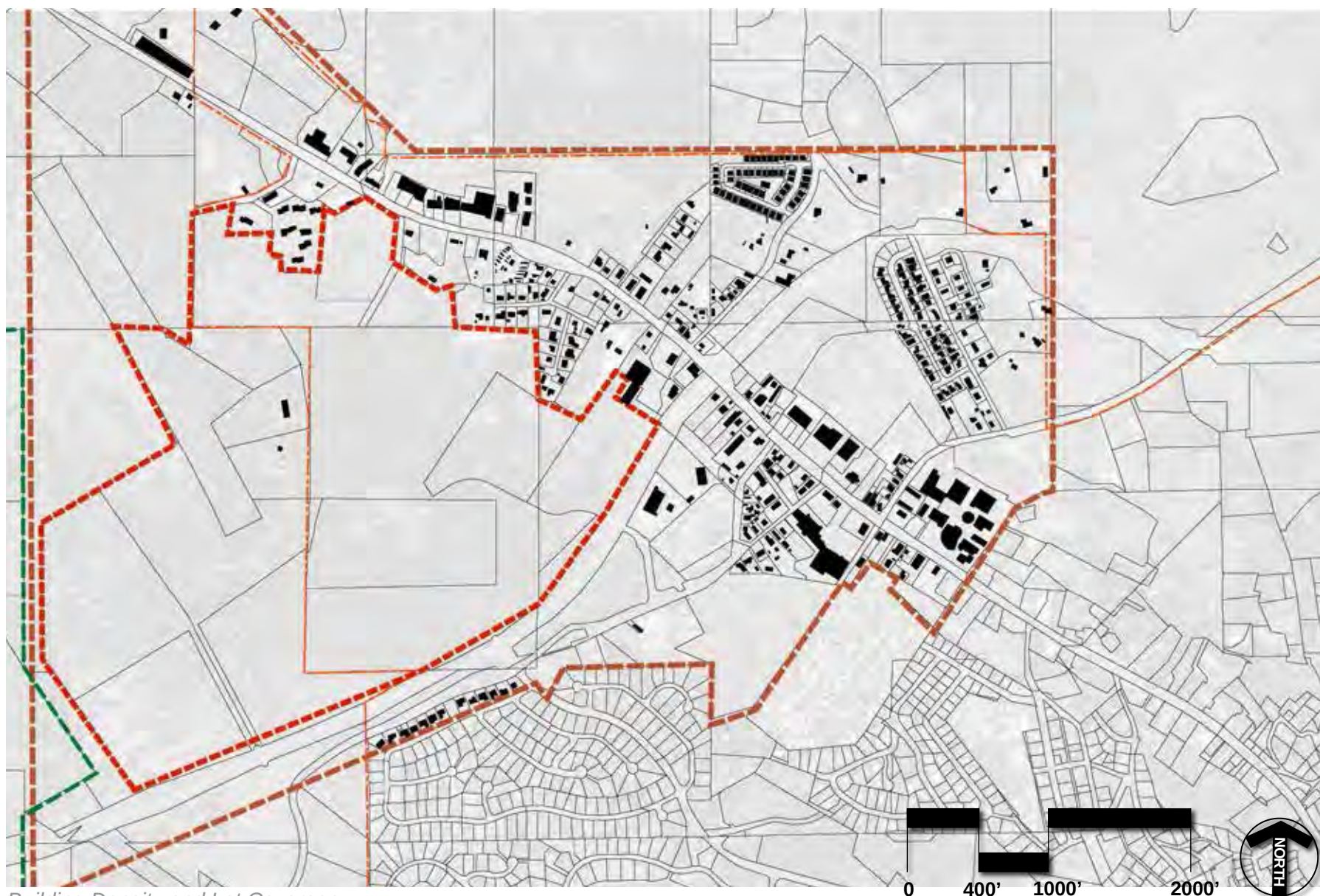
A number of civic uses exist within the project area, including the high school, city offices, two churches, a library, a post office and the fire station. The existing city offices on the southwest corner of the SR 4/SR 49 intersection are an opportunity for future development. Additionally an updated civic core could create a synergy of development uses along SR 49. These uses are important to the community and are destinations within the project area.

Residential

A significant amount of single family residential and a few small areas of higher density multifamily units are located one-half mile north of the SR 4 and SR 49 intersection along Dogtown Road. Single family homes are primarily located in small neighborhoods with a single access road from either SR 4 or SR 49. The average home size is two to four bedrooms and 1,800 SF with an average lot size of a quarter acre. As noted in the market analysis, housing prices are relatively affordable. The mix of housing ranges from suburban style neighborhoods to large acre working ranches.

Undeveloped

There are a number of large acreage undeveloped parcels, most notably within the project focus area. The 2020 general plan area shows much of this undeveloped land as future commercial planning. It should be noted that not all of this commercial will be supported per the market study at this time. However, a new commercial area, similar in size to Frog Jump Plaza, could be located in this area. To preserve the rural character and historical significance of Angels Camp, consideration should be given to preserve certain lands as open space, parks or greenways. These could include conservation areas, active or passive recreation areas, or preserved agricultural lands.



Building Density and Lot Coverage

Development is heaviest along SR 49, with retail areas characterized by larger building footprints. Residential neighborhoods are relatively compact. A significant amount of the study area adjacent to SR 49 is undeveloped land.

SITE INVENTORY & ANALYSIS

	Commercial		Industrial		Civic		Med-High Density Residential		Single Family Residential		Open Space		Undeveloped	
	Acres	Parcels	Acres	Parcels	Acres	Parcels	Acres	Parcels	Acres	Parcels	Acres	Parcels	Acres	Parcels
SR 4													394.2	22
SR 49	126.4	88			35.7	10	11.2	3	33.4	37	12.3	1	48.8	8
Dogtown Rd.	1	2					1.2	1	33.3	61				
Stockton Rd.	0.6	1	4.9	1	2.5	2	9.9	16			23.1	6	41	5
Gardner Ln.									49.8	77				
Murphys Grade	2.9	7			5	1			4	3	36.6	3		
Total	128.3	98	4.9	1	43.2	13	22.3	20	120.5	178	72.0	10	793.6	68

Existing Land Use Chart

This chart shows the primary land use types associated with the primary roadways in the study area. SR 49 is primarily Commercial, Dogtown Rd. and Gardner Ln. are primarily residential, and SR 4 and Stockton are primarily undeveloped. Future roadway improvements identified in this study should be consistent with existing uses.

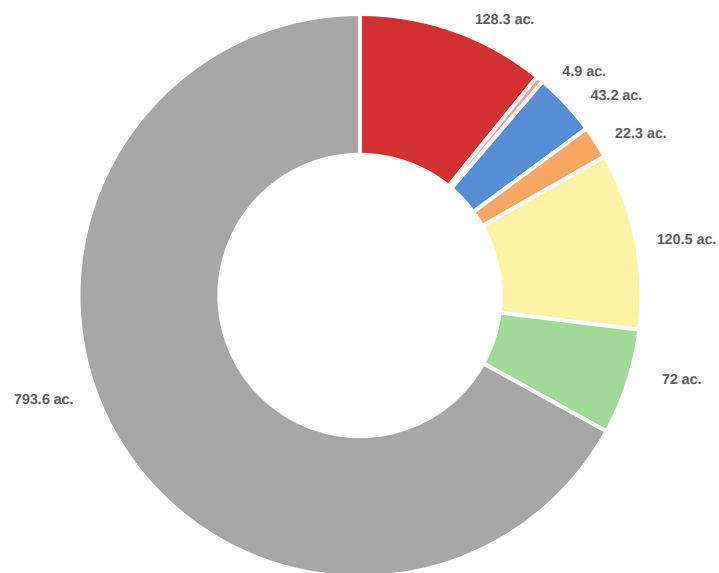
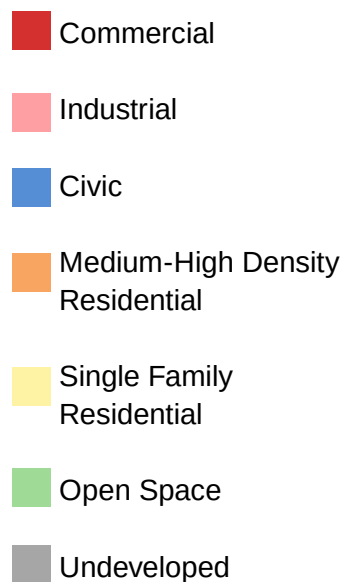
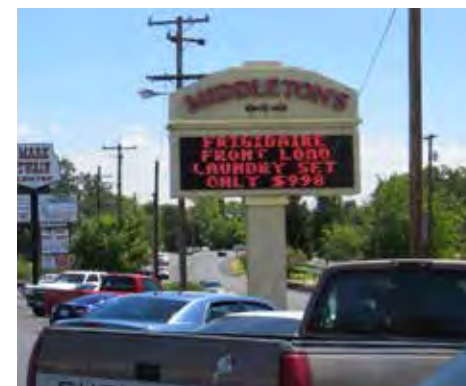


FIGURE 10: EXISTING LAND USE



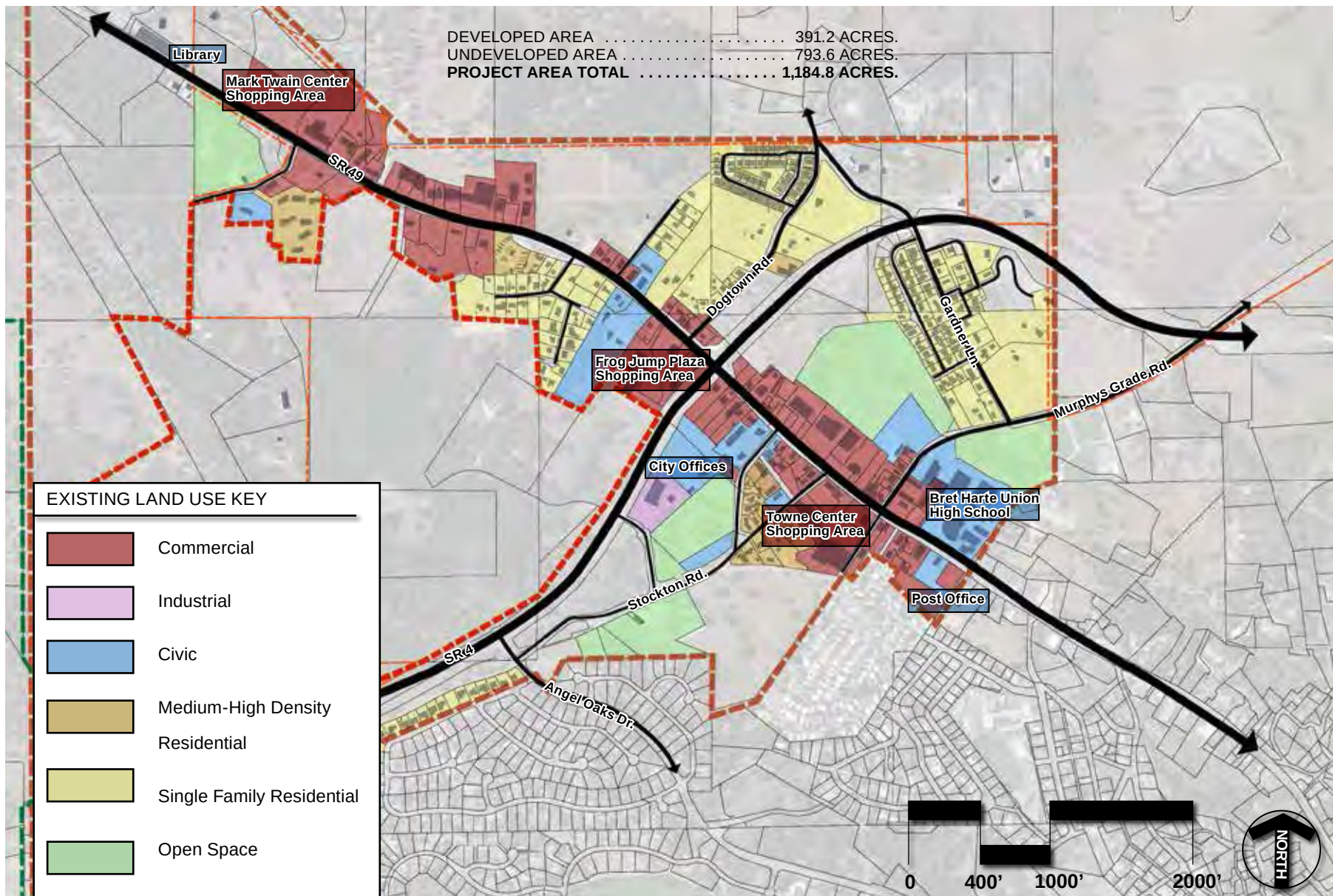
Angels Camps Town Center



Mark Twain Center



Frog Jump Plaza



Existing Land Use

Three primary shopping centers within the project area contribute to commercial uses. Civic uses within the project area include the high school, city offices, two churches, library, post office and fire stations. Most housing is single family residential with a few small areas of higher density three-story apartments.

SITE INVENTORY & ANALYSIS

2.5.2: Land Use Potential

Development potential for the study area was evaluated based on the suitability of the land. Challenges to development on the site include topography, the Cherokee Creek watershed and mature oak growth.

Developable Lands Analysis

GIS Mapping showed the areas of constraint to determine suitable locations for development. The steep slopes and watersheds in the land use focus area, specifically Cherokee Creek and hills in the western quarter of the site limit development opportunities. Retail development is better suited on slopes less than 10% while single family residences are appropriate on slopes up to 20%.

The map shows developable areas in green and suggests three primary areas suited for retail along SR 4 and SR 49 shown in red.

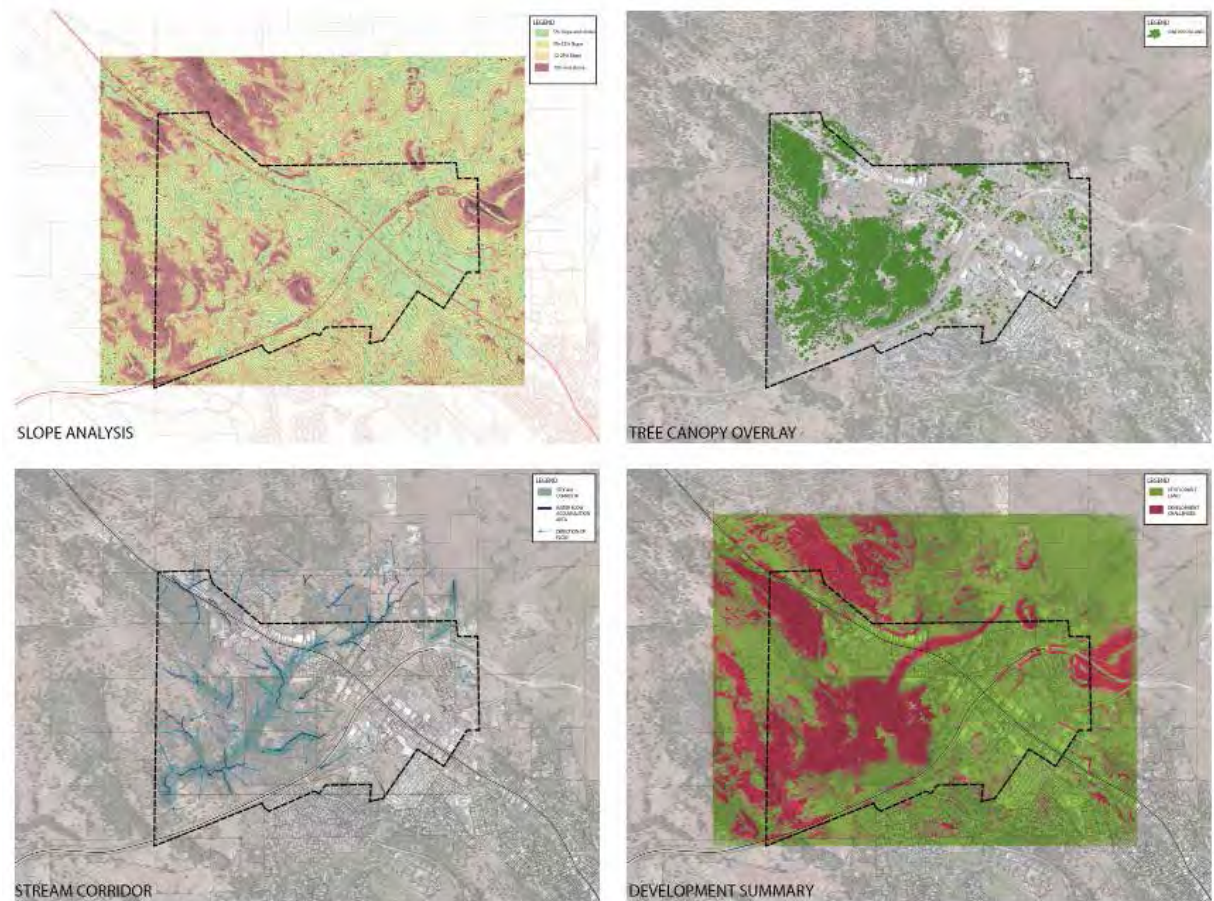


FIGURE 11: GIS OVERLAYS SHOW AREAS OF OPPORTUNITY AND CONSTRAINT FOR FUTURE DEVELOPMENT.

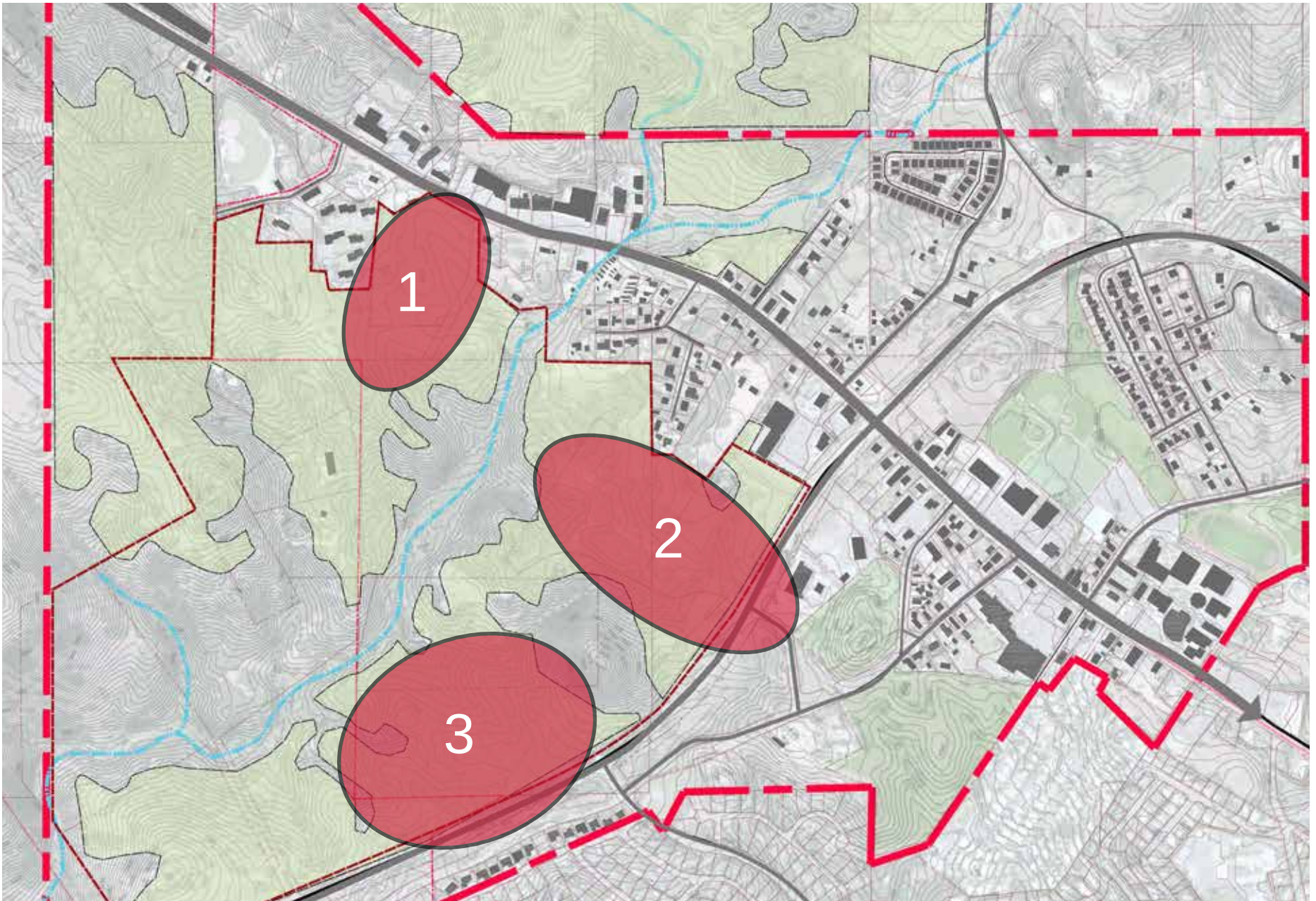


FIGURE 12: THE RED BUBBLES SHOW THREE AREAS OF LAND ALONG SR 4 AND SR 49 ARE WELL SUITED FOR FUTURE DEVELOPMENT.

SITE INVENTORY & ANALYSIS

Land Use Potential

The market analysis provided a framework for the amount of growth that could be projected in Angels Camp in 2020 and 2040. Based on the estimates provided the appropriate land uses, locations of uses and development types were evaluated.

Various scenarios based on the type and amount of anticipated development within the study area yielded land use plans that were used as a basis for the transportation analysis.

Single Family Residential:

Residential uses are assumed at 4 units per acre. The market analysis showed a development potential for 389 additional homes in Angels Camp by 2040. The land use plan shows this area could accommodate about half the demand and that other areas of Angels Camp outside the study area could accommodate more.

Multi Family Residential:

The market analysis shows approximately 56 multifamily units would be supported in Angels Camp by 2040. Multi-family housing is in demand in California and construction is on the rise nationwide.

Given the overall goal to reduce traffic congestion and improve economic opportunities, incorporating multifamily housing within close proximity to retail and transit opportunities is an appropriate mix of uses. Approximately two new apartment complexes would accommodate the demand in the study area. This increase to housing would allow workers to both live and work in Angels Camp.

Hotel:

The Market study showed the demand for increased beds for transient occupancy. This was also identified by the Advisory Committee and the Destination

	2015-2020	2021-2040	Total
 Housing (Units)			
Single-Family	79	310	389
Multifamily	11	45	56
 Retail (Sq. Ft.)			
Low-Growth	100,000	118,000	218,000
High-Growth	200,000	141,000	341,000
Additional Retail (Acres)			
Low-Growth			
Service Station	2	1	3
Auto-Related Sales	5	3	8
High-Growth			
Service Station	3	2	5
Auto-Related Sales	5	15	20
 Office (Sq. Ft.)			
Office	15,000	3,000	18,000
 Lodging (Rooms)			
Low-Growth	7	25	32
High-Growth	23	105	128

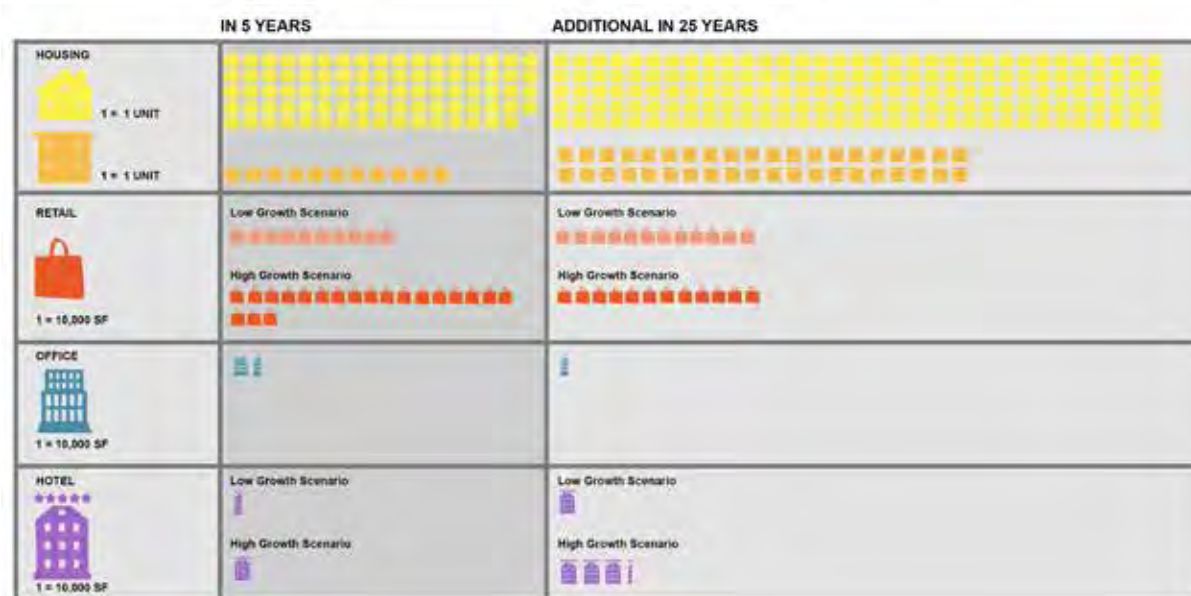


FIGURE 13: NEW DEVELOPMENT POTENTIAL AS NOTED FROM THE ECONOMIC ANALYSIS PROVIDED IN A PHYSICAL AND REPRESENTATIVE GRAPH TO SHOW THE RELATIONSHIP OF POTENTIAL DEVELOPMENT. THERE IS A HIGH DEMAND FOR HOUSING AND RETAIL.

Angels Camp organization as a high-priority that could accommodate a missing need in the area. A 120 key mid-scale hotel with conference center facilities could increase TOT tax by 40%. The conference rooms have the opportunity to attract retreats from the Bay area as well as wedding and events. The hotel would ideally be sited with easy access to food and shopping for guests. The hotel and future conference rooms could look out over the creek and into the rolling grass and oak landscape internal to the site.

Office:

Office was not shown to be in high demand in Angels Camp. However, some increase could be supported in this area. Mixed-use and live work could be included with proposed retail or as 1-3 stand alone offices.

Commercial/Retail:

The existing 2020 General Plan designates a significant amount of the study area as retail commercial and special use districts. Increased retail could create up to 1,500 jobs and reduce leakage by 60%.

The prime location at the crossroad of SR 4 and SR 49 is ideal for retail development that would support long term goals for growth and jobs. However, large pad sites with expansive parking lots may attract people to Angels, but may not present the image the community wants. To understand the types of retail appropriate in Angels Camp, a range of development

Retail Competition

A consideration of future retail development is the potential impact it could have on historic downtown Angels Camp. Future development should provide amenities distinctly different to the downtown historic core. This future development area should be seen as an opportunity to slow people from the highway and encourage them to explore downtown. The intent is not to recreate Downtown but to provide services which support Downtown as the primary destination. The City will need to develop design guidelines or land use code to designate appropriate use and character of the retail districts. For example, Historic Downtown may be an appropriate place for a local deli, and conversely retail at SR 4 and SR 49 would be better suited for a chain deli or restaurant.

Following the marketing campaign of Angels Camp as the 'Basecamp to the Sierras', A secondary visitor's center at the north side of town could as 'trailhead'. This may be as simple as an information kiosk or as detailed as a small 10-15,000 SF visitor and transit center.

Increased retail could create up to 1,500 jobs and reduce leakage in Angels Camp by 60%

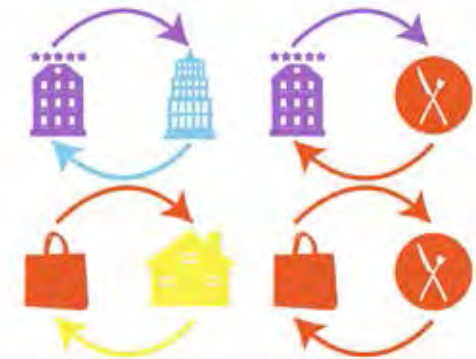


FIGURE 14: ECONOMIC SYNERGIES: CERTAIN TYPES OF USES SUPPORT OTHER USES, AS SHOWN HERE. RETAIL AND HOUSING PROVIDE PLACES CLOSE TO HOME TO SHOP, HOTELS ARE IDEAL IN EMPLOYMENT CENTERS AND WITH ACCESS TO RESTAURANTS, AND RETAIL SHOPPING AND RESTAURANTS WORK WELL TOGETHER.

SITE INVENTORY & ANALYSIS

1. Single Use Site



2. Retail Street



3. Small Scale-Mixed Use



FIGURE 15: RETAIL SITE ANALYSIS

scales were identified to determine the amount of space needed to accommodate the projected demand.

Retail Site Analysis (Left)

To better understand the type of development that could be located in the land use focus area different types and scales of retail were studied. The diagrams in Figure 15 show scale and size of buildings and parking needed to provide approximately 200,000 SF of retail. The images suggest the types of architecture, streetscape and open spaces that would be typical of similar project;

1. Single Use Site Characteristics- 210,00 SF

- Easy Access to parking
- Open views to buildings
- Shared roadways
- Typically 1 story buildings

2. Retail Street Site Characteristics- 220,000 SF :

- Central Street with visible retail frontage
- Plaza Spaces integrated into landscape
- Short term on street parking with larger lots behind buildings with alley or paseo access
- Typically 1-2 story buildings

3. Small Scale Mixed Use Site Characteristics- 214,00 SF:

- Active sidewalks with plazas along multi-modal streets
- Often a town center or town green
- Parking is often parallel with parking garage or centralized lot.

- Typically 1-3 story buildings

Retail Scale Analysis (Right)

The land use focus area is over 400 Acres of land currently zoned for commercial or special use by the 2020 General Plan. To better understand the scale of the land use area compared to the amount of retail it could support regional examples were identified and compared to support the amount of retail that should occupy the site. Figure 16 identifies;

A. Stonecreek Village located in Stockton, CA is approximately 240,000 SF of retail that includes shops and restaurants. This is similar to a typical anchor and pad site development with a more walkable design (1).

B. El Dorado Hills Town Center, located in El Dorado Hills, CA is approximately 600,000 total SF of retail in the town center plus 130,000 SF multi-purpose store and a 60,000 SF grocery store. This is similar in scale and design to a retail street development (2).

C. Copperopolis Town Center is located in Copperopolis, CA and is approximately 105,000 total square feet of retail and has main street shops, arts Center and is planned for future residential. This is an example of a smaller scale mixed-use type of development (3).

Land Use Alternatives

Based on this research and input from the Management Team and Advisory Committee two land use alternatives were developed with coordinating transportation alternatives. The first (1A and 1B) focused on a larger land use area with more of a single use focus. Plans assumed a .25 FAR. The second, (2A and 2B) were developed based on a small scale retail street concept. Plans assumed a .35-.40 FAR.

Scale Analysis



FIGURE 16: RETAIL SCALE ANALYSIS

SITE INVENTORY & ANALYSIS

2.5.3 Existing Landscape & Amenities

The current landscape of the City of Angels Camp is rich in scenic and historical resources. Future planning efforts should enhance these assets as part of the community identity.

Historical Landmarks

The history of Angels Camp is an asset to the community that should be celebrated. Four notable historic landmarks are located within the project area: Altaville Grammar School circa 1858, the Altaville Foundry (circa 1854), the Prince-Garibaldi Building (circa 1825) and historic cemeteries (circa 1855 and 1910).

- The Altaville Grammar School was the first school built on Main Street and is one of the oldest schools in California. It was used until 1950 and is a state historical landmark. The school is set in a historic site and can be seen from SR 49 on the north side of town.
- The Altaville Foundry supplied mining equipment in the Gold Rush and a corner of the building still stands. It is set in a landscaped area at the rear of the Towne Center parking lot.
- The Prince-Garibaldi Building was once a store and also an undertaking parlor located adjacent to the cemeteries. It is a historical landmark.
- An ornate iron gate frames the view to Altaville Catholic Cemetery and Altaville Serbian Cemetery along Stockton Road. Across the street the Altaville Protestant Cemetery is set on a hillside. Currently out of view of the public eye, these locations could be elevated to a place of historic significance.

Parks and Open Spaces

A number of programmed active open spaces are found within the project area: Bret Union High School and associated sports fields, Copello Park Ballfields and a significant amount of rural open space. Overall, the area lacks programmed passive spaces and community trails. The 2020 Plan calls for an increase of 18-21 acres of new parks and the trail corridor master plan identifies walking trails south of town along Angels Creek. There is an opportunity within the study to utilize public lands for a public park or natural open space area. A large open space area would provide an opportunity for programmed park space for special events such as concert areas, community gardens or event lawns on sites where grade conditions inhibit new development. There is also an opportunity for a greenway or recreational trail network to connect the project area to significant places in the community and to the future trails at Angel's Creek.



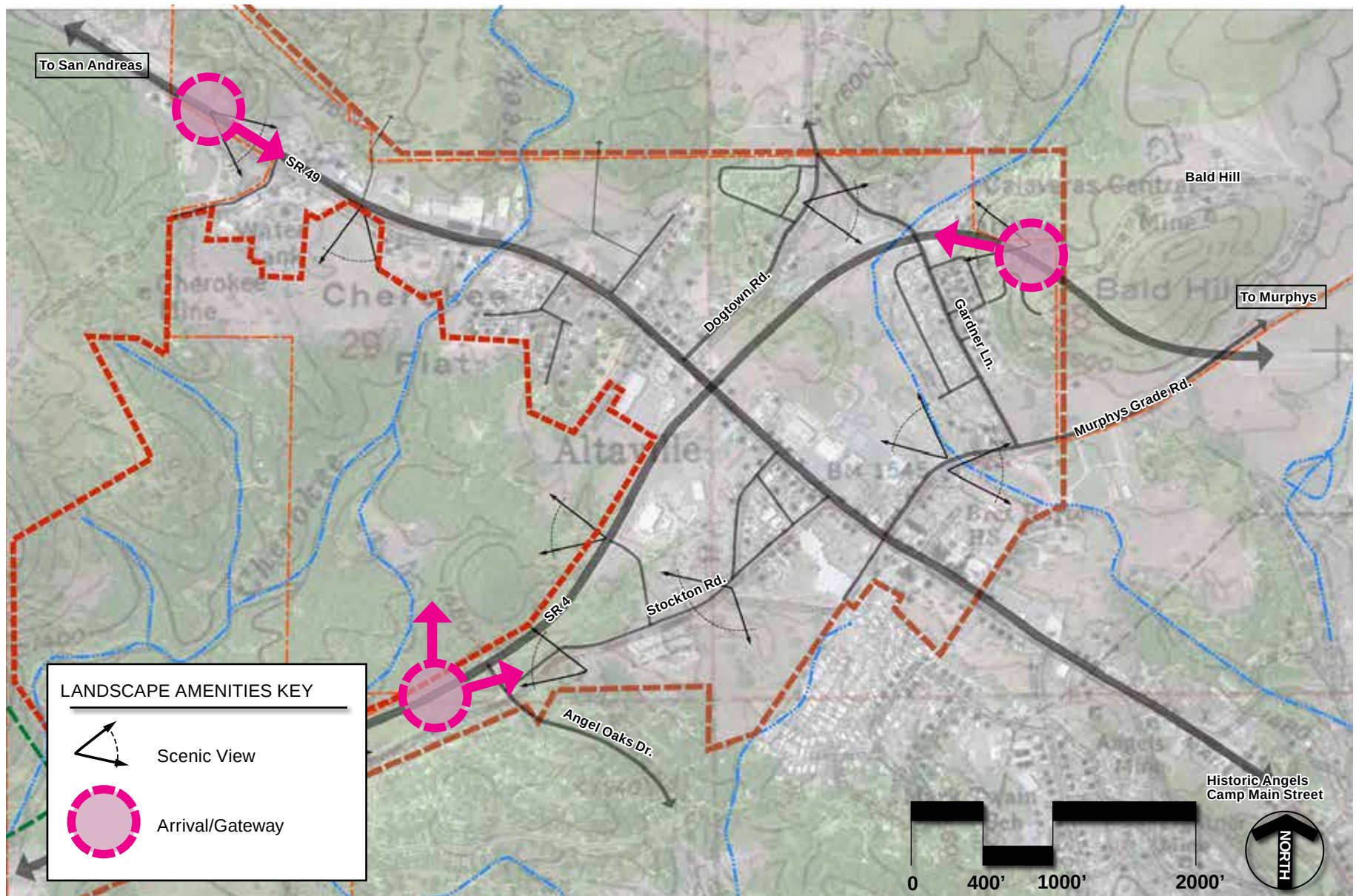
The Foundry



Altaville Grammar School

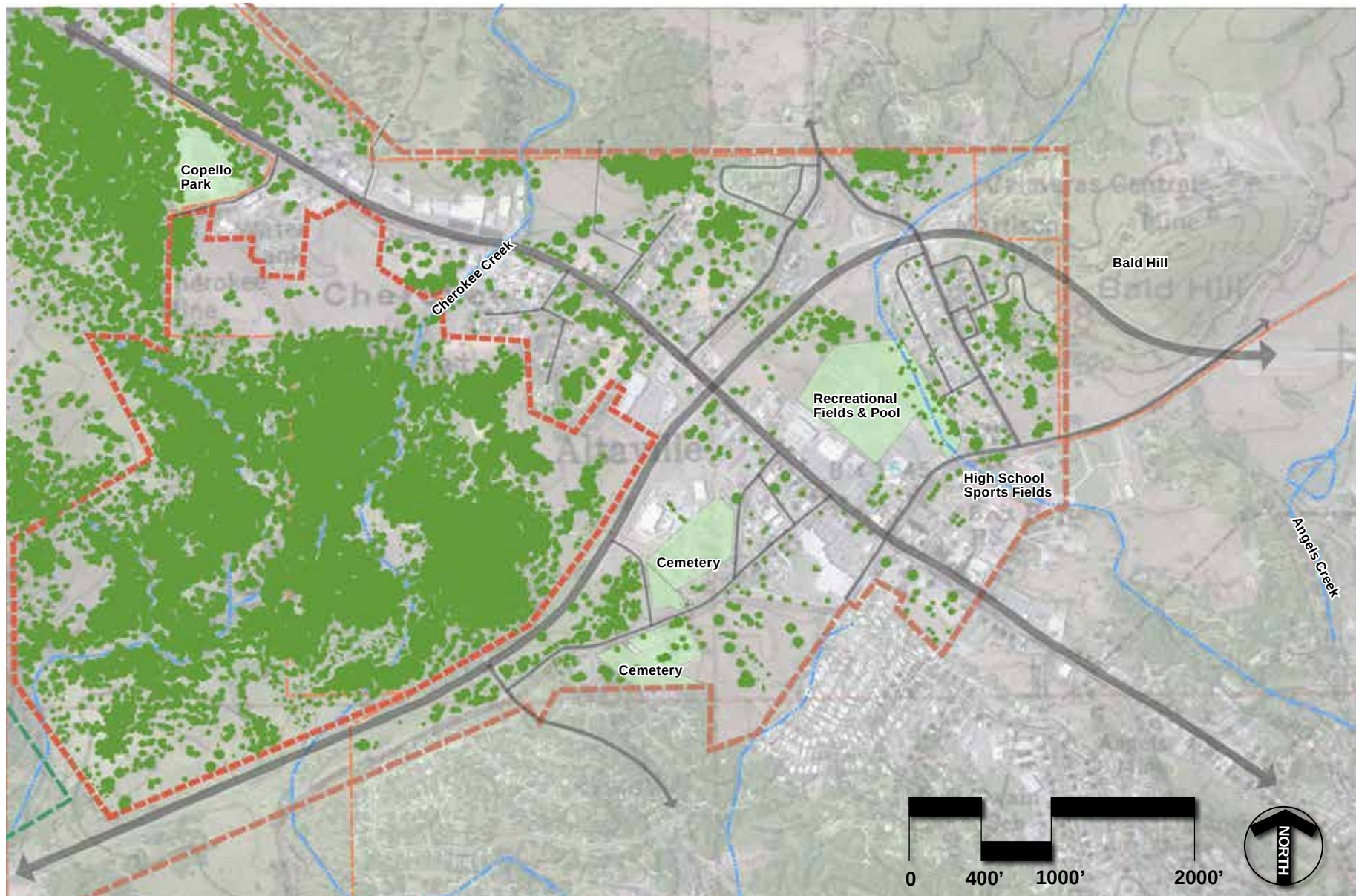


Cemetery Gates



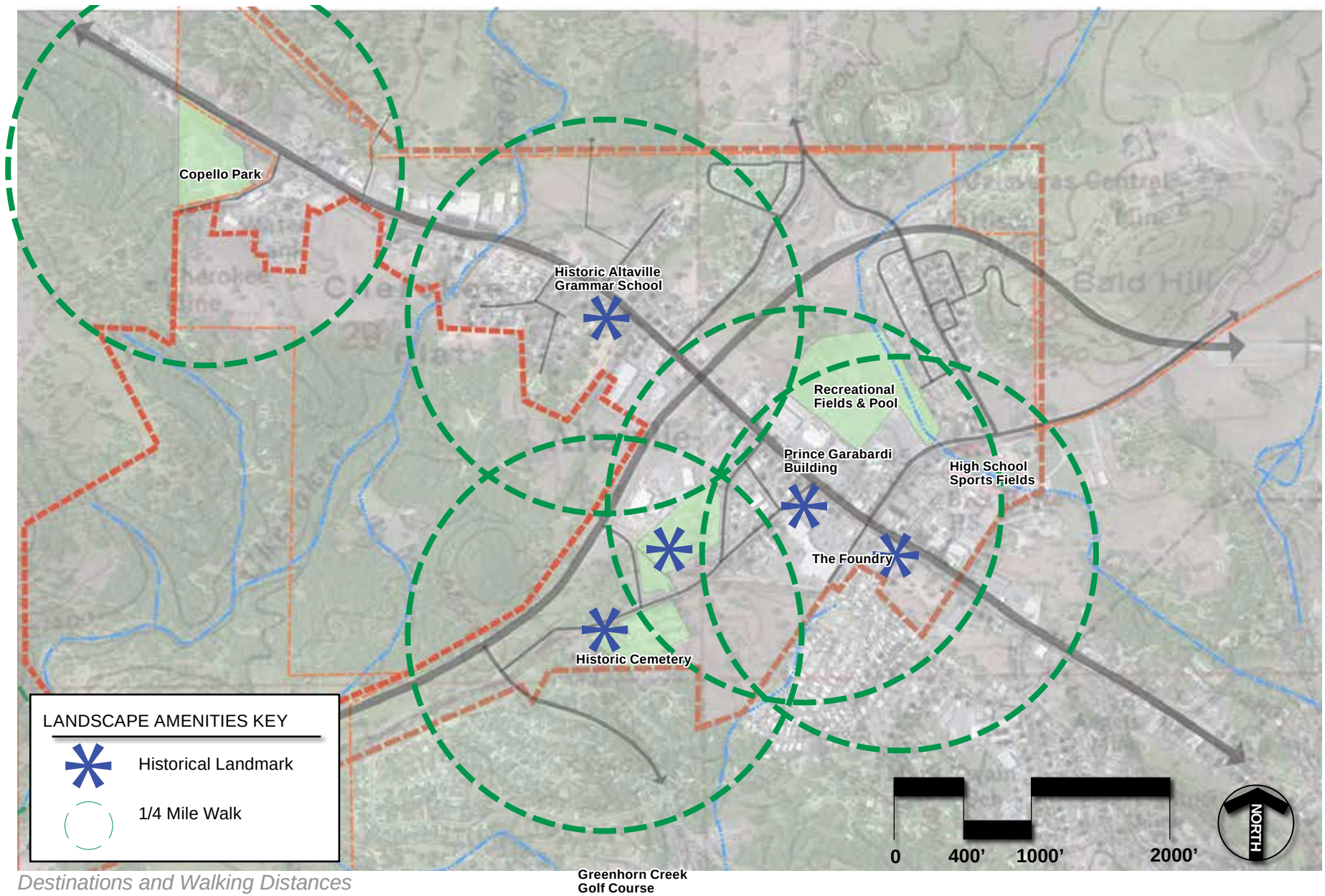
Gateways and Views

Both SR 4 and SR 49 are important gateways to mark the arrival to the City. The rolling terrain creates scenic view corridors upon entry from both east and west on SR 4. SR 4 arrival from the north is less notable as most traffic comes from the west and the south, however this is still an important secondary gateway to the city.



Open Space, Natural Features & Tree Canopy

Significant existing natural features include oak woodlands and Cherokee Creek which will need to be considered for environmental impacts of future development. Topography may limit the feasibility of future development on steep slopes and will impact the land uses proposed in this study.



A number of notable destination exist in the study area including historic places on the Angels Camp Historic Driving and Walking Tour. The high school and recreation fields are an important community destination. Many of these are located within a comfortable quarter mile (5 minute walk) from one another.

SITE INVENTORY & ANALYSIS

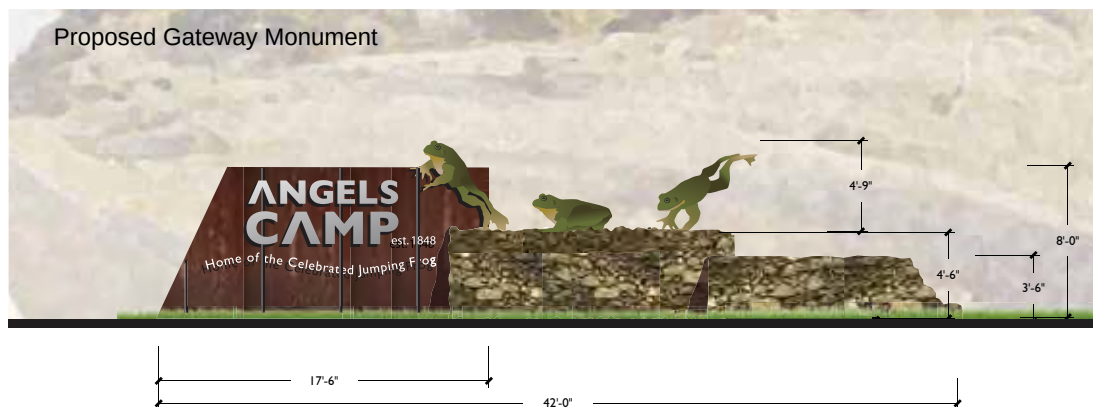
2.5.4 Signage & Wayfinding

The prominence of the SR 4/SR 49 intersection is an essential element of the planning study. It is the entry which many residents and visitors pass through as they travel to destinations from the western cities and along the historic Golden Chain Highway. The Corridor Study will identify recommendations to improve the sense of arrival to the city and highlight it as a special place within the region.

Gateway Signage

Signage for the City of Angels Camp is located along SR 4 and SR 49 at the thresholds to the city. New gateway signage will be proposed as part of the Gateway Study. Potential locations will be coordinated with Caltrans.

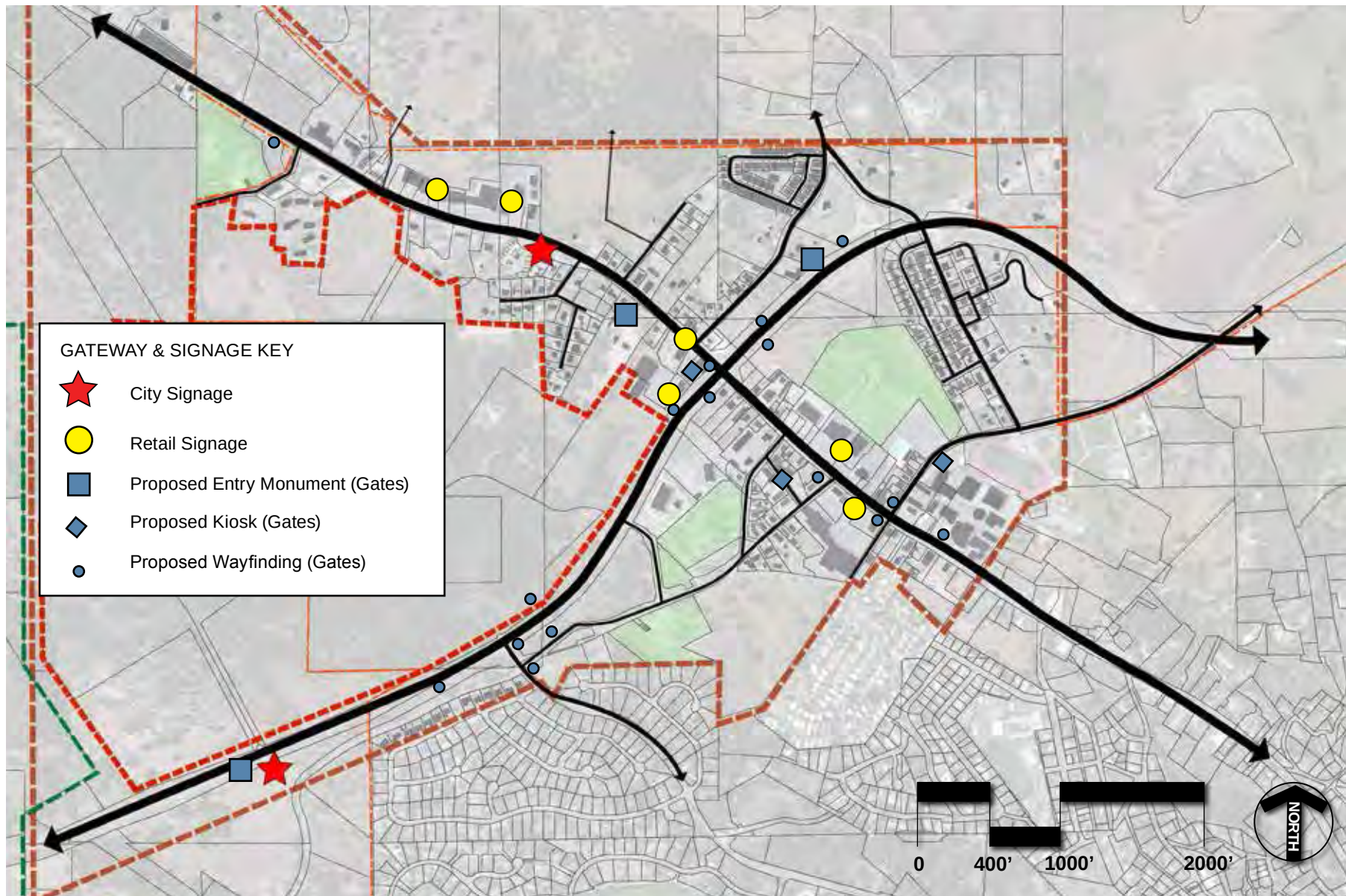
Future signs as identified in the 2011 Angels Camp Wayfinding Study (By Gates+Assoc.).



Clutter of Retail Signs on SR 49



Existing Gateway Signage



Gateways and Signage

Proposed Signage from the wayfinding study will be located within the project area. Locations will be expanded upon in consideration of future land uses.

SITE INVENTORY & ANALYSIS

Angel's Camp, CA

Population:

3,386



Characteristics:

Angel's Camp is a historic mining town in the foothills of the Sierra Nevada Mountains, known for being a recreation gateway and home of the Calaveras jumping frog.

Highways:

- State Route 4
- State Route 49

Baseline:

- Primary main street retail is on Historic Main Street along the southern portion of SR 49. Supporting retail exists at SR 4 and at Murphys Grade Road. The high school, civic buildings and cemetery are located within a one mile radius of the commercial center.

Analysis:

- The diagram suggests a lack of collector roadways in the city forcing SR 4 and SR 49 to serve as arterial roadways, collector roadways and local streets. Additionally, the Historic Main Street and commercial center is located 1.5 miles from the SR 4/ SR 49 intersection – a significantly longer distance than the comparative cities.

2.5.5 Baseline Studies

The design team researched comparable cities and towns to compare the form and functional relationships of places with similar characteristics. Key characteristics identified for comparison included:

- A population of 3,000-4,000
- Mountainous terrain in or around the town center
- A major highway through the town
- A rural or historical character

Commercial Center



Road Framework



1 Mile Radius





uncovercolorado.com



Steve Garufi, coloradoguy.com

Buena Vista, CO

Population:
2,617



Characteristics:

Buena Vista is a historic town in the Upper Arkansas River Valley in the Rocky Mountains. The town serves as a base camp for recreation in the Arkansas Headwaters.

Highways:

- U.S. Route 24

Baseline:

- The Historic Main Street retail is two blocks from the highway and includes on-street and angled parking and alley access. A significant amount of supporting retail is located on larger sites near the highway. Main Street is a primary connector and extends into residential areas to the east and west. A high school and community park are located within a one mile radius of the downtown. A railroad parallels Highway (Hwy) 24 and disconnects the retail from the highway.

Analysis:

- The comparable suggests that a Main Street can be located off a main highway and have larger surrounding retail and still be economically successful. The railroad minimizes access onto Hwy 24 from the east. It is unknown if this results in traffic conflicts along Hwy 24 or surrounding roadways.



SITE INVENTORY & ANALYSIS

Lewisburg, WV

Population:
3,830



Characteristics:

Lewisburg is an historic town at the base of the Appalachian Mountains. The town is known for its year-round performing arts events.



panaramio



lewisburg-wv.com



fromthegarret.wordpress.com

Highways:

- State Route 60
- State Route 219

Baseline:

- The primary retail area centers around SR 219/ SR 60 intersection. Interstate 64 is located to the northeast. A few local collector roads surround the SR 219/SR 60 intersection. The internal, local network is less connected. Parallel parking exists downtown with surface parking located behind commercial buildings. A small university is located within a one mile radius of the commercial center. The state fairgrounds and medical campus are located two miles southwest of the center. Additionally, large box retail is two miles north.

Analysis:

- The diagram shows that a walkable retail center is feasible at the intersection of two primary highways. However, it should be noted that Hwy 64 to the north of town may serve a majority of regional motorists and influence the traffic flow in the Main Street retail area.

Commercial Center



Road Framework



1 Mile Radius





panaramio



David Bienick KCRA News



intownlive.com

Nevada City, CA

Population:

3,068



Characteristics:

Nevada City is a California Gold Rush historic town known for its outdoor recreation, special events and entertainment.

Highways:

- State Route 49
- State Route 20

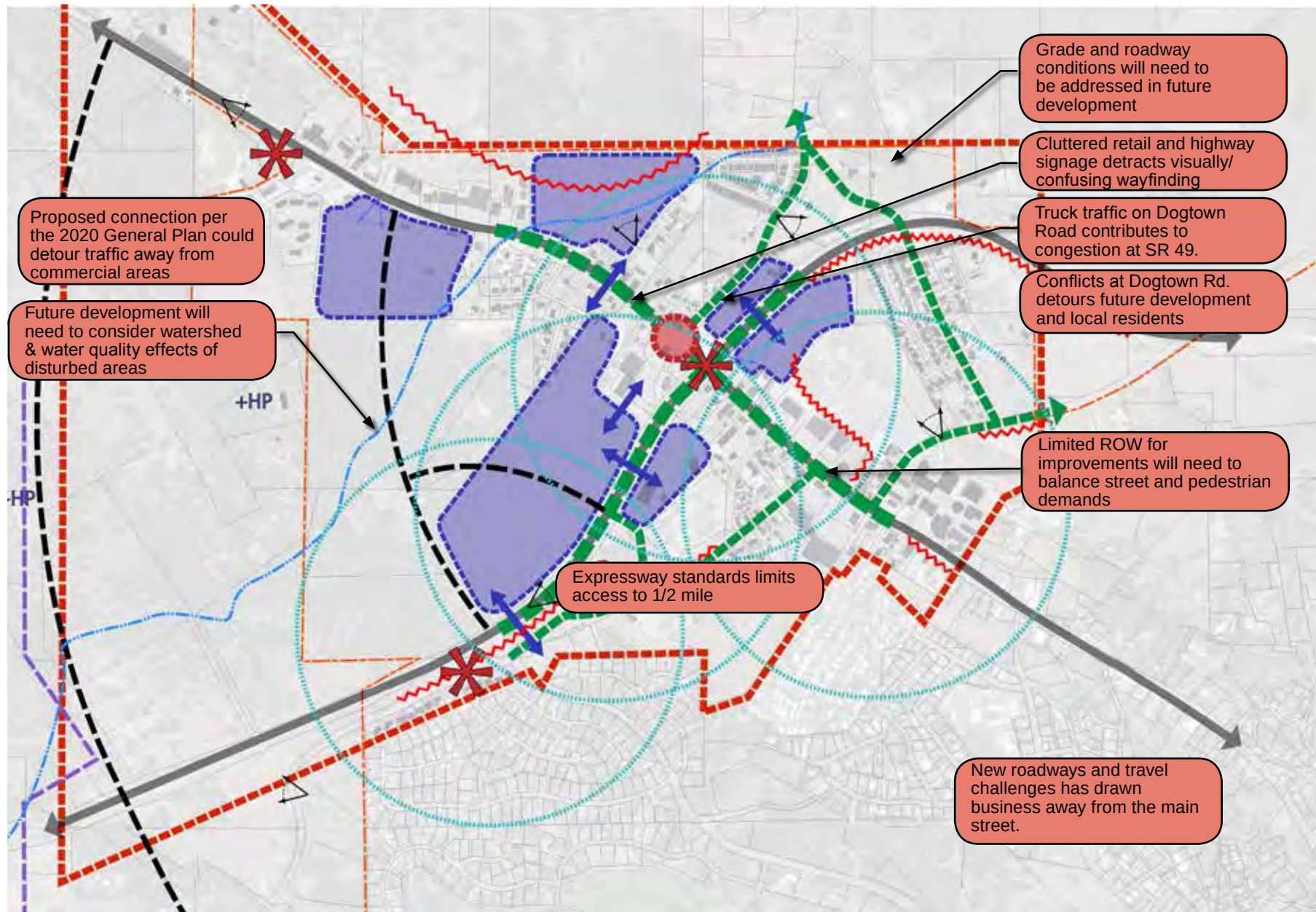
Baseline:

- State Route 49 and SR 20 run through the center of town and split to the north. Parallel parking exists along Main Street with surface parking located at the end and behind buildings that front the highway. Connectors link Broad Street (the Main Street) over SR 49 to other local roads. A braided creek runs south of the main retail center. A community park, cemetery and charter school are also within a one mile radius of the commercial center and town green.

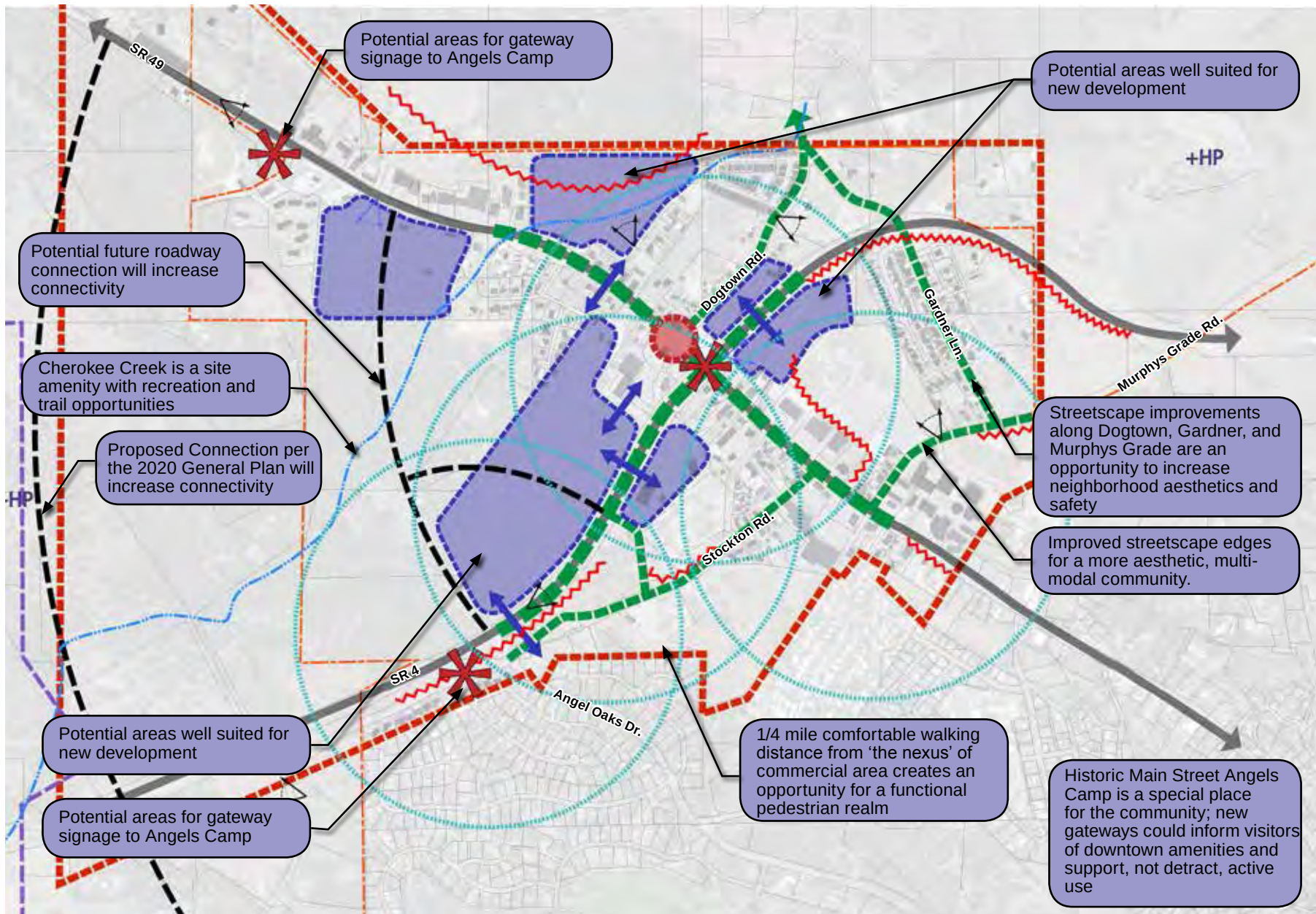
Analysis:

- The local roadway network passes over the highway to resolve intersection conflicts. However, this divides the downtown from community areas to the east. The local roadway network is a grid and connects with the retail area at regular intervals.





Fundamental Issues and Challenges



Opportunities and Assets



Rural lands at the intersection of Dogtown Rd. and Gardner Ln.

2.6 Summary of Design Considerations and Conclusions

Existing transportation issues along SR 49 and Dogtown Road and Frog Jump Plaza could be compounded as development occurs along SR 4. The capacity of the SR 4/SR 49 intersection currently functions at an acceptable level for the existing and projected traffic loads, but movement patterns and the number of roads and commercial access drives intersecting SR 49 create significant safety concerns and are at unacceptable level of service. Collisions near SR 49 and Dogtown Road and Frog Jump Plaza result from the short distances between these access points and driveways off SR 49.

The Angels Camp transportation network is disconnected, forcing local trips to be made on either SR 4 or SR 49. These roadways carry the highest volumes of local and visitor traffic within the city limits, with SR 49 serving the more vehicles than SR 4. Primary peak travel times correspond with traditional workday flows. The highest traffic volumes occur morning and night. Additional traffic volumes correlate to visitor traffic, with notable increases during Friday evenings, Saturday mornings and Sunday evenings when visitors enter and leave Angels Camp. The rise in visitors who are unfamiliar with the constraints at Dogtown Road and Frog Jump Plaza increases roadway conflicts.

The Corridor Study will explore the opportunity to minimize the number of vehicular movements near Dogtown Road and Frog Jump Plaza and the opportunity to develop alternative access points along SR 4 as well as internal circulation network. Coordination between the City, CCOG and Caltrans is required to allow new access on SR 4 in this area.

The market analysis shows a significant retail leakage in Angels Camp. This is due to both the concentration of retail located in Sonora, 15 miles to the south, and to the large percentage of residents who work and shop outside of the City as well as a limited demand for large retail based on the low population of the region. Angels Camp cannot be expected to capture all of the retail leakage, but it could support modest growth. Additional retail similar in scale to the existing Frog Jump Plaza would be sustainable. Development could include two or three retail buildings with second story offices and a small hotel or multi-family housing. Significant growth could also draw more development opportunities over time.

Overall, the following future uses could be supported:

- Retail, including clothing, sporting goods and hobby items, footwear and other general merchandise
- Gas and automobile related development
- A small boutique hotel
- A combination of single family and multi family housing
- Medical facilities

With the exception of small specialty uses that could draw adjacent supporting facilities, office uses are not strongly supported.

The SR 4/SR 49 intersection is ideally situated as a primary regional hub. It connects Angels Camp to smaller towns to the north and south and to larger cities and recreation destinations to the east and west. Although the intersection is ideal for future development, traffic conditions at Dogtown Road, Frog Jump Plaza and SR 49 can not support development with no internal circulation that would increase congestion at key intersections or driveways.

The intersection and surrounding areas have significant development potential. The parcel west of Frog Jump Plaza would allow improvements to connect to SR 49 through the existing parking area. The area east of Dogtown Road has drawn development interest but has not been supported by the community due to the transportation constraints. The city-owned property south of SR 4 provides an opportunity to create a civic core. New growth will need to consider existing commercial uses on Historic Main Street in order to keep the downtown vibrant and economically successful.

Envisioned project outcomes include a reorganized transportation network that supports new development areas and multi-modal roadways that connect new and existing development. Separated, Class I bike paths and sidewalks can include enhanced landscaping and set the stage for a new gateway and wayfinding signage. Physical connections could be made through a transit and bike facility improvements. Gateways and signage can direct visitors to downtown and activating the SR 4/SR 49 corridor through Angels Camp.

Future phases of the Corridor Study will explore alternatives to resolve identified challenges and expand upon opportunities and assets in order to develop implementable land use and transportation recommendations that support the sense of place in Angels Camp.

Next Steps

The next phase will begin public outreach which will document stockholder meetings, advisory committee meetings and public meetings to engage the community. Input from the public and stakeholders will guide the development of transportation and land use alternatives and the selection of a preferred scenario. This will be the framework for recommendations in subsequent chapters.

Vision

Four steps have been identified to develop a unified vision for the SR 4 and SR 49 Gateway and Corridor.

1) IMPROVE SAFETY AND ACCESS:

Safety concerns near Dogtown Road, Frog Jump Plaza and SR 49 are the primary project constraint. Vehicular movement patterns need to be minimized and strategically planned access points along SR 4 need to be identified to avoid the situation that occurred on SR 49 from the Frog Jump Plaza development.

2) BUILD A CONNECTED NETWORK:

The lack of local and connector roadways within the project area results in higher traffic volumes along SR 49 and SR 4. Increased road network connectivity will provide alternative travel routes and alleviate the number of vehicles and driveways on SR 4 and SR 49.

3) CREATE AN OPPORTUNITY FOR GROWTH:

Resolving movement patterns provides an opportunity to introduce new development at the SR 4/SR 49 intersection. Well-design development in this area can create needed transportation connectivity and bring increased revenue to the City.

4) REDEFINE THE IMAGE

In addition to improved transportation facilities, new development can provide sidewalks other community amenities to enhance Angels Camp's sense of place and visual quality. Enhanced landscape, wayfinding signage and a community gateway can improve the sense of arrival and strengthen community identity.



NEXT STEPS:

TELL YOUR NEIGHBORHOOD
Survey Monday for 2 weeks
questions from today

Visit the website at:
www.pennstate.edu/...

NEXT MEETING:
We will review ideas and other
based the feedback we receive

Please fill out your comment

3

Stakeholder and Public Outreach

This chapter includes a summary of outcomes from three public outreach meetings and key findings for informing the planning process. The following sections are included:

1. Community Outreach
2. Public Involvement

Chapter 3: Stakeholder and Public Outreach

The project team conducted a widespread public outreach campaign for the corridor study. The team met with the Management Team, project Stakeholders, Caltrans and Advisory Committee through the progression of the study. The Management Team consisted of representatives from the CCOG, Caltrans and The City of Angels. The stakeholders consisted of property and business owners in the project area. The Advisory Committee applied, were selected and approved by the City Council and consisted of community leaders and representatives from schools, businesses, community organizations and city council. The following chapter outlines in more detail;

1. Community Outreach
2. Public Involvement

The public outreach process included 3 public workshops followed by online surveys. Updates and announcements for meetings were posted to the project website at www.planningangelscamp.com. Each meeting was publicized over various forms of media including flyers, sandwich boards, newspaper press releases and Facebook outreach. Three meetings took place at different stages of the process which ranged from general to specific information.



Flyers were distributed in the community, emailed to previous attendees and placed online.

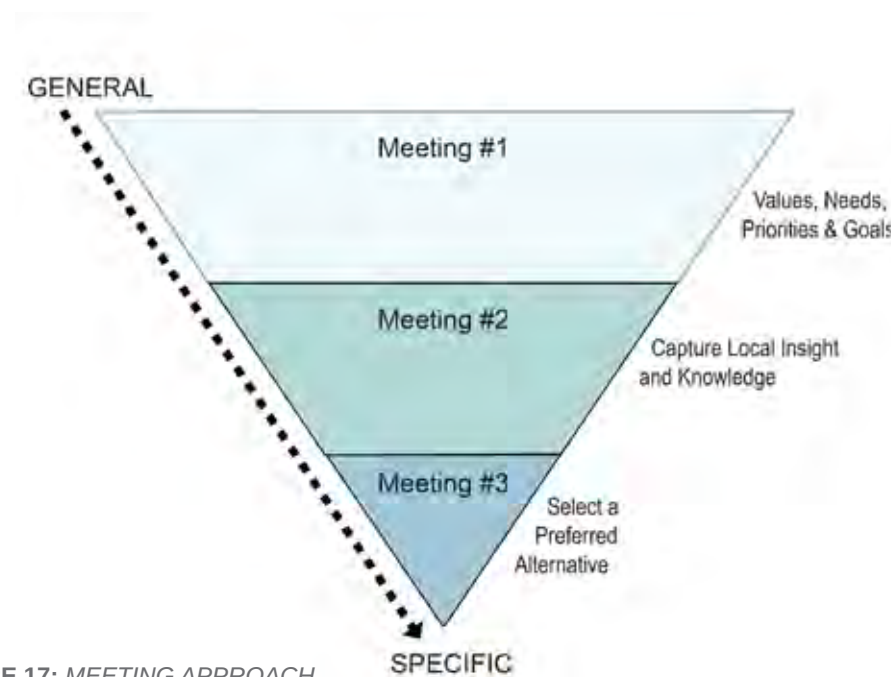


FIGURE 17: MEETING APPROACH

3.1: Community Outreach

3.1.1 Advisory Committee Meetings

The Management Team met with the members of the Advisory Committee at five meetings during the planning process to review the project and listen to feedback from the community.

3.1.2 Stakeholder Meetings

The team held over 12 meetings with various project stakeholders during the process including:

- Property owners at an open house
- Property owners met with individually
- Local Business Owners
- The Destination Angels Camp Board
- The Visitors Bureau
- Randy Starbuck, economic advisor for Destination Angels Camp

3.1.3 Caltrans District 10 Meetings

The Management Team and Design Team met twice with Design Operations at Caltrans District 10 to review the alternatives and address concerns to access along SR4 and SR49.



Advisory Committee reviewed content and the presentations prior to the public meetings.

The goal of the first public meeting was to understand the community's values and goals for what a supportable plan would look like, validate the problems and listen to public concerns and to educate and inform the public of what has been done thus far and where we are in the process.



3.2: Public Involvement

3.2.1 Public Meeting #1 *Values and Vision* *January 21, 2015*

The meeting was held at Bret Harte Union High School from 5:30-7:30. A total of 75 people attended. The format was a combination of presentation and open house, including a 45 minute power point presentation with key pad polling to obtain feedback. The presentation focused on a set of questions to understanding the community goals and objectives and to validate the information we heard from stakeholders and during the data gathering process. Following the presentation project representatives were available to discuss the goals and objectives with the public. People could also put post-its on the plans and comment cards were also available to provide written comments. Following the meeting, the presentation was posted to the website and an online survey was available for 2 weeks to allow for more feedback. 123 people completed the survey.

The goal of the first public meeting was to understand the community's values and goals for what a supportable plan would look like, validate the problems and listen to public concerns and to educate and inform the public of what has been done thus far and where we are in the process.

See Appendix for detailed summary of responses, presentation, boards and sign in sheets

Demographics:

A significant portion of these responses were people who live and own in Angels Camp. The majority of

people (77%) attending the meeting were 55 and older and the online survey attracted the 24-44 demographic. A majority of respondents came to the meeting to understand what is going on in the study. Most respondents wanted to learn more about transportation and economic related issues.

Transportation Questions:

A significant majority (90%) of the respondents suggest that it is easy or relatively easy to get around the study area. Only 3.5% reported any difficulty travelling in the study area. SR 4 and SR 49 were consistently noted as the most travelled roadways followed by Murphys Grade. Stockton, Dogtown and Angel Oaks were ranked evenly as collectors and Clifton and Gardner Lane were ranked evenly as local streets.

The intersection with the most challenges is Dogtown and SR 49. A total of 56% of respondents noted difficulty at this intersection. Murphys Grade and SR 49 (20%) and SR 49 and SR 4 (13%) also noted some difficulty.

Traffic congestion and vehicles turning into businesses or driveways rank as the biggest challenge to travel. Stoplight queuing, traffic speed and general safety concerns were also noted as secondary challenges.

Connectivity Questions

91% of respondents prefer to get around by vehicles. Comments suggest that more transit options is not desired. Some comments were provided from the younger demographic that sidewalks and safe routes for children to bike would be valued on a local level, but most people prefer to take their daily trips by car or truck. The majority, 59%, of respondents noted that the

project area was not easy to walk or bike around or that they choose not to walk or bike. SR 4 and SR 49 were noted as roads with the most difficulty to walk or bike. 35% of respondents would not walk or bike if conditions were improved. 24% of respondents would prefer to walk or bike on SR 49, Stockton and Murphys Grade to the high school.

People suggested they would walk more if there were more sidewalks and better places to walk or bike. The data suggests that walking, biking and public transit is not highly valued in the community. However, there is some desire to increase the walkability within areas that have retail and the area around the high school.

Economic Questions

Shopping (35%) and Jobs (44%) were noted as the most desired uses for future development. Parks and Services both ranked low in terms of desired amenities at 9% and it was clearly noted that the community does not see a need for increased housing.

The majority of people online and at the meeting value loyalty (33%) when making shopping decisions. Location, convenience, value and quality all rank relatively similar around 15%. This suggests that overall people have the desire to shop in Angels Camp and are willing to choose this over lower priced or better quality products located outside Angels Camp. The comments indicate that the community is generally conflicted as to the type of shopping they would like to see between large box retail for increased economic revenue and smaller local retail for better jobs and sense of community. Comments also noted restaurants and entertainment were desirable.

Gateway Questions

Community and the Outdoors were noted as the best aspect about living in Angels Camp. The outdoors, scenery and views is more valued than recreational experiences in the outdoors.

Most people (60% of respondents) feel neutral about the arrival into Angels Camp. Data supports a need for a gateway or arrival into Angels Camp through better landscape, architecture and wayfiniding signage.

Goals Assessment

Transportation and Economic goals were valued the highest among the four goals identified in the public meeting.

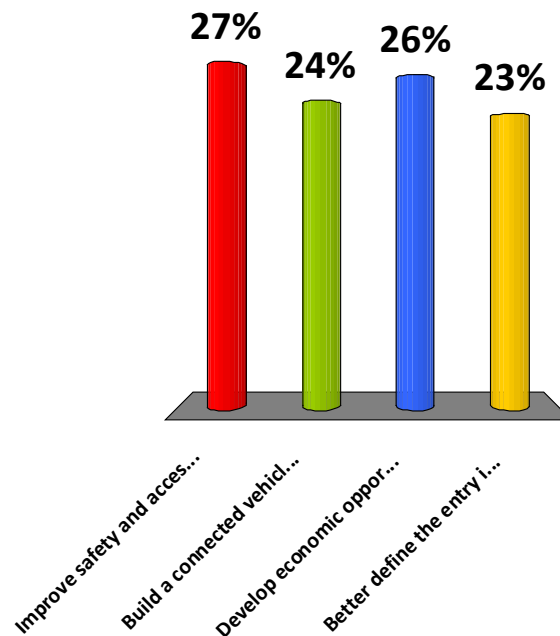


FIGURE 18: RANK IN ORDER WHICH PROJECT GOAL IS THE MOST IMPORTANT TO YOU (A IS THE MOST IMPORTANT)

ANGELS CAMP SR 4 & SR 49 GATEWAY AND CORRIDOR STUDY
PUBLIC MEETING - January 21, 2015

PURPOSE: This study will be an integrated approach to transportation infrastructure and land use opportunities within the project area that will build on the existing assets and unique character of Angels Camp to support a vibrant future for the community.

Outcomes and recommendations will incorporate design solutions that support the vision and values of the local community and enhance the economic vitality of the region while advancing the State's goals for the highway system.

KEEP THIS TO SHARE WITH YOUR FRIENDS
COMMENT CARD - PLEASE DETACH AND RETURN

COMMENT CARD

Name: _____
Email: _____
Date: _____
Comment: _____

THANK YOU FOR COMING!

ANGELS CAMP SR 4 & SR 49 GATEWAY AND CORRIDOR STUDY

GOALS

- Improve safety and access on SR 4 and SR 49
- Build a local connected road network in Angels Camp
- Create an opportunity for growth along SR 4 and SR 49
- Refine the entry/gateway into Angels Camp

MORE INFORMATION

TELL YOUR NEIGHBORS! Questions from today's meeting will be available online. Please visit our website at: www.planningangelscamp.com

NEXT MEETING:
We will review some ideas and alternatives based the feedback we received today.

KEEP THIS TO SHARE WITH YOUR FRIENDS
COMMENT CARD - PLEASE DETACH AND RETURN

DO YOU HAVE ANY COMMENTS ON SPECIFIC GOALS AS YOU VISIT EACH STATION?

- _____
- _____
- _____
- _____

THANK YOU FOR COMING!

Comment cards asked attendees for their thoughts on the goals and study area. 16 Comment cards were collected at the meeting.

The goals of the second meeting were to share what we have done since the last meeting, educate the public on the decisions made to this point, and gain feedback on circulation and land use preferences.



3.2.2 Public Meeting #2 Transportation Alternatives April 8, 2015

The meeting was held at Bret Harte Union High School from 5:30-7:30. A total of 47 people attended. The format was a combination of presentation and open house. A 60 minute power point presentation reviewed outcomes of the prior meeting, provided background to inform design decisions and concluded with development alternative concepts. Following the presentation was an interactive session which allowed groups to make changes to development alternatives based on community vision. The meeting concluded with a presentation of revised alternatives where project representatives were available to discuss the goals and objectives of the project with the public. People could also put post-its on the plans and comment cards were available to provide written feedback. Following the meeting, the presentation was posted to the website and an online survey was available for 2 weeks to allow for more feedback. 66 people completed the online survey.

See Appendix for detailed summary of responses, presentation, boards and sign in sheets

Refer to Chapter 4 for more information on the alternatives presented in this meeting.

Comment card provided a space to make comments on the alternatives. 11 comment cards were received by attendees.

3.2.3 Public Meeting #3 Preferred Alternatives September 9, 2015

The final meeting was held at Bret Harte Union High School in the Learning Center from 5:30-7:30. A total of 38 people attended. The format was a combination of presentation, question and answer and open house. A 30 minute power point presentation reviewed outcomes of the prior meeting, provided information about the traffic analysis and presented the two alternative alignments. Following the presentation people had a chance to ask questions of the design team. Following a Q&A period, project representatives were available at the boards to discuss the alternatives with the public. People could also put post-its on the plans and comment cards were also available to provide written comments. Following the meeting, the presentation was posted to the website and an online survey was available for 2 weeks to allow for more feedback. 3 people completed the online survey.

See Appendix for detailed summary of responses, presentation, boards and sign in sheets

Refer to Chapter 6 for more information on the alternatives presented in this meeting.

Comments received at the Q&A session focused on roundabouts and whether or not roundabouts are a viable alternative in Angels Camp. Some people expressed concern about confusion and limited truck movements in roundabouts. Others were in support of roundabouts for increased safety and travel times. Additional concerns were expressed regarding Street A and the impacts SR 49 and the residential in this intersection. Most of the comments received were positive and in support of the Foundry Lane Access.

In addition to general feedback, We asked 3 final questions on the comment cards:

- Do you feel this process has looked at different options to support the recommendations?
- Do you feel this process has listened to the public?
- Do you feel this process is headed in the right direction?

The general consensus from all comment cards supported the direction of the process. A few concerns were noted regarding traffic along SR 49 at Dogtown Road and Frog Jump Plaza. Many on the comment cards expressed a preference for the Foundry Lane concept and thought this would help to promote development in Angels Camp.

The goals of the final public meeting were to share what we have done since last meeting, educate the public on the decisions made to this point and select a Preferred Alternative.

COMMENT CARD: PUBLIC MEETING - September 9, 2015

Name: VERONICA MENDOZA

Email: _____

DO YOU FEEL THE PROCESS HAS:

.....LOOKED AT DIFFERENT OPTIONS TO SUPPORT THE RECOMMENDATIONS? YES

.....LISTENED TO THE PUBLIC? YES

.....IS HEADED IN THE RIGHT DIRECTION? YES

DO YOU HAVE ANY ADDITIONAL COMMENTS? (More Space on the Back)

GOOD LUCK!

Comment card provided a space to answer questions about the process and provide any additional comments. 8 Comment cards were received.



4

Land Use and Transportation Alternatives

This chapter includes the transportation and land use alternatives that were reviewed during the planning process:

1. Area 1: Dogtown Road, Frog Jump Plaza and Street A
2. Area 2: Downtown Connection Alternatives
3. Area 3: Future Development

**Traffic will increase 28%
in Angels Camp by the
year 2040.**

Chapter 4: Land Use and Transportation Alternatives

This chapter explains in more detail the land use and transportation alternatives that were developed for public meeting #2. The Design Team looked at two land use scenarios based on a high growth estimate and a low growth estimate and four transportation scenarios based on access at Angel Oaks Drive access or Foundry Lane. In addition, alternative roadway alignments were identified to provide alternative access for Dogtown Road and an alternative access point to Downtown Angels Camp. The following information is described in more detail;

1. Area 1: Dogtown Road, Frog Jump Plaza and Street A
2. Area 2: Downtown Connection Alternatives
3. Area 3: Future Development

Following Public Meeting #2, based on feedback from the community, Advisory Committee and Management Team, the alternatives were narrowed down to a single land use plan and a three transportation concepts. A detailed traffic analysis of the three concepts is included in the Appendix and a summary will be presented in Chapter 5.

While all the roadways are connected and influence the overall traffic flow of the area, for ease of the comparison they have been broken into three primary areas;

- Dogtown Road, Frog Jump Plaza and Future Street A
- Downtown Road Connections
- Land Use Focus Area/Access to SR 4

Baseline

Overall contributing factors to the traffic conditions in Angels Camp include limited connection of roadways minimizing travel options, peak hour traffic volumes creating backups and poor access control along the roadways along with closely spaced intersection creating turning conflicts. Drivers experiences delays, long vehicle queues, turning conflicts and difficulty accessing businesses and residences.

According to operations analysis and growth projections in the county, traffic will increase by 28% in Angels Camp by 2040. Without a plan in place, existing problems will become more of a concern. There will be a 60 percent increase in traffic volume at the most congested location. Increased traffic would also exacerbate operations at the SR 4/ SR 49 intersection and increase vehicle conflicts. If development happens and there is no transportation facilities to support it, congestion along the roadways will be much worse.

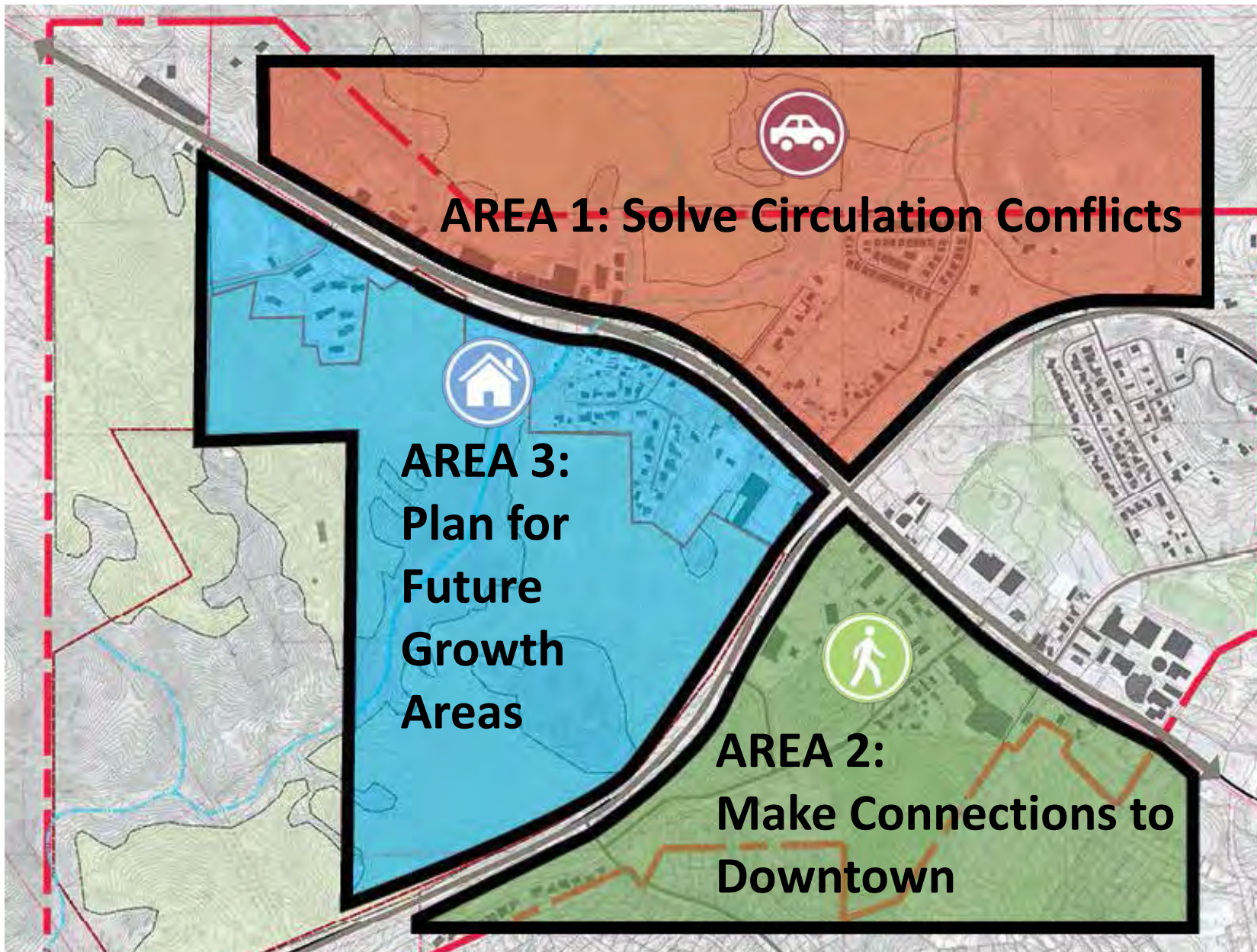


FIGURE 19: THE ALTERNATIVES LOOK AT THE STUDY ARE IN 3 PRIMARY AREAS FOR EASE OF COMPARISON.

4.1: Area 1- Dogtown Road, Frog Jump Plaza and Future Street A

Current congestion and safety at Frog Jump Plaza and Dogtown Road has been an issue since the SR 4 bypass west of SR 49 was constructed in the 2000's. The Frog Jump Plaza was developed with three driveways accessing SR 49 and is the area of highest concern for residents. The City Council recently adopted a general concept of Street A as a resolution and a proposed alignment is depicted on all plans.

Alignment 1

The intersection for Street A would be located at Francis Street and the roadway alignment is proposed to follow the grade along the Cherokee Creek. An internal connection would be made from Dogtown to Clifton for local residents. Dogtown Road and Frog Jump Plaza would be limited to a right in and right out turn movement. Roundabouts at SR 4/ SR 49 and Street A/Francis Street would provide northbound and southbound access. This alignment alternative requires the least amount of out-of-direction travel. All travel directions would be accommodated through roundabouts. This also eliminates conflicting movements in the highest collision area at Frog Jump Plaza. This option results in the shortest length of roadway that would need to be built.

Alignment 2

The Intersection for Street A would be located with a signal or stop north of Francis Street at the curb cut for the current businesses. The alignment follows the natural grade to the north of the creek and crosses outside the City limits following the Clifton property lines. Access would be restricted with a cul-de-sac or bollards on Dogtown Road and Clifton Lane and

internal connection would be made from Dogtown Road to Street A for local residents. This alignment maintains most of the existing access on SR 49 but requires the most out-of-direction travel. All travel directions are accommodated, but with a higher delay. Conflicting movements are reduced in the highest collision area.

Alignment 3

The intersection for Street A would be located at the existing curb cut and gravel road north of Middletons Shopping Center at a signal, stop or roundabout. This alignment represents a more regional solution to address regional traffic. This alternatives maintains all the access on SR 49 at Frog Jump Plaza and Dogtown road and therefore does not eliminate congestion from turning movements at these location.

Why not provide an access point at SR 4 and Dogtown?

A number of comments were received about access from Dogtown to SR4. This was discussed internally but was eliminated as an option. Similar to Foundry Lane, an access point at SR 4 and Dogtown requires a design exception. Additionally, there is a high cost of implementation and less of a regional benefit. Additionally, this will not solve Frog Jump Plaza congestion as it does not provide an alternative for the left turn movement. It has the potential to create congestion and back ups on SR 4. It was determined that access to the west, either at Angel Oaks or Foundry Lane will have a greater regional benefit and therefore have a better chance of being supported by Caltrans and the California Transportation Commission. Preliminary analysis shows that the Foundry Lane connection will reduce congestion on SR 49.

What we heard at Public Meeting #2...

Dogtown Road and Street A Alignment Alternatives

Roundabouts received mixed comments, some comments thought they could work or work well in certain situations. Some comments were emphatically not in favor, most people noted a preference for stop signs.

- Road in City Limits (Alignment 1 and Alignment 2): Maintaining a local street within the City limits seemed to receive the most positive feedback with some expressed concerns related to traffic cutting through existing neighborhoods.
- People do not support full-cut off on Dogtown Road and Clifton Lane.
- Road in County (Alignment 3): This received positive feedback for keeping traffic out of the neighborhoods and providing a potential for future development. Most of the concerns noted were from additional cost of the road distance and being outside the City limits.

Alignment 1



Alignment 2



Alignment 3



Clifton Lane looking East



Clifton Lane looking East



Private drive off SR 49



Access onto SR 49 from Francis Drive



Looking north into private property from Clifton Lane



Private Ranch on Dogtown Road

FIGURE 20: DOGTOWN ROAD, FROG JUMP PLAZA AND FUTURE STREET A ALIGNMENT ALTERNATIVES

4.2: Area 2- Downtown Connections

Alignment 1- Stockton/Demarest Street Extension

The extension of Stockton Street along Demarest is noted in the transportation element of the City 2020 General Plan. This alternative is the most advantageous for removing trips from the SR 4/SR 49 intersection and could divert up to 400 peak hour trips. This alternative reduces conflicts on SR 49 between SR 4 and Murphy's Grade Road. It also shows the best travel time savings for longer distance, local trips.

Alignment 2- Monte Verda Street Extension

The Monte Verda street extension could connect from existing Foundry Lane along the current access road for the Foundry and in front of the current City offices to align with SR 49. This also removes trips from SR 4/SR 49, but only diverts up to 250 peak hour trips. This is more ideal for short distance local trips, walking and bicycling and would provide a more direct access to planned development with access at Foundry Lane.

Alignment 3 - Angel Oaks Drive Extension

This alternative represents the extension of Angel Oaks Drive to the south end of town. It is the most advantageous for removing longer distance trips from SR 4/SR 49 intersection and offers the best regional solution. This alternative had been recommended in previous planning efforts but has not been successful due to public opposition.

What we heard at Public Meeting #2...

Downtown Connection Alignment Alternatives

- Stockton/Demarest – This was generally well received with most concerns expressed about increased traffic at Murphy's Grade as well as pedestrian conflicts at the high school. This option had the most support voiced from public input.
- Monte Verda - This had mostly neutral to positive feedback with the primary concern being increased congestion from traffic onto SR 49 and impacts to the Foundry Building. This option had the least amount of support from public input as was the smallest gesture towards making a downtown connection.
- Angel Oaks - This option received mixed feedback. Some comments strongly supported this, many comments expressed concern or noted this has been studied before, and a few comments were not in support. This option is in the middle, some positive some negative, regarding public support.

Alignment 1



Alignment 2



Alignment 3



Stockton looking East



Foundry Lane and SR 4 Intersection



Angel Oaks Drive and Stockton Drive



Stockton looking West



Monte Verda Street from Foundry Lane



Angel Oaks Drive looking South towards Greenhorn Creek

FIGURE 21: DOWNTOWN ROAD ALIGNMENT ALTERNATIVES

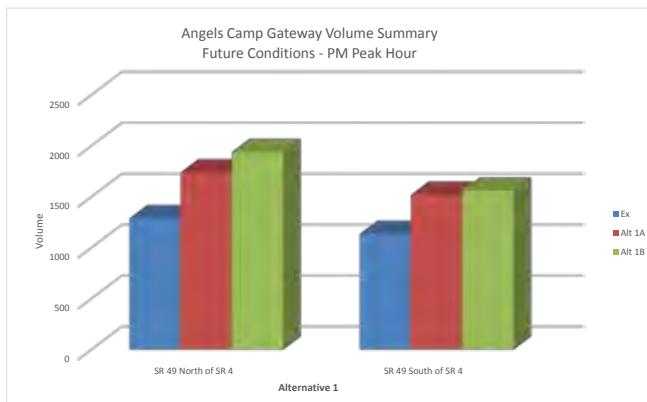
LAND USE AND TRANSPORTATION ALTERNATIVES

4.3: Area 3- Future Development Area

1A and 1B: Right in Right out at Foundry Lane with Raised median/Frontage Road Alternatives 1A and 1B included the same land use scenario with a lower FAR of .25 typical of most suburban retail development. This concept features a boutique hotel as an anchor to a potential retail street along Foundry Lane.

In both concepts Angel Oaks Drive provides a primary regional connection. Foundry Lane is central to the retail core with a right in and right out at SR 4 with Roundabouts at SR 4/49 and Angel Oaks to provide turning movements. Alternative 1B looks at a frontage road concept and eliminates the need for access at Foundry for a Caltrans preferred option.

Preliminary transportation studies as shown in the chart below show that there will be a higher volume of traffic with an Angel Oaks only connection and that access to the north of SR 4 will be necessary to manage traffic. The differences in traffic volumes will vary based on land use intensity and the roadway connections shown at Street A, Angel Oaks and Stockton Road.



Alternative 1A

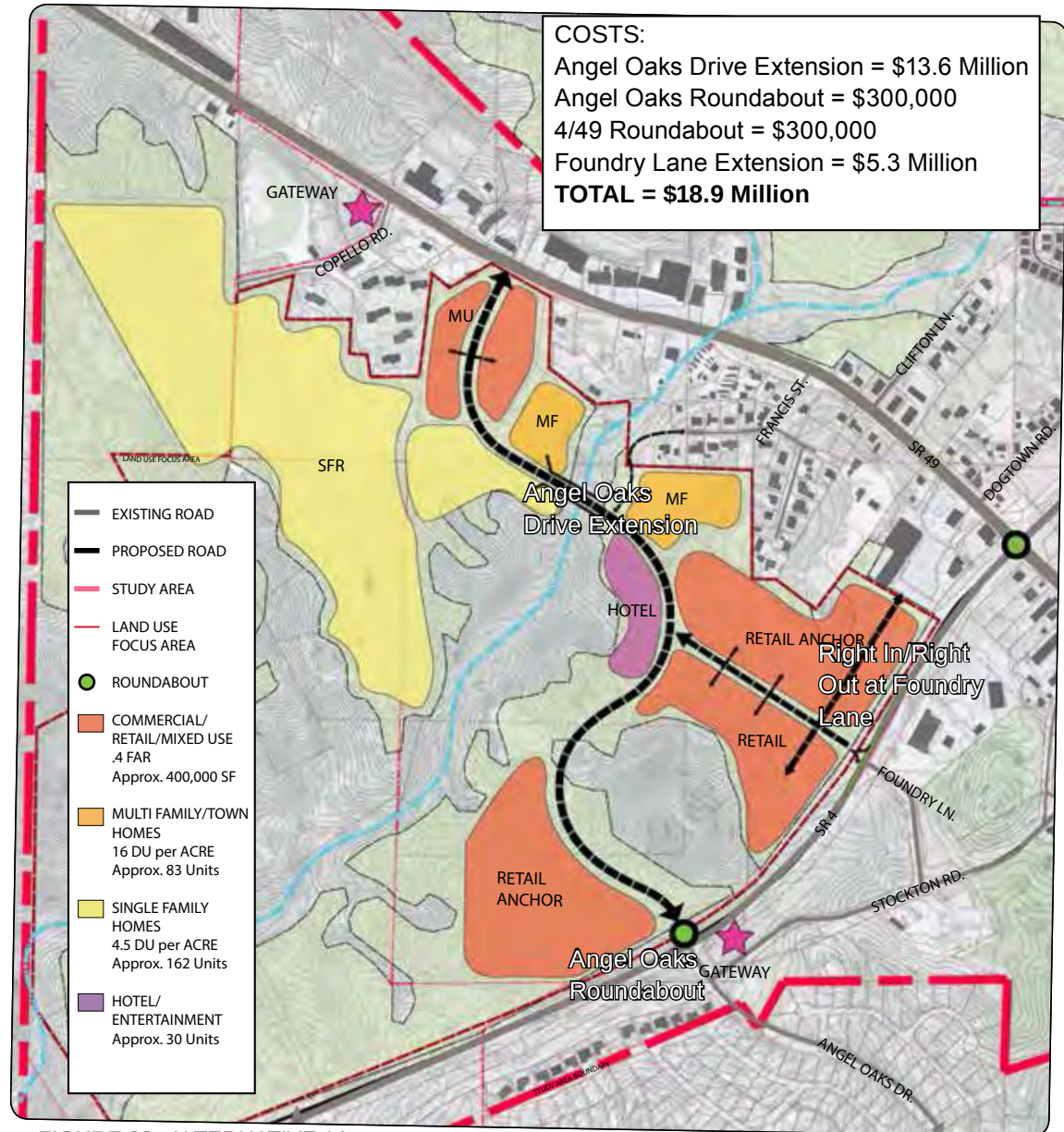


FIGURE 22: ALTERNATIVE 1A

Alternative 1B

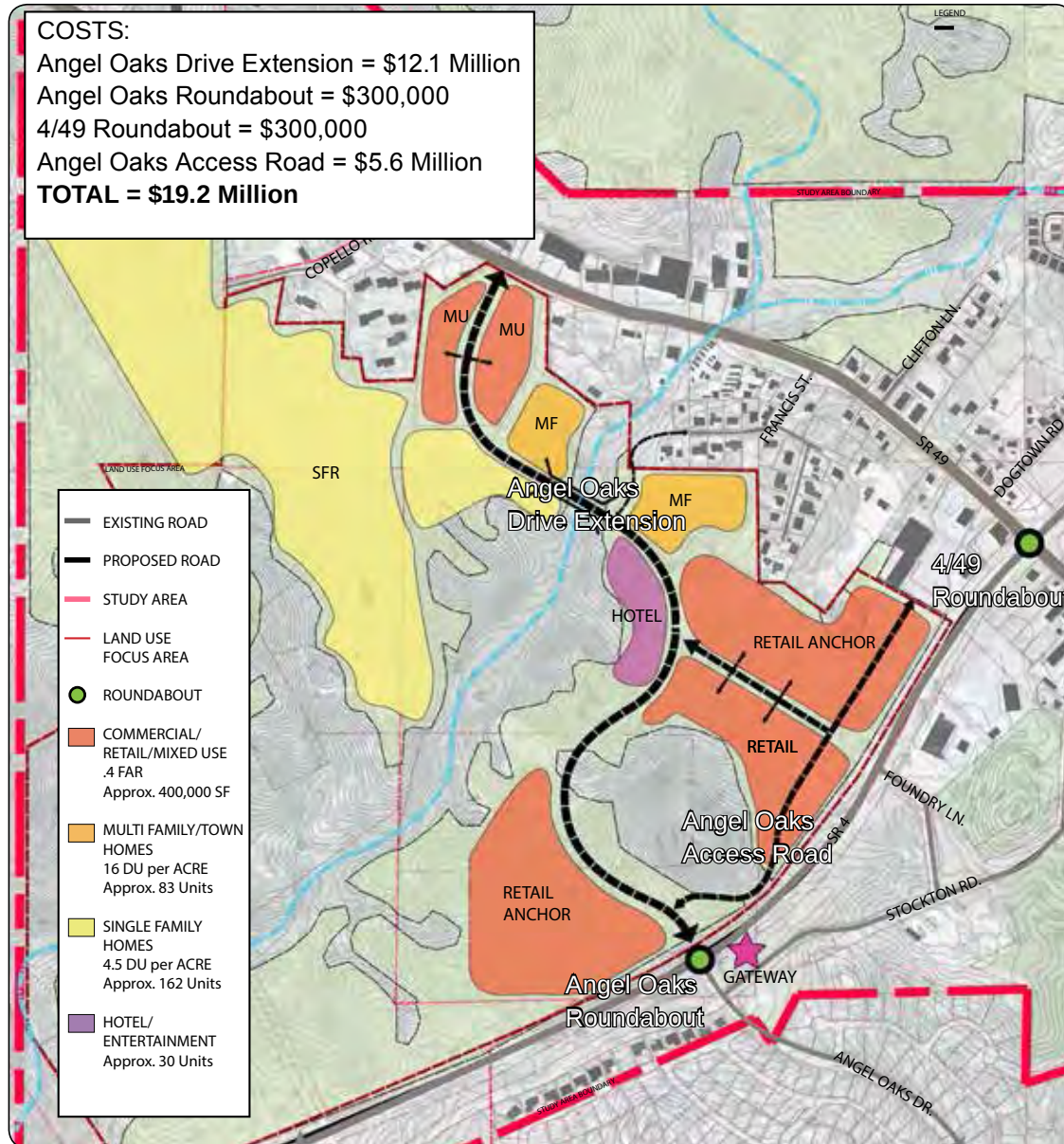


FIGURE 23: ALTERNATIVE 1B

What we heard at Public Meeting #2...

Land Use and Transportation Alternatives

Respondents generally supported Foundry Lane Access.

- Alternative 1A: This was the most supported plan. The intersection at Angel Oaks with a Frontage road and access at Foundry received many positive comments.
- Alternative 1B: This plan received positive feedback but most comments suggested they would like to see this alternative with access at Foundry suggesting they would like alternative 1A.
- Roundabouts were noted as a concern as well as a few comments about no right in and right out. Full access at Foundry would be preferred.
- Some comments raised question to the amount of retail that would be supported by future growth as well as how this supports the integrity of the community.
- Comments suggested community uses such as parks, trails or community centers should be included in the planning.

LAND USE AND TRANSPORTATION ALTERNATIVES

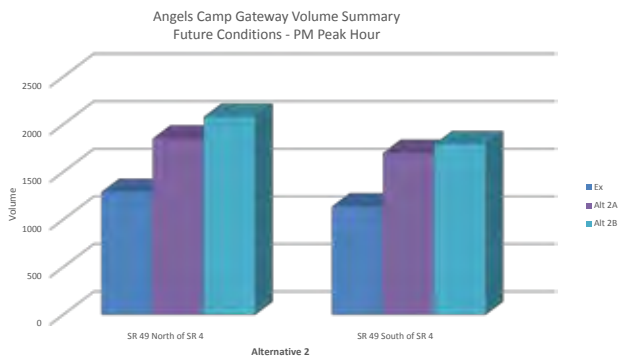
2A and 2B:

Regional Access from Foundry Lane Roundabout at Foundry Lane

Alternatives 2A and 2B used the same land use scenario with a higher FAR of .40 typical of a more compact, mixed-use development. This concept features an internal street with a hotel or entertainment venue located on the axis of the retail development. An local road internal to the retail area would provide a secondary network of pedestrian-oriented streetscape.

In both concepts, Foundry Lane provides a regional connection to SR 49. Foundry Lane is the primary access to SR 4 with a roundabout. An additional roundabout connection from Angels Oaks could provide access to future western development when needed. Alternative 2B shows access from Angel Oaks Drive.

Preliminary transportation studies as shown in the chart below show that there will be a higher volume of traffic with a single Angel Oaks Connection compared to access at both Foundry and Angel Oaks Drive.



Alternative 2A

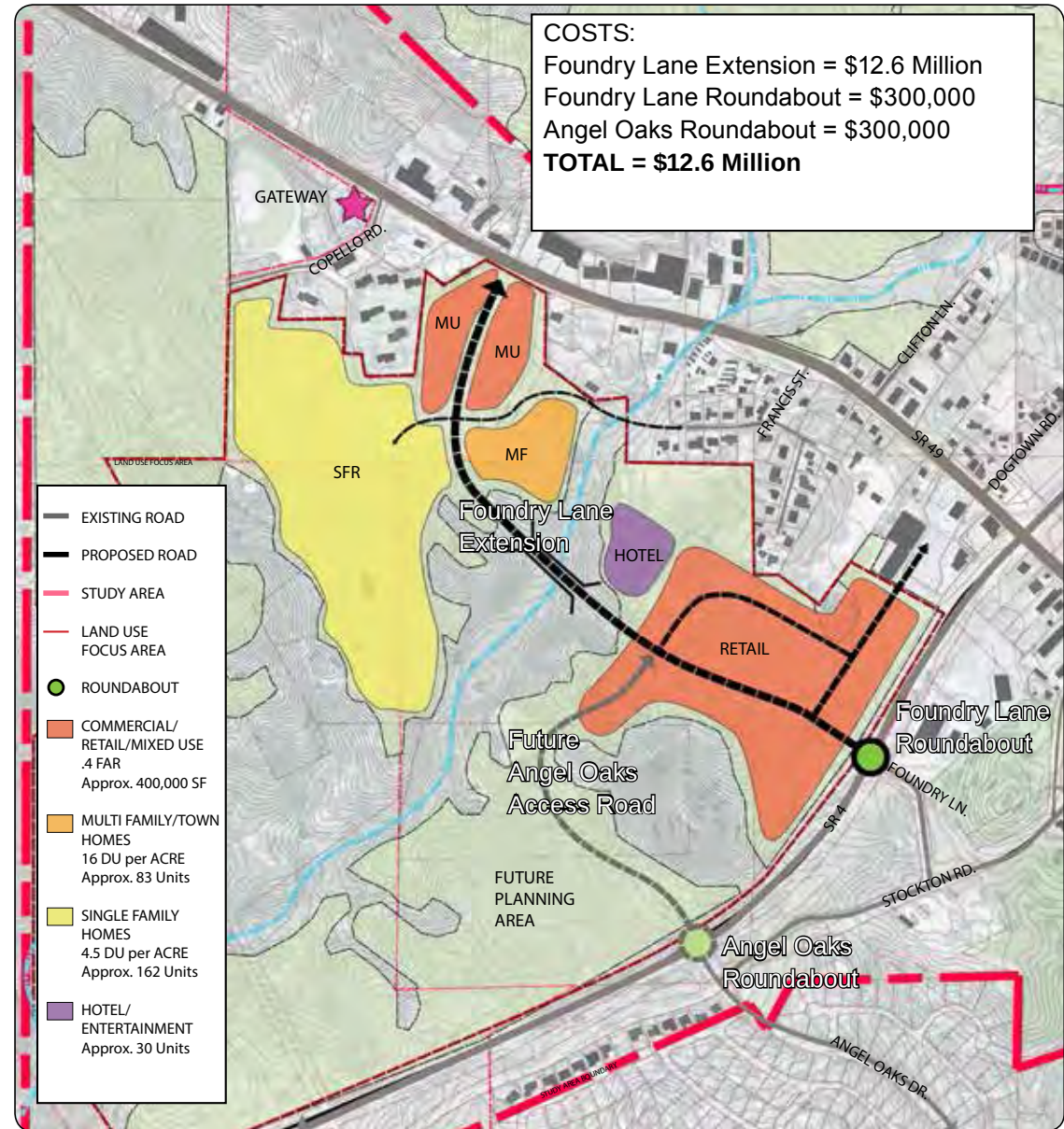


FIGURE 24: ALTERNATIVE 2A

Alternative 2B

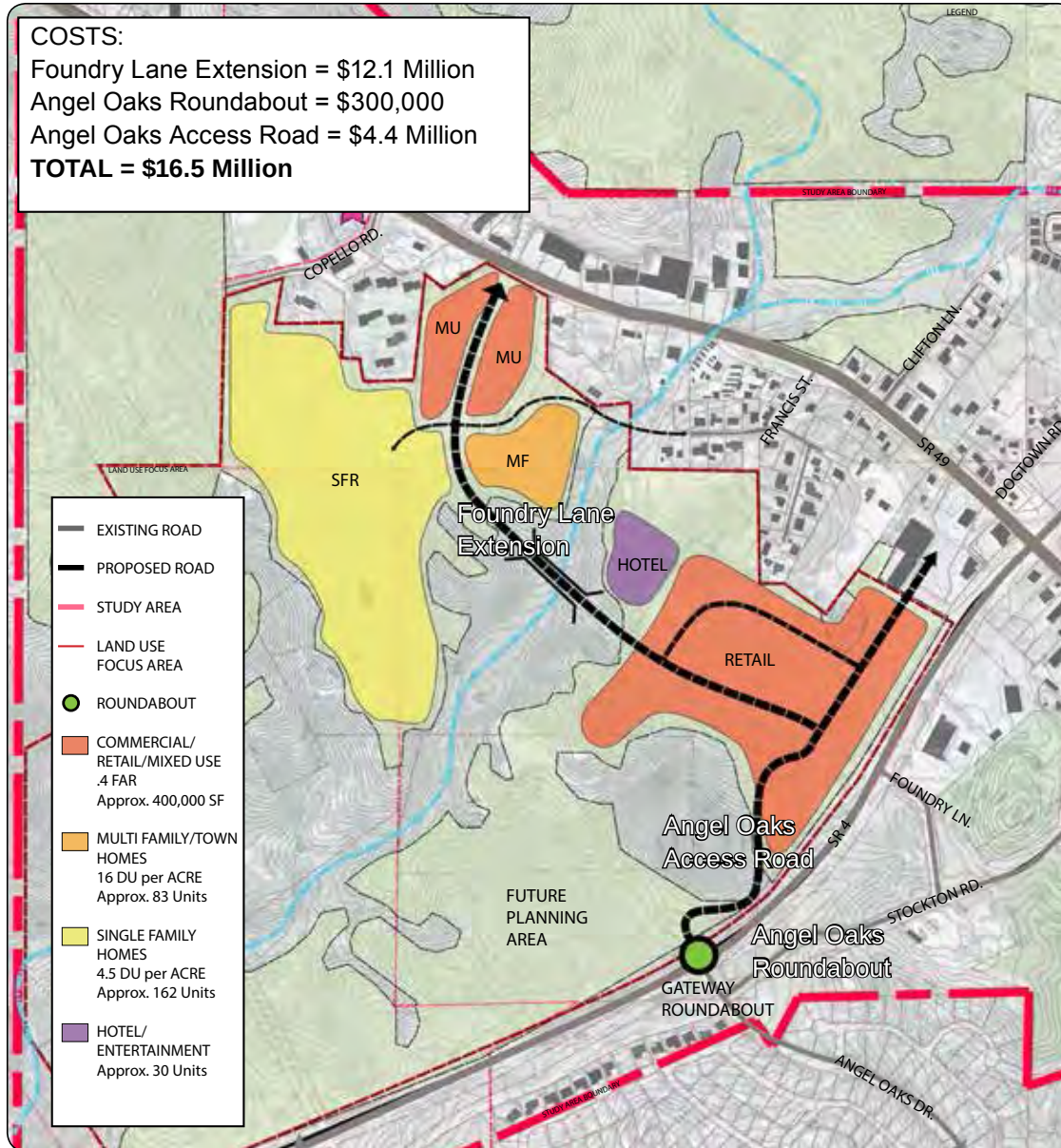


FIGURE 25: ALTERNATIVE 2B

What we heard at Public Meeting #2...

Land Use and Transportation Alternatives

Respondents generally prefer a frontage road but most would like to see access at Foundry as well as the Frontage Road.

- Alternative 2A: This was the most supported plan at the public meeting. Comments suggested liking the land use and planning in this area and the most concern was raised based on the roundabouts.
- Alternative 2B: This was generally the least supported plan with the primary concern that views to retail are not good and the most roadway length would need to be built.
- A roundabout at Angel Oaks was received more strongly than a roundabout at Foundry Lane.
- Comments supported the proposed land use, especially hotel and entertainment opportunities. Some comments expressed this is the more realistic alternative for phasing and future growth.



5

Future Transportation Operations Analysis

This chapter includes a summary of the transportation analysis and how the outcomes affected the planning process. The following sections are included:

1. Circulation Alternatives
2. Operations Analysis Summary

Chapter 5: Transportation Analysis

Following public meeting #2 and development of a final land use plan, a full traffic operations analysis was performed on three transportation alternatives to identify the impacts to the circulation networks. The full report is included in the appendix. The following section will be a summary of the report and includes;

1. Circulation Alternatives
2. Operations Analysis Summary

Section 5.1: Circulation Alternatives

Common Elements

- Right in/right out at Dogtown and Frog Jump Plaza
- Street A at Francis Street
- Stockton/Demarest Extension
- Monte Verda Street Extension
- Foundry Lane Roadway Extension to the North connecting to SR 49

Unique Elements

- Alternative 1: Foundry and Angel Oaks Access at SR 4
- Alternative 2: Frontage Road Access from Angel Oaks Drive
- Alternative 3: Right In/Right Out at Foundry and Full Access at Angel Oaks.

TABLE 6: CIRCULATION CONCEPT COMPARISON			
Facility	Circulation Concept Description		
	1	2	3
Common Elements			
Street A Extension	New roadway between Dogtown Road (just north of Gardner Lane) and SR 49 at Francis Street with controlled intersection at SR 49. Roundabout and traffic signal control evaluated.		
Stockton Road Demarest Street Extension	Extension of Demarest Street to Stockton Road (just west of Monte Verda Street).		
Monte Verda Street Extension	Extension of Monte Verda Street to Foundry Lane.		
Cherokee Creek Bridge	Bridge over Cherokee Creek to complete the roadway extension between SR 4 and SR 49.		
Angel Oaks/Foundry Lane Connection	New roadway connection between SR 4 and SR 49 with a new full access controlled intersection on SR 49.		
Francis Street Connection	New local roadway connection to Francis Street connecting development north of Cherokee Creek to proposed Street A intersection on SR 49.		
Frog Jump Plaza Access	New connection between Frog Jump Plaza and the planned commercial development area to the west.		
Dogtown Road & Frog Jump Plaza Access	Access restrictions (right-in/right-out only) at Dogtown Road and the driveways serving Frog Jump Plaza.		
Unique Elements			
SR 49/SR 4 Intersection	Traffic Signal Control	Traffic Signal Control	Roundabout Control
SR 4/Foundry Lane Intersection	Roundabout Control	Right-in/Right-out only access to the south. No access to planned development north of SR 4	Right-in/Right-out only access to the north and south.
SR 4/Angle Oaks Drive Intersection	Roundabout Control	Roundabout Control	Controlled Intersection (Roundabout or Traffic Signal Control Considered)
Source: Fehr & Peers, 2015.			

FIGURE 26: CIRCULATION COMPARISON

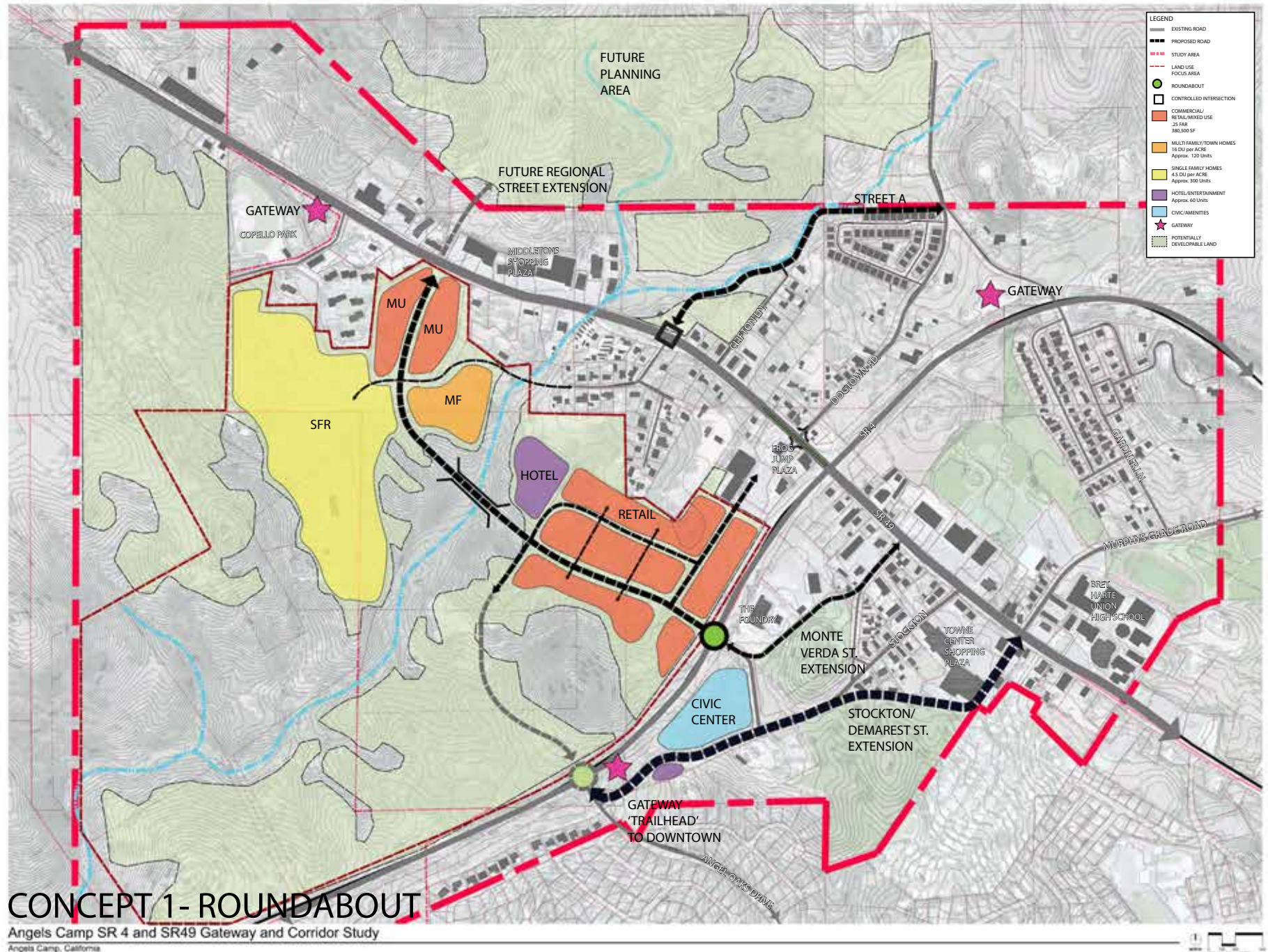


FIGURE 27: CONCEPT 1 - ROUNDABOUT

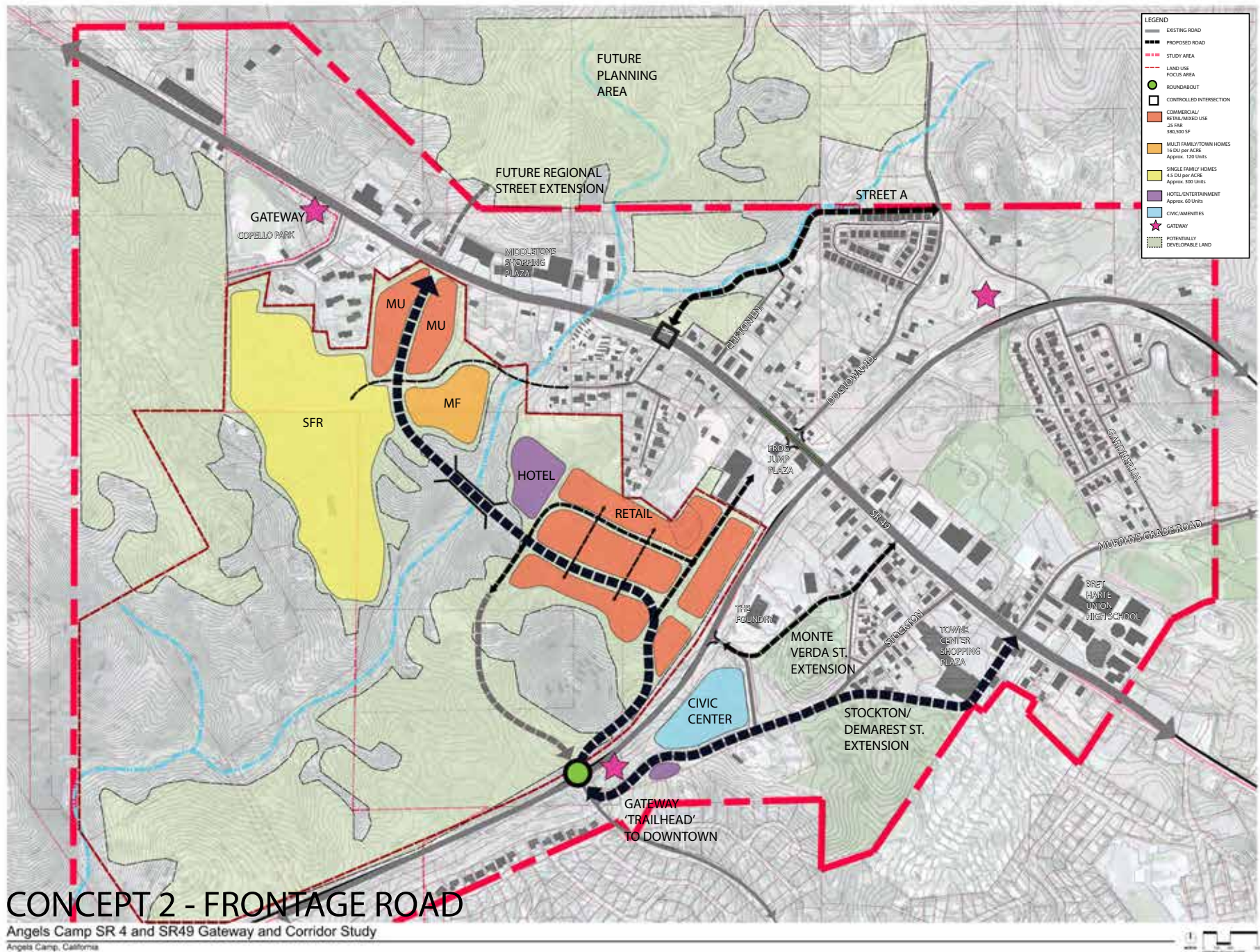


FIGURE 28: CONCEPT 2- FRONTAGE ROAD

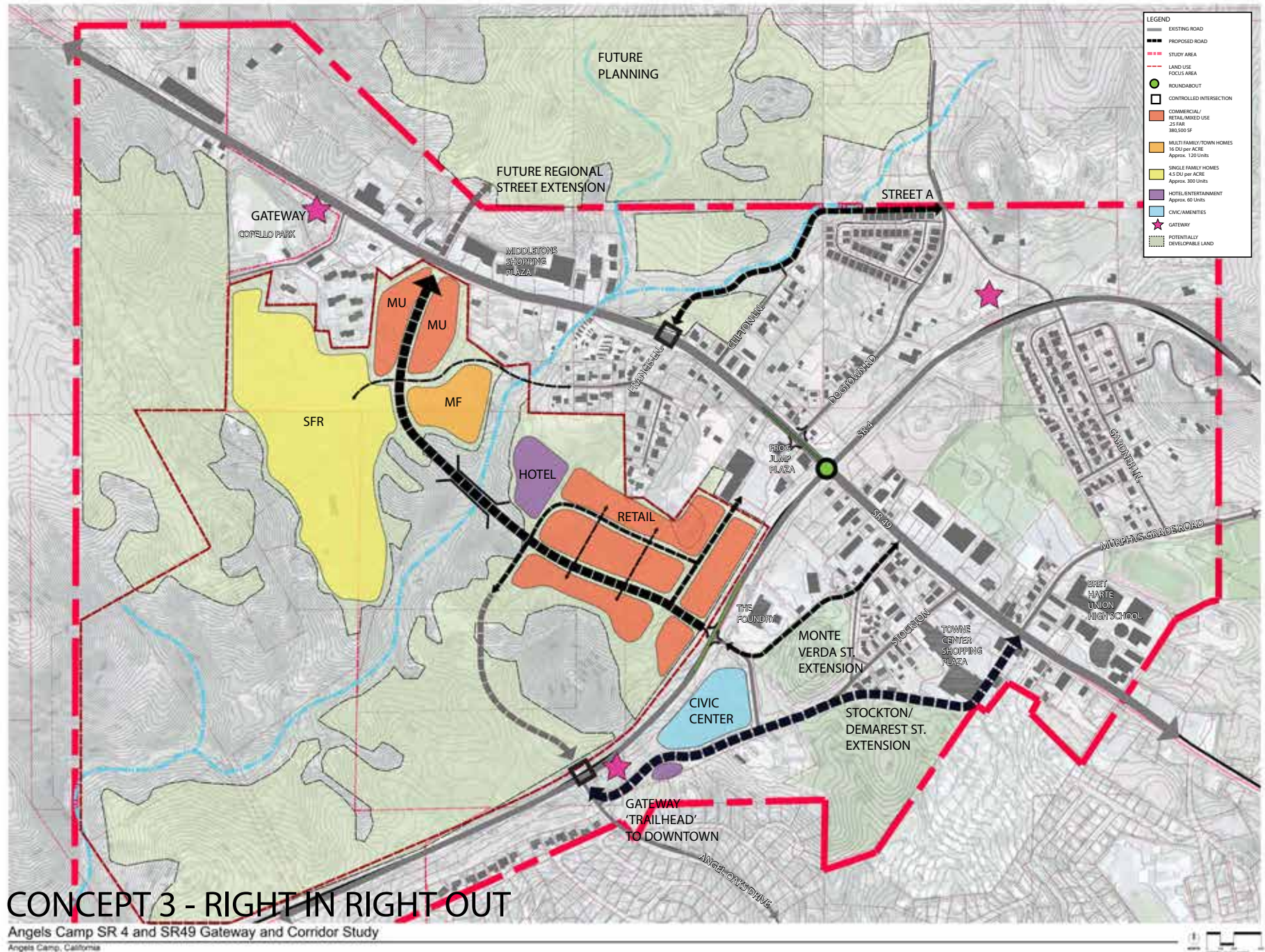


FIGURE 29: CONCEPT 3- RIGHT IN RIGHT OUT

Section 5.2: Operations Analysis

Alternative 3, right in/right out at Foundry Lane does not work from an operational perspective and was removed from any further study.

Future year analysis confirms the City CIP, specifically the need to widen SR 49 from 2 to 4 lanes from just south of Murphy's Grade Road to north of Dogtown Road.

Analysis confirms that Alternative 2, a frontage road from Angel Oaks to Foundry Lane is less attractive to new development from SR 49.

Access restrictions on SR 49 will add U-turn movement to SR 4/SR 49 and SR 49/Future Street A intersections.

With access restrictions, widening SR 4/49 and SR 49/Street A intersections may be necessary to accommodate U-turn movements. Phasing of roadways will be an important consideration. A mid-block U-turn may provide an alternative.

SR49/Street A traffic volumes to/from the west are consistent with local-serving facility and not a cut through issue for the existing community.

TABLE ES-1: NETWORK PERFORMANCE MEASURES – DESIGN YEAR (2040)					
Performance Measure			Circulation Concept		
			1	2	3
Peak Hour Travel Time (Minutes)	SR 49	NB	3.1	3.3	3.6
		SB	3.6	3.8	5.0
	SR 4	EB	1.5	1.4	4.0
		WB	1.8	2.0	5.2
Peak Hour Vehicle Hours of Travel (Hours)	SR 49	NB	31	35	35
		SB	36	40	52
	SR 4	EB	5	5	17
		WB	9	12	26
Peak Hour Average Speed (MPH)	SR 49	NB	18	17	15
		SB	15	14	11
	SR 4	EB	20	22	8
		WB	17	15	6
Daily VMT			55,620	55,970	55,790

Source: Fehr & Peers, 2015.

Source: Fehr & Peers, 2015.

FIGURE 30: PERFORMANCE MEASURES

Intersection		Concept 1			Concept 2		
		Signal Warrant Satisfied?	Control	Improvement Discussion	Signal Warrant Satisfied?	Control	Improvement Discussion
SR 49	SR 4	N/A	Signal	- Two through lanes (NB & SB) needed to accommodate north/south and U-Turn movement growth - Two-lane roundabout	N/A	Signal	- Two through lanes (NB & SB) needed to accommodate north/south and U-Turn movement growth - Two-lane roundabout - Higher demand for SR 49 (North of SR 4) with Angel Oaks Connection
	Street A	Yes	Signal	- With traffic signal, widening of southbound departure lane needed to accommodate northbound-to-southbound U-Turns or provide Michigan (midblock) U-Turn. - Single-lane roundabout with bypass lane	Yes	Signal	- With traffic signal, widening of southbound departure lane needed to accommodate northbound-to-southbound U-Turns or provide Michigan (midblock) U-Turn. - Single-lane roundabout with bypass lane
	Angel Oaks	Yes	Signal	- Demand for eastbound Angel Oaks to NB SR 49 is about 400 vehicles. Two turn lanes needed to accommodate traffic volume. - Widening of northbound departure to two lanes needed - Single-lane roundabout with bypass lanes	Yes	Signal	- Demand for eastbound Angel Oaks to NB SR 49 is about 400 vehicles. Two turn lanes needed to accommodate traffic volume. - Widening of northbound departure to two lanes needed - Single-lane roundabout with bypass lanes
SR 4	Foundry Lane	Yes	Roundabout	Single-lane roundabout	N/A	Side-Street Stop	Maintain side-street stop control.
	Angel Oaks	Yes	Roundabout	Single-lane roundabout or traffic signal	Yes	Roundabout	- Single-lane roundabout with bypass lanes - Traffic signal

FIGURE 31: CONCEPT COMPARISON

WELCOME TO HISTORIC
**ANGELS
CAMP**

MUSEUM • GARDENS • HOUSE

Preferred Alternative Recommendations

This chapter includes a summary of the final land use and transportation alternatives.

The following sections are included:

1. Final Land Use Plan
2. Overall Recommendations
3. Street A, Dogtown Road and Frog Jump Plaza
4. Stockton/Demarest Street Extension
5. Access at Foundry Lane
6. Access at Angel Oaks
7. How Goals are Achieved

Chapter 6: Preferred Alternatives Recommendations

The project is separated into two study areas. A transportation project study area and a land use focus area. This section will look at recommendations to the overall project study area and land use focus area;

1. Final Land Use Plan
2. Overall Recommendations
3. Street A, Dogtown Road and Frog Jump Plaza
4. Stockton/Demarest Street Extension
5. Access at Foundry Lane
6. Access at Angel Oaks Drive

6.1: Final Land Use Plan

The final land use plan shows approximately 380,000 SF of retail development at a .40 FAR being located along SR 4 and SR 49. Previous concepts shown at public meeting #2 looked at development in the area to the west. Based on feedback from the community and discussions with the stakeholders, a more compact development would promote a more walkable and bikable design and support Caltrans district goals for increased mobility. The retail area provides the opportunity for internal streets that connect to local roads in the community and increase the local street network. Additional single family and multifamily housing could be located at the core of the site where there is existing single family uses and away from busy roadways. This will not address all the demand based on the market study but will support the economic synergy and vitality of the area. A hotel and offices could be located within the retail area to support the retail district.

These recommendation will need to be incorporated into an update of the 2020 General Plan. Chapter 1.C.a designates this area as a Shopping Center Commercial District, This should be amended to support more mixed use and hotel amenities. The 2020 General Plan Land Use map should be amended to reflect a mix of uses including residential (SFR)(MDR) (HDR), retail (SC) and Parks (PR). The As noted in 1.C.b more detailed specific plan should be initiated to further define development guidelines within this area.

- Future Retail at SR 4: 19.5 Acres - Approximately 340,000 SF Retail Stores
- Future Retail at SR 49: 4.5 Acres - Approximately 60,000 SF Retail Stores.
- Future Hotel: 3.2 Acres - Approximately 120 Room Hotel.
- Future Single Family Residential: 34 Acres - Approximately 135 Homes.
- Future Multi Family Residential: 4.5 Acres - Approximately 70 Units.

The consensus of the retail analysis shows a preference for a 'Neighborhood Commercial District' that could accommodate 1 to 4 pad site developments, such as a sporting merchandise store, a discount food and goods general store or a discount clothing retailer based on the needs identified in the Market Study. These stores would be anchors with visual access to SR 4 and should connect to a walkable retail street with smaller retail, office or restaurants. Development should be compact, mixed-use and pedestrian friendly that allow of shoppers to park once and get to multiple retail destinations. The future hotel should be easily walkable to retail areas for ease of access from hotel



A Neighborhood Center should have walkable streets including street trees, seating and landscape.



Outdoor seating and gathering spaces create a sense of community along the streetscape.



Architecture should match the community, with windows, doors and street relationships scaled to match the street.

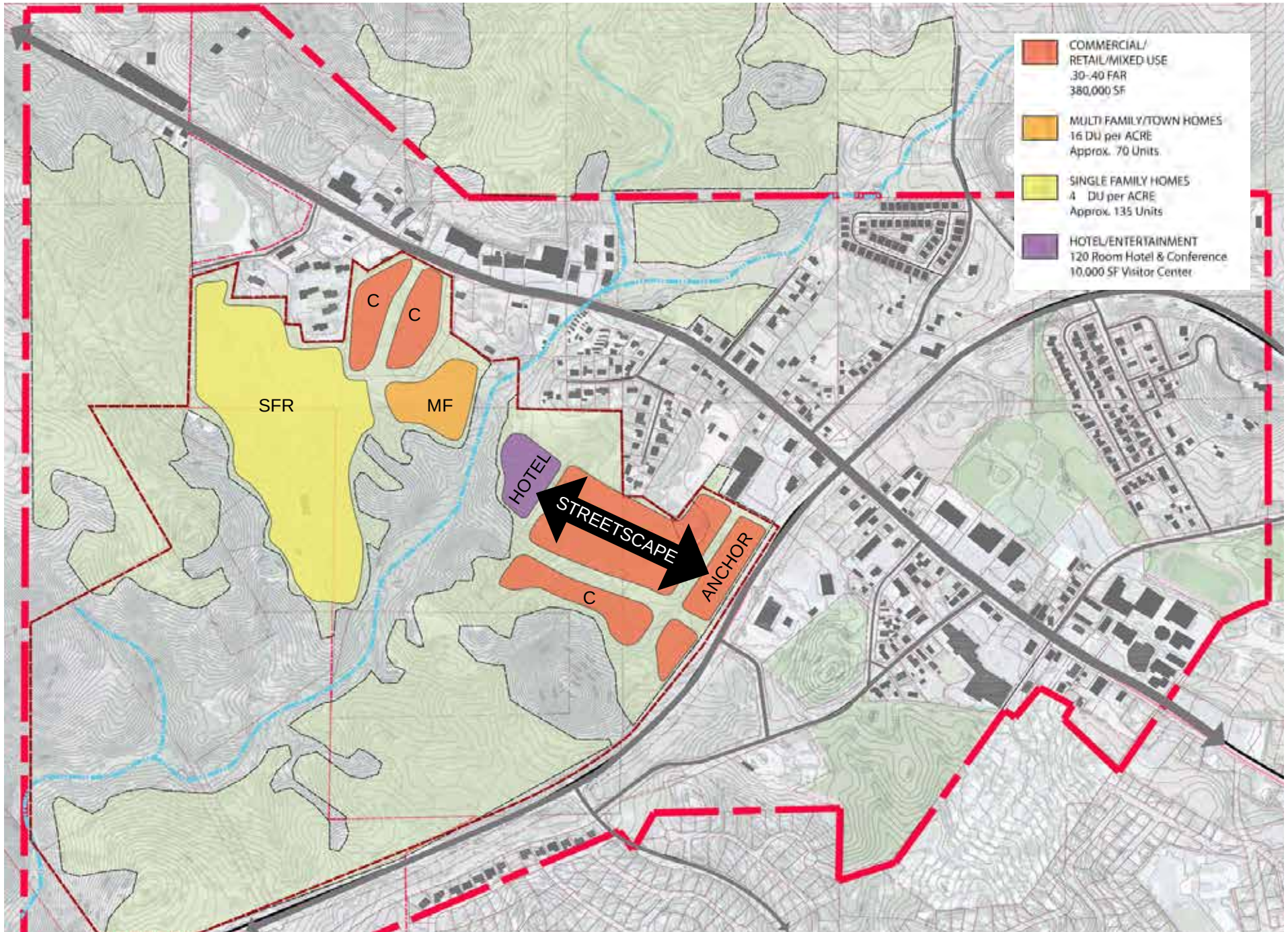


FIGURE 32: FINAL LAND USE PLAN

PREFERRED ALTERNATIVES RECOMMENDATIONS

guests. Future residential should have greenway connections for easy access and provide close proximity to serve lower-income residents.

Key elements of Neighborhood Commercial would include:

- Mixed-use development including housing choices
- Interconnected street system
- Pedestrian oriented streetscape
- Building design at a pedestrian scale
- Reduced building setbacks
- Narrowed street widths and turning radii
- Increased transit and bikes
- Shared and Park once parking strategies
- Civic and Park spaces



SR 49 Improvements: Future ROW improvements should implement continuous concrete walks and bike lanes along SR 49 Roadway as space allows. Plant street trees and landscape as space allows outside Caltrans clear zone requirement.

Section 6.2 Overall Recommendations

This section looks at overall recommendations for the entire study area that can be applied universally to transportation improvements and future development.

Recommendations will align with the goals of the process for;

community feedback;



transportation impacts and potential alignments;



connectivity;



development opportunities and phasing;



gateways.



Foundry Lane/Angel Oaks Extension: Planning should provide a separated multi-use trail with street trees and landscape in the ROW.

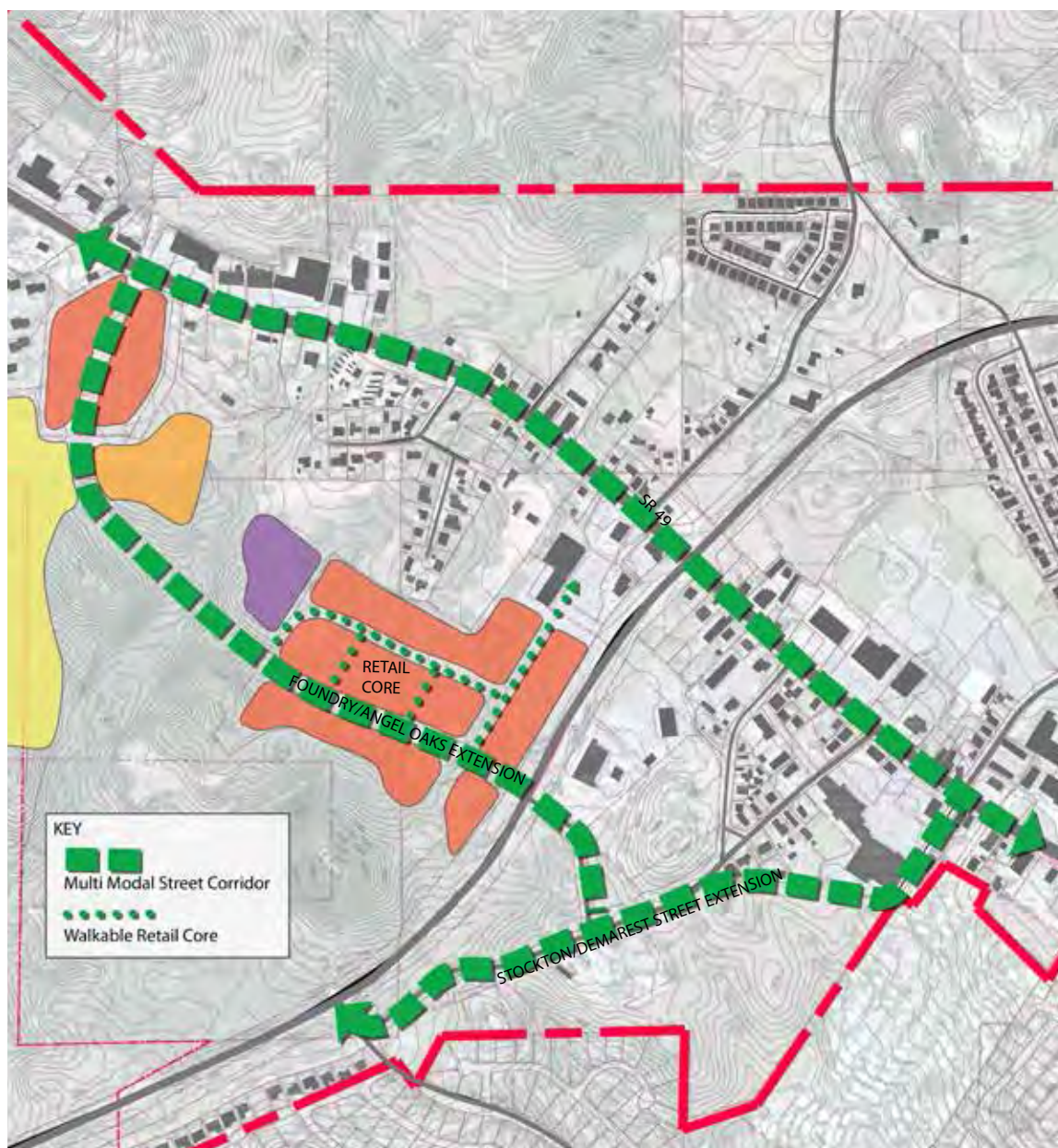


FIGURE 33: MULTIMODAL CORRIDORS SHOULD PRIORITIZE PEDESTRIANS AND BIKE AND ANY FUTURE INFRASTRUCTURE IMPROVEMENTS SHOULD INCORPORATE BIKE LANES AND SIDEWALKS.

6.2.1 Community Feedback:

The overall feedback from the public input process indicated a desire for access at SR 4 to increase jobs and services in the community and to solve the problems at Dogtown Road and Frog Jump Plaza.



6.2.2 Transportation impacts and potential alignments:

Transportation will increase in Angels Camp by 28% by 2040 and action needs to be taken to resolve existing roadway conflicts. Transportation alignments to be addressed include:

- Street A Alignment
- Downtown Connection Alignment
- Regional Connection with access at Foundry Lane and/or Angel Oaks Drive.

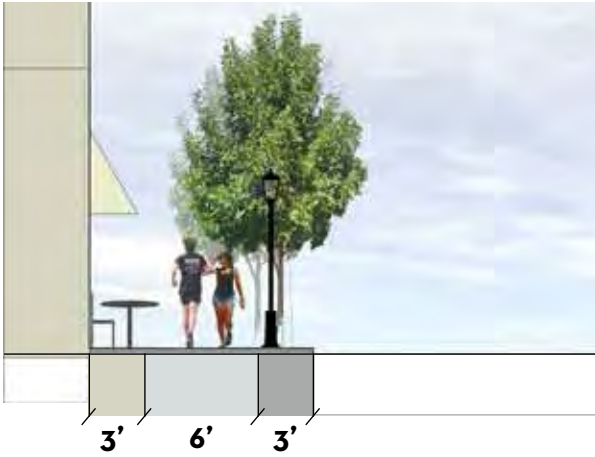


6.2.3 Connectivity:

The project presents the opportunity to make connections to existing streets and increase the connected networks in Angels Camp. Rather than separating areas, future development should strive to promote connectivity to develop a network of primary and secondary streets that connect neighborhoods to retail areas and access to regional roads. In addition, connections should be made for transit, bicycles and pedestrians. Detached sidewalks and bike lanes should be provided on Foundry, SR 49 and Stockton Road to facilitate a 'multi-modal loop' for access to future retail. This includes:

- Sidewalks
- Bike Lanes
- Public Spaces
- Parking and Buffers

PREFERRED ALTERNATIVES RECOMMENDATIONS



Sidewalks are part of the public realm and offer the opportunity for pedestrian spaces.

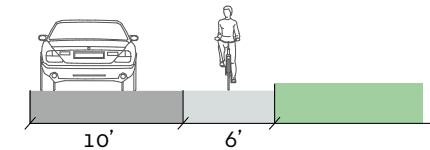
Sidewalks:

Future development of retail areas and roadways should prioritize pedestrians and bikes in addition to vehicular transit. Human-scale building and roadways that are comfortable and safe will promote a healthier and engaged sense of community. Future development along Foundry Lane should include 6' detached sidewalk and Class 1 bike lanes, or a 12' shared multi use path on either side of the roadway to accommodate safe travel for pedestrians. Internal roadways to the retail area should include on-street parking for retail access and a minimum of 12' walks from retail to edge of curb to allow for pedestrian seating/landscape and pedestrian clearance. Future development should:

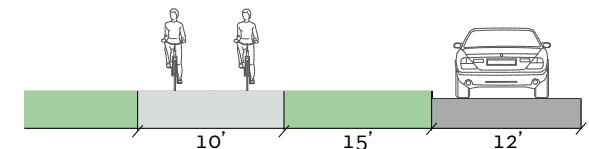
- Promote complete street design for transit, vehicles, bicycles and pedestrians.
- Provide sidewalks and trail connections from retail to residential areas.
- Provide traffic calming along streets such as bump outs, reduced turning radii.
- Provide safe pedestrian crossings at intersections including high visibility crosswalks, pedestrian signals and bollards.

Bike Lanes:

Bikes are an increasingly important form of transit for commuters and growing in popularity as a recreational activity. A bicycle program and route map should be developed for the City of Angels. All roadway improvements on Foundry Lane, Stockton Road and SR 49 should include bike lanes. In addition, bike parking should be provided at major retail destinations. An opportunity exists to develop a bike share program for visitors that could include stations at to the north and in downtown to promote biking in Angels Camp.



A conventional bike lane, class 2, is a minimum of 4' wide and is best of streets with less than 3,000 ADT and streets with posted speed limits of 25mph or less. A buffered bike lane is preferred on streets with extra wide lanes.



A Class 1, Separated bike path can be used for recreation or commuting and is best for trails in areas with minimal intersections or along high volume roads.

Future development should:

- Provide bike lanes along roadways and bike parking outside destinations.
- Develop a bike system in Angels Camp.

Public Spaces

The public realm is the space between buildings and includes streets, alleys, parks, sidewalks, plazas and open spaces. The quality of the public realm is important to attracting people to a place and encouraging them to shop, work and play. The streets should be considered as integral to the open space network and designed for both bikes and pedestrians as well as cars. Similarly, a park or open space could be incorporated into the plans to host events such as concerts or gatherings and attract people to support the shops and stores. Future development should;

- Create a unique sense of place through amenities such as lighting, signage, site furnishings, and art.



Example of pedestrian intersection with bump out for traffic calming, signage, ADA ramp and high visibility pavement markings.

- Contribute to the community by offering a place to gather and interact with one another.
- Use quality and long-lasting materials.

Parking & Buffers:

Parking should be a secondary design feature, however, it is important to economic viability of development. Future retail development should be located behind buildings when possible to screen views from the street. Paseos and alleys can allow access to the retail street. Parking should be accommodated in pockets rather than large fields of parking along the retail street with buffered parking lots to meet retail demand and the larger anchor stores. People should be able to comfortably walk from one store to another rather than get in the car and drive across the block. It is critical that the ROW and space between the building and the roadway be utilized to effectively reinforce the vision of Angels Camp. This includes



Streetscape elements can contribute to the identity of the area and provide a comfortable user experience.

screening unsightly utilities and parking areas. Future development should;

- Incorporate on-street parking.
- Incorporate smaller parking instead of large out of scale parking areas.
- Off set the amount of parking through shared parking and park once strategies.
- Establish a grid network when possible to provide connectivity for users.
- Appropriately screen parking areas.



Example of parking lot screening.

PREFERRED ALTERNATIVES RECOMMENDATIONS



6.2.4 Development Opportunities and Phasing:

Future development along the SR 4 and SR 49 corridors should support sustainable, high-quality and well designed architecture and site planning to enhance the community character of Angels Camp. This includes:

- Building Scale, Massing and Design
- Development Pattern

Building Scale, Massing and Design:

The history of Angels Camp is part of what makes the community unique and special to visitors and residents. Future buildings should respect past tradition in form and scale. Elements such as building heights relative to the street, window and door size and spacing, pattern and fenestration, retail signage and building materials should be used to create a cohesive environment.

- Develop Standards for design through a specific planning process to detail the architectural character representing the scale and tradition of the Angels Camp community.

Development Pattern:

Future development of Angels Camp should respect the scale of smaller building footprints and parking areas respective to the smaller community scale. The code currently limits buildings to under 80,000 SF. Future planning should emphasize the appropriate scale of development for the community. It is important to recognize the influence of design within the community, how people move, interact and use space. Buildings, public space, streets open spaces and systems should work together to develop economic, social and cultural success in the area.

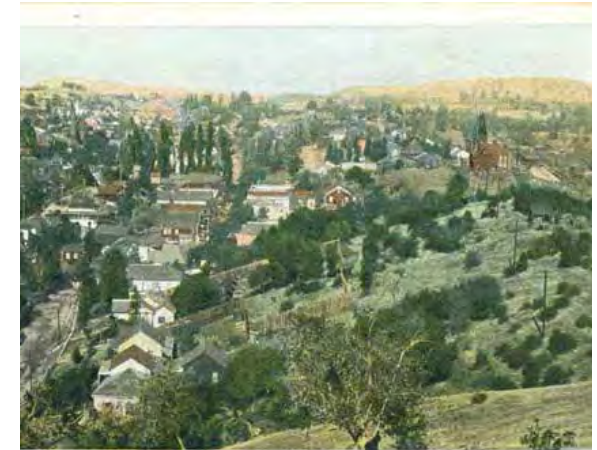
- Understand the scale variations in scale that different development requires and develop a specific plan that supports the development goals of the Angels Camp community.



Varied architectural facades help to minimize the impacts of large building footprints.



Alternatives to traditional box retail includes architectural elements and site design to promote comfortable pedestrian scale.



Traditional building scale of Angels camp shows smaller building footprints with a mining influence.



Development should consider relationships of the building elements and surrounding context.

★ 6.2.5 Gateways:

The arrival into Angels Camp westbound on SR 4 represents one of the land areas for growth within the City of Angels. Given the location and the visibility from SR 4, the character of future growth is important to the image of The City of Angels Camp. As development occurs, guidelines should be developed to maintain or enhance the community character of Angels Camp. This includes:

- Trees and Landscape
- Natural Features
- Signage

Trees and Landscape:

Trees contribute to the well-being of a place. Trees along the roadway provide significant benefits including increased shade for human comfort, increased aesthetics to the community and decreased heat island effect. Spacing should allow for full canopy growth and allow for healthy tree growth. Additional infrastructure improvements could provide the opportunity for storm water retention to decrease infrastructure needs. Proper coordination with utilities such as overhead power, fire hydrants and other utility structures should be identified and minimized. Trees should be limbed up so as not to interfere with truck traffic. Future development should:

- Provide street trees at a minimum of 40' on center and no closer to the curb than 5' and based on the Angels Camp recommended plant list.
- Use planting soil mixes should be appropriate to maintain tree health.
- Plant landscape that is regionally appropriate and minimize water use.

Natural Features:

The natural landscape was identified at the first community meeting as one of the best things about life in Angels Camp. Natural features include grassy, rolling golden landscape and large old oak growth that define the character of the region. Topography, which is often a challenge in initial stages of development, could contribute to the uniqueness of the area when integrated into development. In addition, the woodland and stream corridor are valuable environmental assets and an aesthetic part of the project area. A setback standard along Cherokee Creek of a buffer will ensure these drainage ways are protected and the integrity of the streams and rivers are preserved. Future development should;

- Protect natural resources including terrain, existing trees, streams and creeks.
- Integrate natural features whenever possible to maintain the character of the area.
- Emphasize site design, building design and infrastructures that minimizes environmental impacts.

Signage:

Destination Angels Camp has developed a Gateway Study that designates gateway and wayfinding signage along SR 4 at the entry to Angels Camp. Signage should be implemented as designed and coordinated with Caltrans to meet standards.



Streetscape trees contribute to a sense of scale and comfort as well as provide screening from the roadway and environmental benefits such as off-setting carbon emissions and reduced heat-island effect.



The natural landscape surrounding the City of Angels Camp should be protected. Development should be contextually sensitive and capitalize on views and preservation of the natural environment.

PREFERRED ALTERNATIVES RECOMMENDATIONS

Section 6.3 Street A, Dogtown Road and Frog Jump Plaza

6.3.1 Community Feedback:

The community had the most input regarding this area as it is the area with the most impact to the current transportation network in Angels Camp. The turning movements into and out of Frog Jump Plaza and from Dogtown Road create significant backups. Meeting #2 noted a preference for Francis Street Intersection, stop signs/signals and minimizing the total length of roadway to be built.



6.3.2 Transportation impacts and potential alignments:

Dogtown Road

Per the CIP plan for Angels Camp based on future traffic growth, the lanes along SR 49 from Murphy's Grade to Frog Jump will need to be increased. This roadway expansion would significantly impact the current ROW. This roadway project should include a landscaped median which will extend the total length of the left turn pocket at SR 49/SR 4 eastbound and allow for improved traffic operations at the SR 4/49 intersection. The median will prohibit left turn movements from Frog Jump Plaza northbound on SR 49 and Dogtown Road Southbound on SR 49. Therefore, Street A or a turning movement alternative, such as a mid-block U-turn/Michigan U-turn needs to be built in conjunction with this median.

Street A

The proposed Street A Alignment follows the natural grade and ties in at Francis and SR 49 to the east and Dogtown Road to the west inside the current City limits. A street connection should be made to Clifton Lane at the time of construction. Traffic analysis at Francis



Diagram of a Michigan U-Turn - Image Credit: https://en.wikipedia.org/wiki/Michigan_left



Example Signage

Street shows that the amount of left turn movements from SR 49 North to SR 49 South would decrease operations and a signal with a left U-turn would be preferred. An alternative to this intersection could include a Michigan U-turn between Francis and Frog Jump Plaza that would allow for the left turn movement.



6.3.3 Connectivity:

Future Roadway improvements should include a minimum of a 6' attached walks along either side of SR 49. Preferred improvements would include a detached walk and landscape area to buffer pedestrians from traffic. Bike lanes along SR 49 should be detached based on the traffic counts in this location. Coordination with Caltrans will be needed to meet clear zone requirements within the ROW to include landscape. Walks and bike lanes are allowed in the clear zone. A pedestrian intersection at Francis Street and SR 49 should include crosswalks and signalization. The SR 4 and SR 49 intersection should be reviewed for pedestrian operations. Currently there is not pedestrian movement on the eastern intersections. Efforts should be made to provide a 4-way pedestrian crossing.



6.3.4 Development Opportunities and Phasing:

Development of Street A is limited to when development occurs on the property along SR 49.

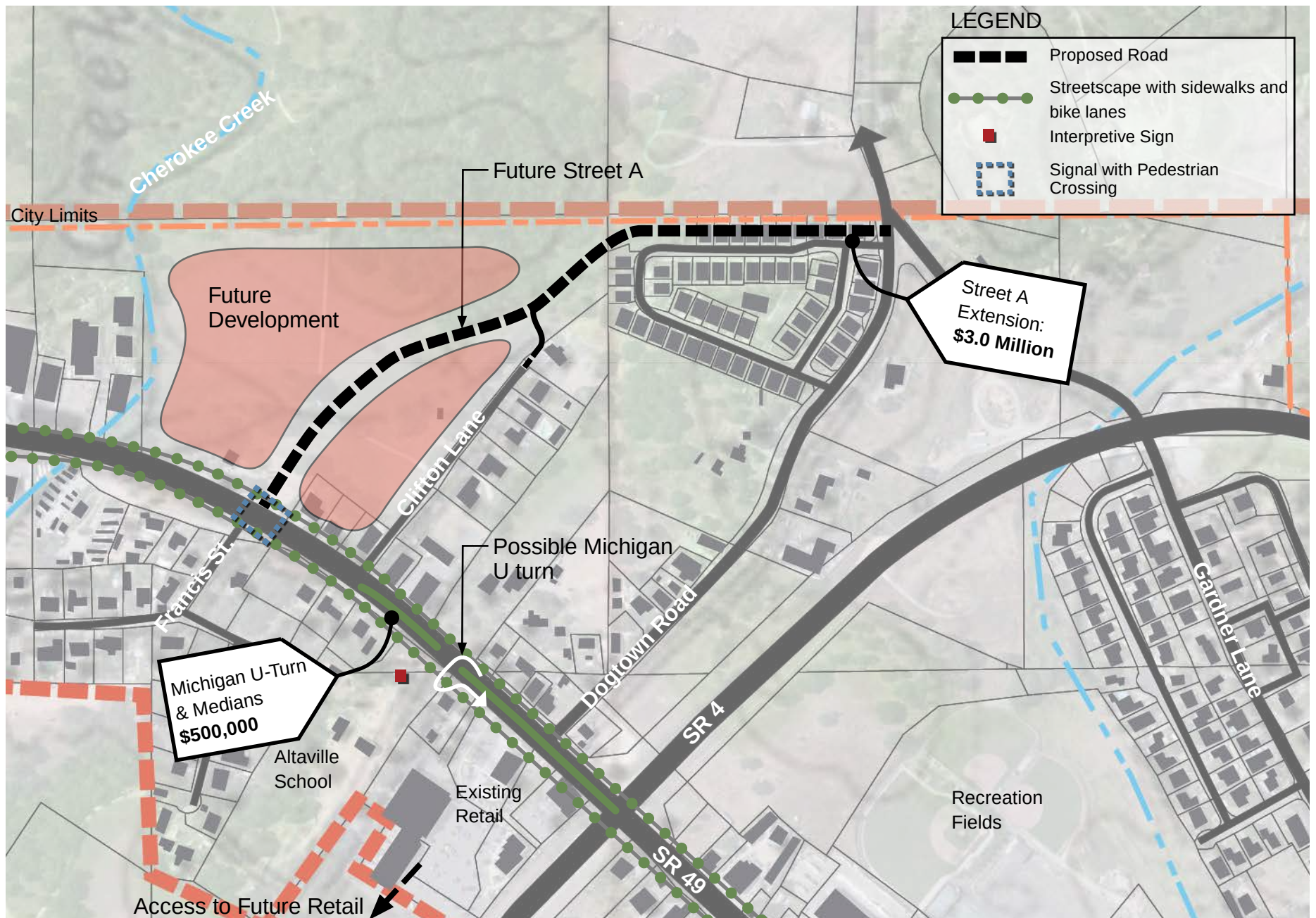
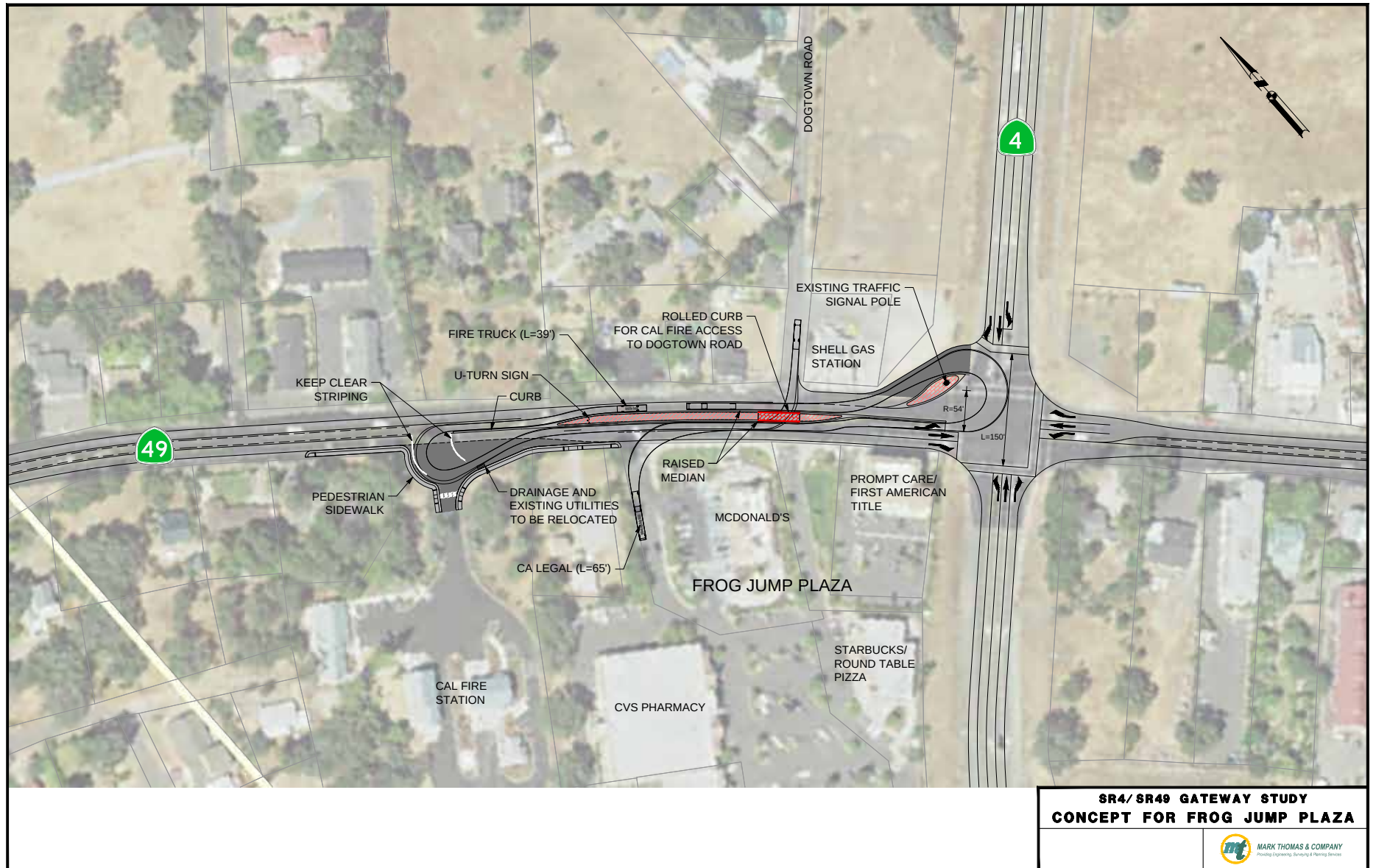


FIGURE 34: DIAGRAM OF DOGTOWN ROAD, FROG JUMP PLAZA AND STREET A IMPROVEMENTS

PREFERRED ALTERNATIVES RECOMMENDATIONS



CalFire Coordination

An alternative to this intersection may include a Michigan U-turn between Francis St. and Frog Jump Plaza that would allow for the left turn movement. The diagram on page 126 illustrates a conceptual level of how a Michigan U-turn could be accommodated in this area. The most appropriate location for the Michigan U-Turn is at Cal Fire's Altaville Forest Fire station, located approximately 220 feet north of the Frog Jump Plaza and Dogtown Rd. intersection. While the vehicle and truck movement can be accommodated with this layout, it is critical that response time and daily operations of Cal Fire will not be compromised.

A meeting was held with Cal Fire to discuss the recommended transportation improvements from the study and what the potential impacts might be on their facility and operations at this location. Cal Fire's main interests and concerns were regarding any improvements that would negatively impact their access at SR 49 as well as their access to Dogtown Road. Currently, Cal Fire is in the process of expanding their facility to accommodate a maintenance/auto shop which will significantly increase the traffic and types of vehicles entering and exiting the facility from SR 49.

The diagram shown illustrates potential solutions to address their concerns. Please note these are conceptual and will require additional review and coordination with Cal Fire when the City moves forward with the next phases of this project. The following summarizes the main concerns and how they could be accommodated.

Access restricted to Dogtown Road:

Access to Dogtown Road is critical and needs to accommodate low-be trailers hauling heavy equipment. With a raised median at Dog Town Road, a left hand turn with trucks and loaders will be difficult. A rolled curb in this location can accommodate this movement while maintaining the uninterrupted median discouraging left hand turns from Dog Town Road. Note that if some version of Street A is constructed, Cal Fire would prefer this over the current Dog Town Road access.

U Turns in front of Cal Fire Facility:

Cal Fire does not want to see more traffic blocking their driveway. Currently Cal Fire experiences vehicles making U turns in front of their property and in some cases vehicles are driving into their facility. This has not only become an access issue with people blocking their driveway, but a safety issue for personnel walking around the facility. By providing a dedicated U turn as illustrated along with adequate signage and striping, this should reduce vehicles from entering onto Cal Fire property. Will maintain a "keep clear" zone in front of the driveway for emergency access.

Existing Utilities and Facilities in Front of Cal Fire:

If improvements occur similar to what is illustrated, there will be additional improvements/ relocation of existing facilities. Without a full understanding of what will be needed, at the minimum it will required modification to the existing drainage, relocating the utilities and potentially the existing bus stop, and modification to the pedestrian sidewalk.

PREFERRED ALTERNATIVES RECOMMENDATIONS

Section 6.4 Stockton/Demarest Street Extension

6.4.1 Community Feedback:

The community generally supported the idea of making a downtown connection and any of the suggested roadways would benefit operations at the SR 4/49 intersection. The priority should be placed on the extension of Stockton through Demarest Street to Murphys Grade Intersection. The other connections noted as alternatives, Angel Oaks Drive extension to downtown and Monte Verda Street extension will also benefit operations and an internal roadway network to make travel easier in Angels Camp. Monte Verda will be considered for future phase. Angel Oaks should continue to be considered by The City as a local collector road to remove vehicle trips from SR 49 and improve travel times.

6.4.2 Transportation impacts and potential alignments:

The downtown connection of Stockton/Demarest significantly improves traffic by removing up to 440 vehicle trips out of the SR 4/SR 49 intersection. Many locals use this roadway as an alternative to access downtown. Extending Demarest Street allows for the intersection to connect at Murphys Grade and provides a link to major collector roads in Angels Camp to create a stronger network of streets.

Either a roundabout or a signal at SR 4 and Angel Oaks would trigger the need to reconfigure the Angel Oaks intersection. Stockton would become the primary roadway and Angel Oaks would 'T' into Stockton Road with a stop sign. This will also alleviate concerns that were noted by local residents about traffic speeds from cars making the turn from SR 4 onto Stockton.



Proposed Stockton/Demarest Streetscape Section

6.4.3 Connectivity:

The Stockton/Demarest Street connection will become an important collector road for the community. It is not through a major neighborhood but connects the Greenhorn Creek neighborhood to local commercial areas and the High School. There is a high potential for walking and biking along this roadway. Based on traffic speeds, the street section for Stockton should include Class 3 bike lanes on the roadway. Sidewalks should be 6' wide and detached from the roadway for pedestrian safety. This would be an ideal roadway for street trees and landscape improvements. Other pedestrian features such as landscaped bump outs for traffic calming and painted crosswalks should be located at the intersections of Angel Oaks/Greenhorn Creek Drive, Foundry Lane and Monte Verda/Demarest Street. A possible historical walking/bike tour could connect some of the local history including the Foundry Building and cemeteries.

Angel Oaks Drive is the first sense of arrival into Angel Camp. This location could provide a 'Gateway Trailhead' with information about transit routes, locate bike rentals, be the first stop for a potential trolley/bus to downtown or provide information about the historical locations encouraging visitors to stay and explore Angels Camp.

6.4.4 Development Opportunities and Phasing:

Priority should be placed on developing a Stockton street connection and extending Demarest Street. This is a 'quick win' for development as it helps operations at 4/49 and is not dependent on access approval on SR 4. An investment in the area including gateway signage, 'Trailhead Center' and streetscape could provide a catalyst to attract development in the area. Funding should be identified to implement initial phases.

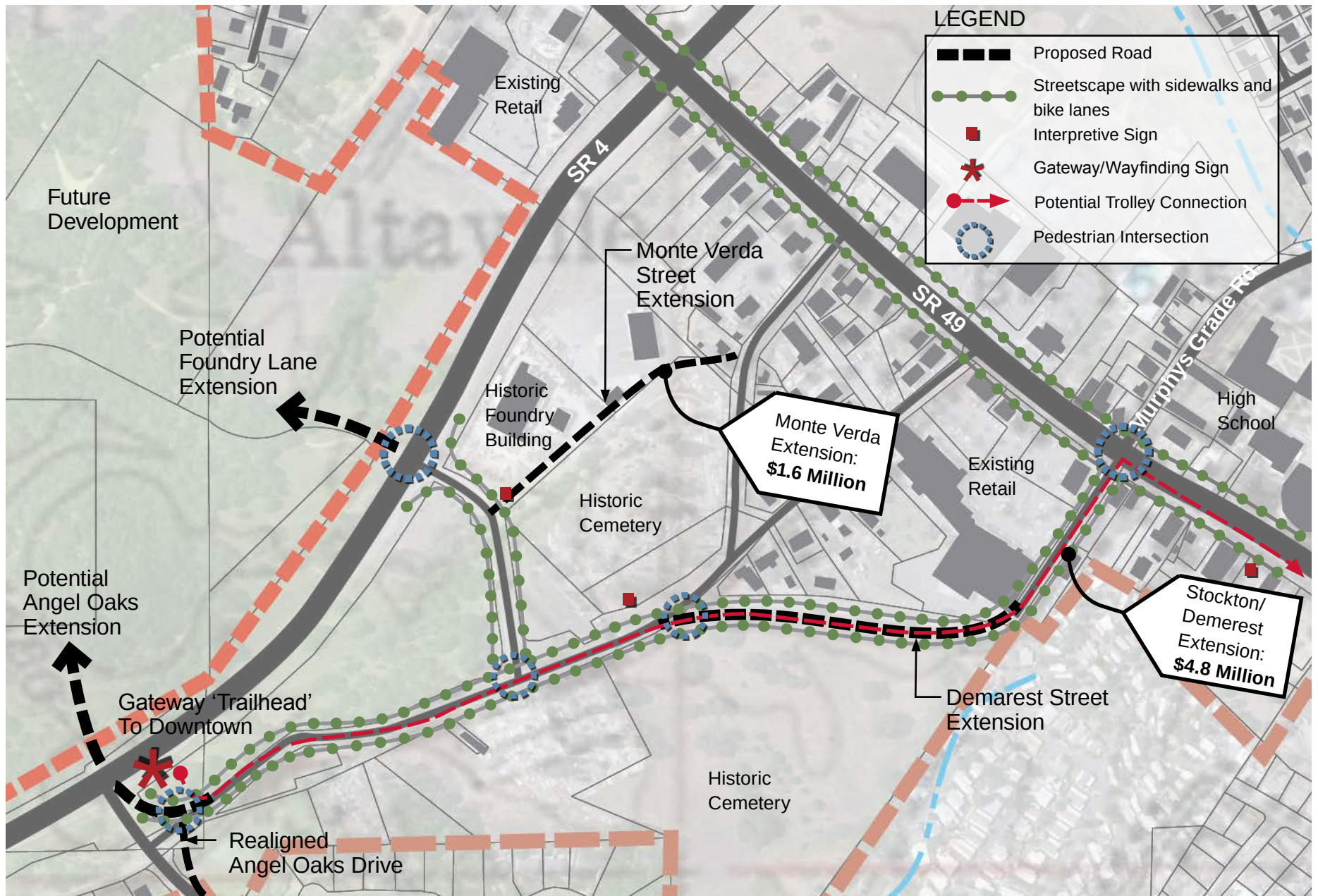


FIGURE 35: DIAGRAM OF DOWNTOWN CONNECTION IMPROVEMENTS

Access at Foundry Lane will require two design exceptions. One for the 1/2 mile intersection spacing standard at SR 4 and Angel Oaks Drive and one for the 1/2 mile intersection spacing standard at SR 4 and SR 49.



Section 6.5 Foundry Lane Access

6.5.1 Community Input

Foundry Lane alternative is preferred for future development of this area by the community, management team, advisory Committee and future developers. This option is more visible from the roadway and easier to access when driving. Discussions with a developers support this assessment.



6.5.2 Transportation impacts and potential alignments:

Access at Foundry Lane shows improved operations by 5-7% when compared to Angel Oaks access only. With a single lane roundabout and right-turn lane bypass the intersection of SR 4 and Foundry Lane would operate acceptably. Signal control was also reviewed at the intersection and this would not operate acceptably. A roundabout is the preferred option for access at Foundry Lane. Meetings with Caltrans also noted that a signal would not be acceptable due to the spacing standard but a roundabout could be considered if traffic operations are not severely impacted.

As noted in section 6.3, the Stockton/Demarest Street Extension would provide an attractive alternative to and from the west. Many local residents already use this as a way to avoid the SR 4 and SR 49 intersection. The SR 4 and SR 49 intersection would operate similarly with a signal or a roundabout. However, the roundabout would eliminate the queuing for left turns on SR 49 that back up significantly.

As noted previously, the Foundry Lane Alternative would require two design exceptions, one exception for being spaced less than 1/2 mile from SR 4/SR 49 and one for being spaced less than 1/2 mile from Angel Oaks Drive. While operations are increased by 5-7% in this alternative, this does not show a significant enough difference for Caltrans to support a design exception. However, additional factors in the PSR development such as development potential and feasibility costs could support this as a more viable alternative than access at Angel Oaks. In proceeding with a PSR all levels of intersections (Stop, Signal and Roundabout) as well as alternatives a part of the ICE process at both Foundry Lane and Angel Oaks Drive.



PREFERRED ALTERNATIVES RECOMMENDATIONS



6.5.3 Connectivity:

Foundry Lane is an essential part of the pedestrian and bike multimodal corridor. Foundry Lane, SR 49 and Stockton Road should prioritize pedestrian facilities such as separated sidewalks, bike paths or bike lanes on roadways at a minimum. Additional roadway improvements include bump outs and pedestrian crossings to provide a safe space for walking. Future development along Foundry Lane should include 6' detached sidewalk and Class 1 bike path, or a 12' shared multi use path on either side of the roadway to accommodate safe travel for pedestrians. Internal roadways to the retail area should include on-street parking for retail access and a minimum of 12' walks from retail to edge of curb to allow for pedestrian seating/landscape and 6-8' pedestrian clearance.

The extension of Foundry Lane creates an important regional connection to the north. This road will be an arterial connection with collector roads feeding into it. All efforts should be made to connect to local streets to develop a connected streetscape network providing travel alternatives to SR 4 and SR 49.

Roundabouts present more challenges for pedestrians and bicyclists than a traditional stop or signal. Consideration to pedestrian and bike movements and appropriate signage should be included in roundabout design.



6.5.4 Development Opportunities and Phasing:

A roundabout at Foundry would be the first to be constructed and would be a catalyst for retail development north of SR 4 and west of Frog Jump Plaza. A roundabout at Angel Oaks would not need to be constructed at the same time, but should be planned



Diagram of pedestrian movements in roundabouts.

for in future phases. The phasing of construction is somewhat dependent on the amount of retail developed and the number of trips that will be generated.



6.5.5 Gateway:

The roundabout at Foundry Lane provides an opportunity for a gateway feature either in the roundabout or to the side of the roundabout. A second alternative could be to relocate old mining equipment into the roundabout as an artistic sculpture which represents the past mining history in Angels Camp.

PREFERRED ALTERNATIVES RECOMMENDATIONS

Images are illustrative in nature only to show the potential scale of development and roadway improvements.



Birds Eye Perspective of roundabout access at Foundry Lane



Birds Eye Perspective of roundabout access at Foundry Lane



Proposed Perspective of SR 4 and Foundry Lane Gateway into Angels Camp

**Access at Angel Oaks
does not require a design
exception.**



Section 6.6 Angel Oaks Access

6.6.1 Community Feedback

The community supported the access at Angel Oaks but most noted a preference for Foundry Lane. Concerns noted by the community included limited visibility to future retail area and promoting sprawl in the community.



6.6.2 Transportation impacts and potential alignments:

Access at Angel Oaks shows a roundabout or signal at the SR 4 and 49 intersection would have higher traffic volumes compared to Foundry Access. However the difference is not significant enough to justify an exception. A potential intersection at Angel Oaks Drive would provide acceptable levels of service with either a roundabout or a signal.

Meetings with Caltrans suggested this alternative is preferred over access at Foundry Lane. However, future development of a PSR will require additional transportation analysis that will address operations at a more detailed level and provide additional information such as a financial feasibility analysis.



6.6.3 Connectivity:

Angels Oaks access is not ideal for bikes and pedestrians access to future retail. Bikes and pedestrians would need to cross at SR 4/49 intersection. If Foundry Lane were a primary pedestrian route as designated, but there is no intersection at Foundry Lane, the best option would be an overpass or underpass on SR 4 to access future retail to the north. An alternative would be to develop sidewalks within the right of way on SR 4 to provide access from SR 4/SR 49 and Angel Oaks/SR

4 intersections from Foundry Lane to provide a safe crossing of SR 4 to access retail.

The extension of Foundry Lane creates an important regional connection to the north. This road will be an arterial connection with collector roads feeding into it. All efforts should be made to connect to local streets to develop a connected streetscape network providing travel alternatives to SR 4 and SR 49.



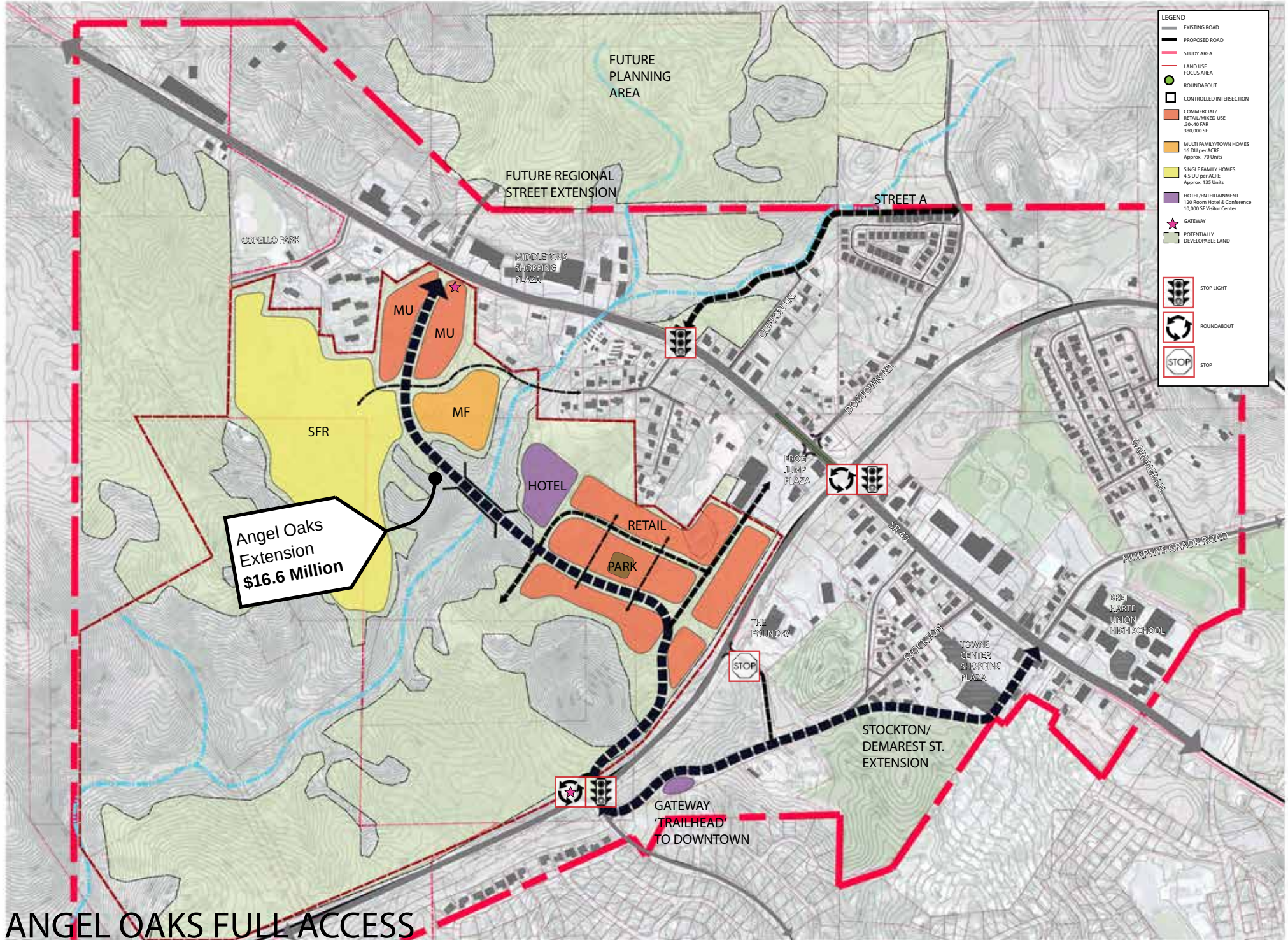
6.6.4 Development Opportunities and Phasing:

The frontage road would be a longer distance of road to construct to access retail.



6.6.5 Gateway:

Angel Oaks Drive is where eastbound travellers initially experience Angels Camp and the ideal location for gateway signage.



- LEGEND**
- EXISTING ROAD
 - PROPOSED ROAD
 - STUDY AREA
 - LAND USE FOCUS AREA
 - ROUNDABOUT
 - CONTROLLED INTERSECTION
 - COMMERCIAL RETAIL-MIXED USE 30-40 FAR 380,000 SF
 - MULTI FAMILY/TOWN HOMES 16 DU per ACRE Approx. 70 Units
 - SINGLE FAMILY HOMES 4.5 DU per ACRE Approx. 135 Units
 - HOTEL/ENTERTAINMENT 120 Room Hotel & Conference 10,000 SF Visitor Center
 - GATEWAY
 - POTENTIALLY DEVELOPABLE LAND
 - STOP LIGHT
 - ROUNDABOUT
 - STOP

PREFERRED ALTERNATIVES RECOMMENDATIONS

Images are illustrative in nature only to show the potential scale of development and roadway improvements.



Birds Eye Perspective of roundabout access at Angel Oaks Drive



Existing Perspective of SR4 Gateway into Angels Camp at Angel Oaks Drive.



Proposed Perspective of SR4 and Angel Oaks Drive Gateway into Angels Camp

6.7: How Goals are Achieved



Transportation Goal: Improve Safety and Access on SR 4 and SR 49

- Traffic will increase 30% by 2040 and solutions have been identified to maintain operations on the state highways.
- Meetings with Caltrans have resulted in two alternatives for how to gain access on SR 4 for future development –at Angel Oaks and/or Foundry Lane. A PSR will need to be developed as a part of future study to gain access onto SR 4.
- Stockton/Demarest extension removes 420 trips per day from 4/49 Intersection and provides an alternative connection to downtown.
- Access at Foundry with a connection the Frog Jump Plaza will remove about 30% of traffic from the SR 49 intersection. Streetscape enhancements including medians and a Michigan U-turn along SR 49 could support a short term solution for congestion until development of Street A.



Connectivity Goal: Build a connected vehicle and pedestrian local network in Angels Camp

- Foundry Lane and Stockton/Demarest Streets will become multi-modal roadway connections.

- Street A will provide an alternative to Dogtown Road and make safer neighborhood streets.
- Bike lanes and sidewalks along SR 49, Stockton/Demarest and Foundry Lane will promote walking and biking alternatives.
- The 'Downtown Trailhead' at Stockton and Angel Oaks will be an opportunity to connect to downtown via local transit or via wayfinding signs.



Economic Goal: Develop economic opportunities along SR 4 & SR 49

- Access at either Foundry or Angel Oaks would support retail, office and housing growth in the local area.
- New development could create 1,500 Jobs in Angels Camp.
- Increased retail will reduce leakage in the primary market area by about 60%.
- 2% Increase in multi-family housing will allow workers to live and work in Angels Camp.
- A mid-scale 120 room hotel and conference center would increase Transient Occupancy Tax (TOT) by 40%.



Gateway Goal: Better define the entry into Angels Camp

- Intersection improvements along SR 4 and SR 49 create an opportunity for gateway signage.
- Roadway improvements along Foundry should include landscape aesthetics along Stockton/Demarest will enhance the sense of arrival.
- Slowing visitors along SR 4 and attracting them to a 'Trailhead' at Stockton and Angel Oaks Drive will encourage visitors to experience Angels Camp.



Next Steps

This chapter includes a summary of implementation strategies for the preferred alternatives and action items for future planning. The following sections are included:

1. Development Program
2. Infrastructure Program
3. Project Phasing Options
4. Infrastructure Funding Sources and Financing Mechanisms
5. Prioritization

Chapter 7: Next Steps

This chapter presents a summary of next steps, plan area land use program, the estimated costs for roadway infrastructure, phasing opportunities, and funding options. Although costs for other types of infrastructure necessary to support build out of the land use program are significant, this section focuses on the costs for roadway infrastructure. The ultimate feasibility of developing the site is contingent upon decisions that are made locally and at the state level about the manner in which the roadway system within the plan area will interface with the State Highway system, namely State Routes 4 and 49 adjacent to the site. This section includes;

1. Development Program
2. Infrastructure Program
3. Project Phasing Options
4. Infrastructure Funding Sources and Financing Mechanisms
5. Prioritization
6. Action Items

7.1: Development Program

Land Use Types and Quantities

Based on the final land use plan, assumptions were made to support the potential development in the land use focus area. A breakdown of the projected areas are as follows:

- Single-Family Homes – 135 units
- Low-Rise Apartments – 70 units
- Retail/Commercial – 380,000 sq. ft.
- General Office – 40,000 sq. ft.
- Hotel/Conference Center – 120 rooms
- Visitor Center – 10,000 sq. ft.

Absorption Rates

Note that the amount of development that the plan can accommodate will likely require a long-term absorption period (i.e., 25 years or more). Thus, as discussed later, successful implementation will require the ability to incrementally phase the development and construct infrastructure over time, corresponding as closely as possible to the rate of absorption for new residential and commercial development. For example, based on the land use demand projections reported in Figure 38, Angels Camp is likely to experience sufficient demand growth through 2020 to support around 80 new single-family housing units and 11 new multifamily housing units. This would be sufficient to support approximately 60 percent of the proposed single-family development and 15 percent of the proposed multifamily development. Through 2040, it is projected that Angels Camp could experience sufficient demand to absorb all of the proposed single-family units, and upwards of 60 percent of the proposed multifamily units. However, there are four previously entitled residential projects in Calaveras County, which could absorb some, if not all, of the projected demand for

new residential units. The nearest competitive supply would come from the Greenhorn Creek project, which is slated to construct 55 single-family units. There are also two projects to the west of Angels Camp in the unincorporated community of Copperopolis and one to the north in San Andreas, which would include a combined 730 units. Due to limited future demand and an existing pipeline of entitled residential development projects, it is anticipated that the residential component of the plan area development will likely represent a longer-term objective.

In addition, as illustrated in Figure 38, Angels Camp may be expected to experience sufficient demand growth through 2020 to support between 40 and 60 percent of the proposed retail development (i.e., between 150,000 and 226,000 square feet). Through 2040, Angels Camp may expect to experience demand sufficient to support between 60 and 90 percent of the proposed retail development (i.e., 219,000 to 342,000 square feet). However, an overall trend of declining average asking rents and low net absorption suggest an underlying softness in the retail real estate market. Despite this, relatively low vacancy and a recovering regional jobs market may offer opportunities for increases in retail floor area.

The preferred land use alternative includes a total of 40,000 square feet of mixed use office space. The land use demand projections indicate the potential for up to 15,000 square feet of medical office space through 2020, and up to nearly 18,000 square feet through 2040. This reflects the relatively weak office market in Angels Camp. In addition, it is projected that there could be sufficient demand for up to around 3,000 square feet of additional general office space through 2020, and up to 4,000 square feet through 2040. Combined, this would equal demand sufficient to

absorb up to 50 percent of the proposed office space through 2020, and up to 60 percent through 2040.

The land use demand projections provided in Figure 38 report potential demand for lodging based on both a low-growth and a high-growth scenario. The low-growth scenario projects demand sufficient to accommodate only seven new hotel rooms through 2020 and 25 through 2040. This represents demand sufficient to absorb only six percent of the proposed hotel units through 2020 and 21 percent through 2040. The high-growth scenario projects demand sufficient to accommodate up to 23 new hotel rooms through 2020 and 105 through 2040. This represents demand sufficient to absorb around 19 percent of the proposed hotel units through 2020 and 88 percent through 2040.

In addition to the land use types described above, the preferred land use plan includes a 10,000 square foot visitor center facility. Due to the unique nature of this use it is anticipated that timing for development of the visitor center is primarily contingent on the ability of the City and collaborating partner entities to secure the necessary funding for construction and operation.

Exhibit A: Projected Land Use Demand by Type, 2015-2040

	New Development Potential	
	2015-2020	2021-2040
Housing (Units)(a)		
Single-Family	79	310
Multifamily	11	45
Retail (Sq. Ft.)(b)		
Low -Grow th	149,900	218,800
High-Grow th	225,900	341,800
Office (Sq. Ft.)(c)		
Medical Office	15,000	17,954
Other Office	3,125	4,217
Lodging (Rooms)(d)		
Low -Grow th	7	25
High-Grow th	23	105

Notes:

- (a) Residential land use demand is based on projected household growth for Calaveras County as a whole, as projected by Caltrans. The figures reported here assume that Angels Camp maintains a constant share of the countywide housing stock, as reported by Nielson for 2014. Household growth is converted to housing units based on existing occupancy and unit characteristics, as reported by Nielson.
- (b) Retail land use demand projections are based on phased capture of existing retail leakage, combined with population growth, as projected by Caltrans. The projections also account for projected growth in direct visitor spending. The low-growth scenario is tied to the county-wide population growth rate, while the high-growth scenario is based on the historic growth rate in travel spending in Calaveras County between 2000 and 2012.
- (c) Office land use demand is based on projected employment growth in office using industries. For the 2015-2020 period, the figures are based on projections published by the Employment Development Department, as well as the city's share of countywide employment, as reported by the Census Bureau. Projections for the period from 2021 to 2040 are based on the projected employment growth rate in affected industries in Calaveras County, as reported by Caltrans.
- (d) Low-growth projections assume that demand for visitor lodging will grow at a rate that is concurrent with projected population growth. The figures reported here are based on the number of rooms reported by Smith Travel Research in 2014 and population growth projections provided by Caltrans. High-growth projections assume a continuation of the historical rate of growth in the number of hotel rooms in Calaveras County for the period from 2000 to 2012, as reported by the California Travel and Tourism Commission. The baseline room count is that reported by Smith Travel Research for 2014.

Sources: California Travel and Tourism Commission, 2014; Caltrans, 2014; Census Bureau, American Community Survey, 2014; Employment Development Department, 2014; Employment Development Department, 2014; Nielsen, 2014; Smith Travel Research, 2014; BAE, 2014.

FIGURE 38: EXHIBIT A: PROJECTED LAND USE DEMAND BY TYPE, 2015-2040

Access at Foundry Lane would provide the shortest route, and most direct access, to the retail development fronting along SR 4. This equals an estimated cost differential of approximately \$4.0 million, or about 32 percent less than the Angel Oaks Access Alternative.

7.2: Infrastructure Program

This infrastructure analysis primarily focuses on the impact of the two roadway configuration alternatives due to their direct effect on the likely feasibility and success of the development proposed within the plan area. Because of the different designs, there are varying implications for the ability of the City and/or a developer to incrementally phase infrastructure development within the study area. While other pieces of important backbone infrastructure – such as water, sewer, stormwater and wet and dry utilities – may also impact the relative cost burden and the ability to identify a viable phasing strategy, these infrastructure components are much less likely to vary between the two alternatives and their designs will not be constrained by state decision-making to the same extent as the roadway configuration.

Improvement Types and Costs

Cost Estimates were developed for the alternatives and preliminary costs applied based on a lineal cost per lane foot. 6-page Caltrans estimates can be found in the appendix. A breakdown of the costs are as follows:

- Street A: \$610/Ln. Ft. for a total of 3 Million.
- SR 49 Streetscape Enhancements (Median and Michigan U Turn) for a total of 2.8 Million.
- Stockton/Demarest Street Extension: \$640/Ln.Ft. for a total of \$4.8 million.
- Monte Verda Street Extension (Foundry Lane alternative Only) at \$640/Ln.Ft. for a total of \$1.8 Million.
- Foundry Lane Extension with Roundabout from SR4 to Bridge at \$1800/Ln.Ft. Frog Jump Plaza

connection at \$1000/Ln.Ft. for a total of \$12.6 Million.

- Angel Oaks Drive Extension at \$1800/Ln.Ft. and Frog Jump Plaza/Angel Oaks Access at \$1000/Ln.Ft for a total of \$16.6 Million.

Roadway Infrastructure

The two final roadway configuration alternatives are similar in most respects, but with a number of key differences. As illustrated in Figure 36 - Final Alternative 1 Access at Foundry Lane and Figure 37 - Final Alternative 2 Access at Angel Oaks, both alternatives include the Street A and Stockton/ Demarest Street Extensions. Both alternatives include a new intersection with State Route 49 (SR 49) south of Copello Road and a new roadway that would extend southward to State Route 4 (SR 4). Both alternatives would include a bridge over Cherokee Creek, as well as a smaller roadway that would provide connectivity to the existing Frog Jump Plaza shopping center. The main point of differentiation between the two alternatives is the location of the access point on SR 4. Under the first alternative (Figure 36), the City would build a SR 4 roundabout or signalized intersection at Foundry Lane. This alternative would provide the shortest route, and most direct access, to the retail development fronting along SR 4.

Costs estimated the total cost for construction of publicly maintained roadway infrastructure under the first alternative at approximately \$12.6 million, including all necessary roadways and intersection components. The second alternative (Figure 37), by comparison, would include an intersection with SR 4 at Angel Oaks Drive, which is farther to the west and farther from the existing SR 4 and 49 intersection. This would require the construction of a frontage road that would extend

from Angel Oaks Drive to the area north of Foundry Lane. Costs estimated the cost associated with the construction of all necessary publicly maintained roadway infrastructure, including intersections, at approximately \$16.6 million under this alternative.

This equals an estimated cost differential of approximately \$4.0 million, or about 32 percent greater for the second alternative, which would need to be absorbed by the proposed development.

In addition to the higher cost, the second alternative is less desirable from a commercial visibility and access standpoint. The use of the frontage road between Angel Oaks and Foundry Lane would be particularly disadvantageous from the standpoint of attracting eastbound regional highway traffic from SR 4 as it approaches the SR 4 and SR 49 intersection. This is because drivers may be well past the Angel Oaks Drive access point before seeing the plan area's commercial development. By the time eastbound drivers would be most likely to notice the commercial development in the plan area, they would be nearing Foundry Lane, but would not be able to access the commercial development on the north side of SR 4 without traveling further east to the SR 49 intersection and then maneuvering back to the west. From a site marketing and business viability standpoint, this is far less desirable than providing access directly to the commercial area via an extension of Foundry Lane into the plan area.

Other Infrastructure Costs

Other backbone infrastructure components that will have the most significant impact on the overall infrastructure cost burden include water, sewer, stormwater, and wet and dry utilities. Onsite improvements of these types are typically designed to city standards and funded by the land developers.

As mentioned previously, it is assumed that the costs for these improvements will not vary significantly, depending on the alternative roadway configuration that is ultimately approved for the plan area.

Costs for offsite improvements to infrastructure systems that will serve new development within the plan area will largely be handled through the City's impact fee programs. According to City staff, the City of Angels currently charges impact fees to collect funds intended to offset the cost of providing certain municipal capital facilities. Most fees are levied on either a per dwelling unit or per non-residential building square foot basis, though the citywide Traffic Mitigation Fee is based on the number of estimated "trip ends" when applied to commercial and industrial uses. Funds collected through the City Services Impact Mitigation Fee are generally intended to support the development of police and fire protection facilities, among other uses. Revenues for the development of water and sewer facilities serving the city are collected through Water Capital Improvement Fees and Sewer Connection Fees.

Roadway Infrastructure Cost burden Analysis

In order to assess the relative cost burden associated with the development of necessary roadway infrastructure, a preliminary cost burden analysis was conducted which spreads the cost of the roadway improvements for the two different roadway access alternatives over the development envisioned in the preferred land use alternative and allows a comparison of the differences in cost impacts for each land use type. Again, the focus is on the roadway infrastructure, because of the potential for significant variability in costs that would be dictated, depending upon which of the two alternative roadway configurations is approved.

From a site marketing and business viability standpoint, access at Angel Oaks is far less desirable than providing access directly to the commercial area via an extension of Foundry Lane into the plan area.

Land Use Type	Anticipated Development	Trip Generation Factors (a)	Total Est. Trips (a)		Cost Burden (\$Millions)(b)		Average Cost Burden Per Unit (b)	
			Number	Percent	Alt. 1 (c)	Alt. 2 (d)	Alt. 1 (c)	Alt. 2 (d)
Retail/Commercial	380,000 sq. ft.	21.3 /1,000 sq. ft.	8,087	83%	\$10.48	\$13.81	\$28 /sq. ft.	\$36 /sq. ft.
Low -Rise Apartment	70 units	3.3 /unit	231	2%	\$0.30	\$0.39	\$4,272 /unit	\$5,628 /unit
Single-Family Residential	135 units	4.8 /unit	646	7%	\$0.84	\$1.10	\$6,204 /unit	\$8,173 /unit
Hotel/Conference Center	120 rooms	4.5 /room	535	6%	\$0.69	\$0.91	\$5,782 /room	\$7,618 /room
General Office	40,000 sq. ft.	5.5 /1,000 sq. ft.	220	2%	\$0.29	\$0.38	\$7 /sq. ft.	\$9 /sq. ft.
			9,719	100%	\$12.6	\$16.6		

Notes:

- (a) Based on average daily trip estimates provided by Fehr & Peers. Estimates include round-trip travel and are based on average weekday traffic volumes.
- (b) Based on the total cost burden for construction all necessary city maintained roadways.
- (c) Includes a primary access point from SR4 located at Angel Oaks.
- (d) Includes a primary access point from SR4 located at Foundry Lane.

Sources: Fehr & Peers. 2015; BAE, 2015.

FIGURE 39: PRELIMINARY ROADWAY COST ALLOCATION

A simple roadway cost allocation model shown in 39, using trip generation factors supplied by the traffic analysis, where each land use type is assigned a trip generation factor that reflects the relative demand for roadway infrastructure that it creates. By multiplying the quantity of each land use by the appropriate trip generation factor, and summing the products, the total number of project trips is calculated. Then, the total cost for each roadway alternative is divided by the total number of plan area trips, to determine the average cost per trip generated. Finally, by multiplying the average cost per trip by the number of trips generated by a unit of development, it is possible to estimate the roadway infrastructure cost burden (i.e., pro-rata cost share) that could be assigned to each land use type.

approximately 83 percent of the cost of the plan area roadway infrastructure. This is because retail uses are relatively heavy trip generators relative to a similar quantity of general office space and/or residential structures. As a result, the roadway infrastructure cost burden is relatively high, at \$28 per square foot for retail/commercial under roadway Alternative 1 and \$36 per square foot under Alternative 2. These costs would be in addition to costs for other onsite infrastructure as well as costs for other applicable citywide development impact fees. At these levels, it will be very important for project proponents to work as diligently as possible to obtain approval for the more economical alternative.

As shown in Figure 39, the retail/commercial component of the land use plan is allocated

Summary Table of Costs per Improvement

Dogtown Road, Frog Jump Plaza and Street A Improvements

STREET A EXTENSION	\$3,000,000.00
MICHIGAN U-TURN	\$500,000.00

Downtown Connections Roadway Improvements

STOCKTON ROAD EXTENSION	\$4,800,000.00
MONTE VERDA STREET EXTENSION	\$1,600,000.00
REALIGNMENT OF ANGEL OAKS DRIVE	\$100,000.00
TOTAL	\$10,000,000.00

Alternative 1- Foundry Lane Extension

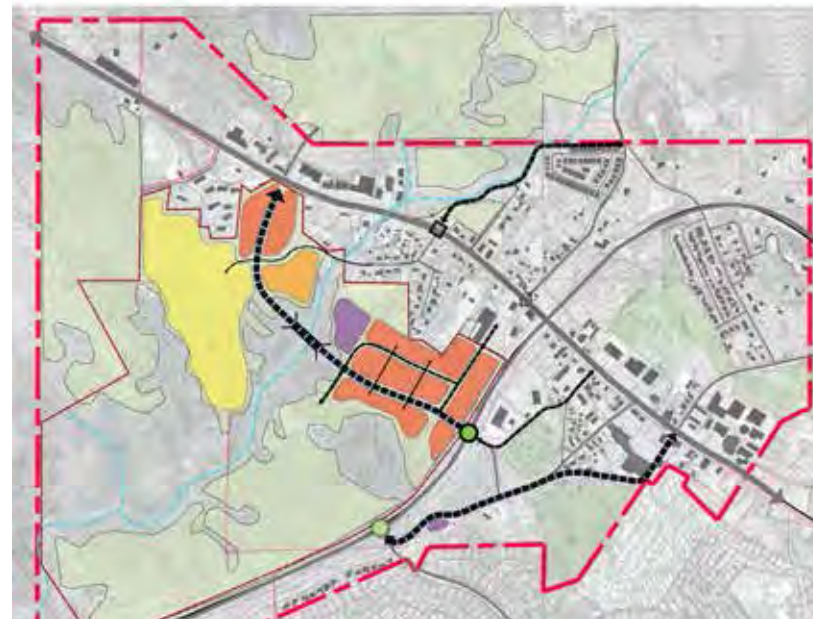
ROUNDBOUT AT SR 4/SR 49	\$300,000.00
ROUNDBOUT AT FOUNDRY LANE	\$300,000.00
FUTURE ANGEL OAKS ROUNDBOUT	\$300,000.00
FOUNDRY LANE EXTENSION ROADWAY	\$12,600,000.00
TOTAL	\$13,500,000.00

Alternative 2- Angels Oaks Drive Extension

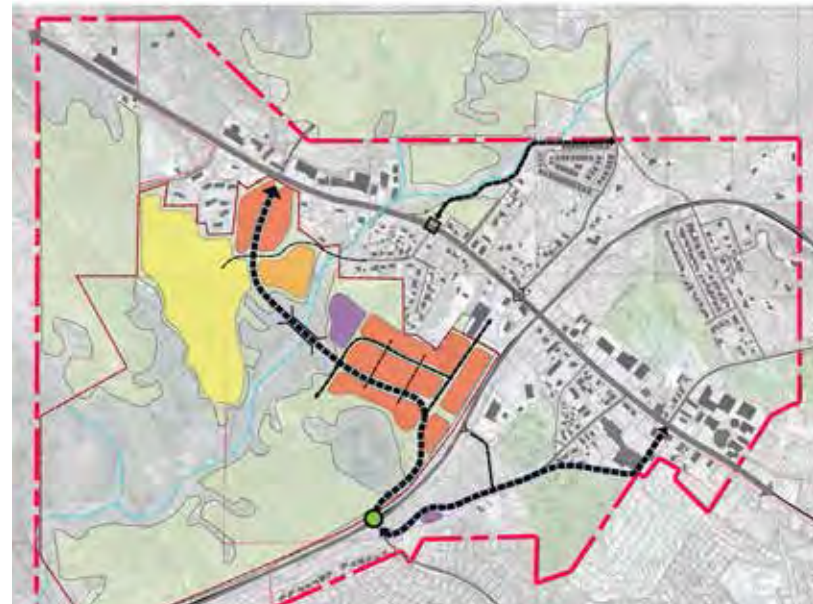
ANGEL OAKS ROUNDBOUT	\$300,000.00
ANGEL OAKS DRIVE EXTENSION	\$16,600,000.00
TOTAL	\$16,900,000.00

Note: These are planning level cost estimates. All analysis and costs assumes full build out of improvements. Further design and engineering is required.

Foundry Lane Access, Alternative 1 - Refer to Section 6.4, Page 132



Angel Oaks Access, Alternative 2 - Refer to Section 6.5 Page 136



Establishing a Management Team from the existing plan partners is recommended. It is intended for the Management Team to work together to identify a coordinated approach to gaining access at Foundry Lane to promote development in the Land Use Focus Area.

7.3: Infrastructure Funding Sources and Financing Mechanisms

The following provides a brief overview of potential funding sources and approaches that the City and developers may utilize in order to pay for the construction of the necessary plan area infrastructure.

Developer In-Kind Contributions

For a land development project such as this, infrastructure improvements are typically the responsibility of the developer(s), unless other funding sources can be identified. This is a cost which needs to be included in the overall project development budget and financed along with other development costs, such as vertical construction (i.e., buildings and associated improvements). Although backbone infrastructure, such as the Foundry Lane road extension, will be dedicated to the City as public property, developers typically prefer to construct the improvements to City standards and then dedicate the improvements once they are completed, rather than paying the City to construct the improvements on their behalf.

Plan Area Fees or Infrastructure Cost Reimbursement Agreements.

One challenge in developing a larger plan area arises when there is more than one property owner and backbone infrastructure costs must be spread equitably amongst the benefitting properties, and/or when the owners who are developing their properties early on must pay for certain improvements which are needed up-front, which will ultimately benefit other property owners who will develop their properties at a later date. A plan area infrastructure fee administered by the City can be structured to help equitably distribute costs among owners and allow for owners who dedicate

land, for backbone roadway rights of way for example, to be reimbursed by fees paid by other owners whose properties will benefit from those new improvements. Reimbursement agreements among property owners are another mechanism available to help achieve similar goals.

Opportunities to Share Infrastructure Cost Burden

Due to the relatively high costs of roadway infrastructure necessary to serve the plan area development, it would be beneficial if the development within plan area itself were not solely responsible to pay for all of the costs. This may be appropriate if the development of the plan area infrastructure would also create benefits for development in other locations within the City, in which case some cost sharing may be equitable, and beneficial.

Local Impact Fees

As a new project, none of the infrastructure requirements identified in this plan are included in existing Angels Camp impact fee programs; however, to the extent that any of the public infrastructure that would be constructed within the plan area would address infrastructure demands created by development elsewhere within Angels Camp, it is possible that local impact fee programs could be modified to include costs that are allocable to new citywide or regional development, and then some funds from future impact fees could help to offset some of the plan area infrastructure costs, as appropriate.

Local Sales Tax Measure

Some communities have had success in bundling various public improvements into programs that are then funded with a special voter-approved sales tax add-on. Because of the need for voter approval, it

would be necessary to show the community-wide benefits that could come from the proposed public investments. Additionally, it would be helpful to show that the development in the Highway 4/49 area, through development of new retail sales tax generating activity, could help to generate new City revenues that will help to fund improvements and services elsewhere in the community, for the broad benefit of Angels Camp as a whole.

Calaveras County Roadway Impact Mitigation (RIM) Fee Program

This countywide impact fee program funds roadway improvements necessary to mitigate the impacts of new development on the regional roadway system, including local roads of regional significance. The City of Angels should explore the possibility of having plan area roadway improvements that would help to relieve traffic congestion on the SR 4 and SR 49 roadway segments surrounding the 4/49 intersection included within the RIM capital improvements list. To the extent that regional development benefits from the plan area roadway improvements, RIM fees collected from new regional development could help to defray some of the project costs. The County anticipates updating the RIM Fee Nexus Study in concert with the update of the Calaveras County General Plan. Since the Nexus Study has not been updated since 2004, this may represent a relatively rare opportunity to request that new projects be added to the RIM capital improvements list.

Regional Transportation Funding

Calaveras County Council of Governments (CCOG) functions as the Regional Transportation Planning Agency for Calaveras County, which is responsible for

coordinating and administering federal, state, and local funds that support the regional transportation network, for purposes including improving highway safety, relieving traffic congestion, and promoting economic development. As such, CCOG, develops an annual work program, a long range regional transportation plan (RTP), and a regional transportation improvement program (RTIP) that is included in the State Transportation Improvement Program (STIP), which Caltrans administers. To the extent that the plan area roadway improvements would help to enhance the regional transportation system, they may be eligible for federal or state funding assistance, which would reduce the costs that would otherwise have to be borne by local funding sources and/or the land developers. CCOG also administers federal Congestion Management and Air Quality (CMAQ) funding, and this source may be another opportunity to position Plan Area improvements that would help to relieve traffic congestion and/or promote alternative transportation for funding.

State Grant Programs

Although CCOG administers and coordinates the local allocation of funds from many state transportation programs, there may be opportunities for the City to apply directly for some state grants, such as the Safe Routes to Schools (SR2S) program, or programs that target projects that will help the State achieve sustainability and greenhouse gas reduction goals. In the case of these two examples, funding for improvements that would help to facilitate alternative transportation, such as walking and cycling, would be the most likely candidates for funding. A number of these programs have been consolidated within the California Transportation Commission's Active Transportation Program. In

addition, Caltrans administers the SHOPP program (State Highway Operation and Protection Program), which funds rehabilitation, maintenance, operations, and safety improvements on state highways and bridges. To the extent that some of the roadway improvements along Highways 4 and 49 would help to meet objectives of the program, the City may be able to propose them for SHOPP funding.

Public Financing Mechanisms

One method to help alleviate infrastructure cost burdens and assist with development feasibility is for the City to partner with the plan area property owners and developers in to establish a mechanism to finance some of the required public improvements using publicly-issued bonds that are paid off over time, rather than requiring the developers to privately finance all of the improvements. Among other benefits of public financing mechanisms, tax exempt status for certain bonds can lower interest rates, and public financing allows developers to shift the debt liability off their balance sheets. Assessment districts, Mello-Roos Community Facilities Districts (CFD), and Enhanced Infrastructure Financing Districts (EIFD) are examples of different types of financing tools that California jurisdictions can use to help finance public infrastructure.

Assessment districts and CFDs are mechanisms which levy an additional assessment or special tax, respectively, on property within a specified area, in order to pay for improvements which benefit the affected properties. The owners of the property are responsible to pay the annual assessment or special tax levies that repay the bonds. The City will need to work with property owners to determine if use of an assessment district or CFD would be a desirable implementation tool.

Funding Strategies

Developer In Kind Contributions

- Plan Area Fees or Infrastructure Cost Reimbursements

Shared Costs

- Local Impact Fees
- Local Sales Tax Measure
- Roadway Impact Mitigation Fee Program (RIM)
- Regional Transportation Funding
- State Grant Programs

Public Financing Measures

- Assessment Districts
- Community Facility Districts
- Enhanced Infrastructure Financing Districts

The EIFD is a relatively new form of financing district which, rather than adding a new assessment or special tax, diverts all or a portion of the increase in the sponsoring agency's property tax revenues and/or property tax in-lieu of vehicle license fees (ILVLF) revenues (i.e., tax increment) generated in the plan area, for qualified purposes that benefit the plan area. This is similar to the way that Redevelopment Agencies collected property tax increment before they were abolished during the last state budget crisis. The decision on the use of an EIFD would be weighted more towards the City, since the primary financial impact is on the City, which would forego potential future tax revenues, although issuance of EIFD bonds requires 55% voter approval. Use of an EIFD could be appropriate if the community-wide benefits from the project would outweigh the foregone tax increment. Additionally, should the total infrastructure cost burden for the plan area prove to be a significant barrier to development feasibility, an EIFD may be one of the only tools directly under the City's control that would help to inject some public funding into the project that would help to catalyze the development.

There is an example of a hybrid financing mechanism employed by El Dorado County to finance transportation improvements in a commercial area. El Dorado County's Missouri Flat Master Circulation and Funding Plan (MC&FP) represents a collaboration between property owners and the local government to finance public improvements necessary to allow development to proceed within a defined project area. The County pledged via a "Funding Agreement" that was incorporated into Development Agreements with major property owners, to utilize a portion of the incremental property taxes and sales taxes that new commercial development in the area would generate, to pay the debt service on bonds that would be issued

to pay for new improvements. In order to share the risk and guarantee a funding source for the repayment of bonds in the event that the agreed-upon property tax and sales tax revenue share was not adequate to cover the debt service, the property owners agreed to formation of a CFD that would serve as a back-up mechanism to generate needed revenues. In addition, the County worked to secure STIP grant funding to pay for some of the improvements and the County also directed the use of money from its countywide Transportation Impact Mitigation (TIM) fees to pay for some of the improvements.

One or more of the financing mechanisms just discussed may be particularly useful in the Plan Area the City and developers are successful in developing an infrastructure phasing strategy that defers construction of costly improvements until later stages of the development. If an assessment district, CFD, or EIFD is formed early in the development process, it could give the City and developers a method to establish a secured funding source by which subsequent property owners would participate in the funding for necessary improvements over time.

7.5: Prioritization and Implementation

From an economic development standpoint, the City should prioritize efforts to secure the necessary Caltrans approvals for the Foundry Lane access point from SR 4. As discussed previously, this will provide superior visibility and access for commercial tenants that are located on the SR 4 side of the plan area. In addition, this will achieve a significant cost savings for roadway infrastructure, which will benefit project feasibility, and this alternative will also facilitate a much more favorable phasing strategy to help initiate commercial development at the site.

Beyond the preference for the Alternative 1 roadway configuration, the City and developers should try to gear the phasing of plan area development to begin as near as possible to the SR 4 and SR 49 access points, and then gradually build toward the center of the site, extending infrastructure incrementally as development proceeds. If possible, the construction of the bridge on the Foundry Lane roadway extension should be constructed as late as possible, when as much of the plan area development has been absorbed as possible. This is because the roughly \$6 million cost of the bridge represents about half of the total roadway cost for Alternative 1, and about 38 percent of Alternative 2. It will greatly improve overall development feasibility if this costly piece of infrastructure does not need to be financed until most of the development is in place or nearing construction, and thereby providing a larger base of improved properties to share the financing burden.

A few actions items should be established. An identified project team should work to establish a Management in order to implement the plan's recommendations. The City and project team should retain a consultant to help with the development

of a CTC approved PSR for the entire project area, with Foundry Lanes access as an alternative. In order to address safety issues at Dogtown Rd., the City should also seek approval from Caltrans for short-term improvements on SF 49, such as the Michigan U-turn, no right on read, and no parking in front of Shell gas station. The project team and City should work to identify funding for the Gateway Monument and Stockton Road/Demarest Extension Improvements and further trolley or bus transit opportunities along

the SR 49 corridor. Investments in this location could incentivize future developers, therefore an area plan and design guidelines should be developed with a consultant and incorporated into a 2020 general plan for commercial development in order to guide the character of development within the Land Use Focus Area. In addition to development, the 2020 General Plan Land Use and Transportation Elements should be updated to reflect the findings of this study.

ACTION ITEM	STRATEGY
Establish a Management to progress plan recommendations	Identify project team. Identify and develop a core approach to implementation.
Develop a PSR for the entire project area, with Foundry Lane access as an alternative.	Retain a consultant to provide services for development of plans. Obtain CTC approval.
Evaluate short-term improvements on SF 49 such as the Michigan U-turn, no right on red, and no parking in front of Shell gas station to address immediate safety issues at Dogtown Rd.	City to request evaluation for these short-term safety improvements from Caltrans.
Gateway Monument and Stockton Road/Demarest Extension Improvements to address congestion at SR 4 and SR 49 Intersection and arrival into Angels Camp. Investment in this location could incentivize future developers.	Identify a funding mechanism such as Safe Routes to School to provide roadway and pedestrian improvements along Stockton Lane to attract development to the north of town and support downtown growth. Explore opportunities for trolley or bus transit along SR 49 corridor.
Develop an area plan and design guidelines for future development at in the Land Use Focus Area to guide the character of future development.	Retail a consultant to build off the recommendations of this study and the 2020 general plan for commercial development.
Update the Land Use and Transportation Elements of the 2020 General Plan to reflect the findings of this study.	

7.6: Project Study Report Process

The PSR process can be a lengthy process and begins with feasibility studies and ends with a completed project. The process allows for citizens and agencies to comment on the project.

A PSR needs to have a clearly defined purpose and need with a scope of work that is clear and obtainable. The primary objective is to achieve consensus from agencies which can take up to 40% of the effort to ensure the needs and purpose are met. This process is outlined as follows;

Project Initiation Document

This beginning stage usually takes 6-12 months to assemble. This includes scope of work, budget and schedule as well as a refined purpose and need statement.

Secure project programming

The project will need to compete for available funding sources to provide a means for the following stages of the project. A project team will be assembled.

Draft Project Report & Environmental Studies

The project report and environmental studies are two separate steps that run in parallel process and can take from 2-5 years based on the complexity of the project. This includes engineering to describe the work and the consideration of alternatives under a variety of circumstances. Environmental studies could include a range of studies including air quality, wetland impacts, archeological surveys, water quality and visual impacts to name a few. The goal is to find the least environmentally damaging alternative.

Secure Project Approval:

Approval needs to be granted from regulatory agencies including the California Transportation Commission (CTC).

Note, it is possible that 2-5 years of environmental studies and project alternatives could result in project denial. The intent of this study is to look at a range of solutions to determine feasibility of the PSR process resulting in a positive outcome. Our initial findings and early discussions with Caltrans suggest a strong case for access at SR 4 based on financial feasibility for the cost of roadway, increased economic development opportunities, mitigation of some traffic on SR 49, 5-7% increased traffic operations and meeting Caltrans district goals for multimodal design.

Final Design

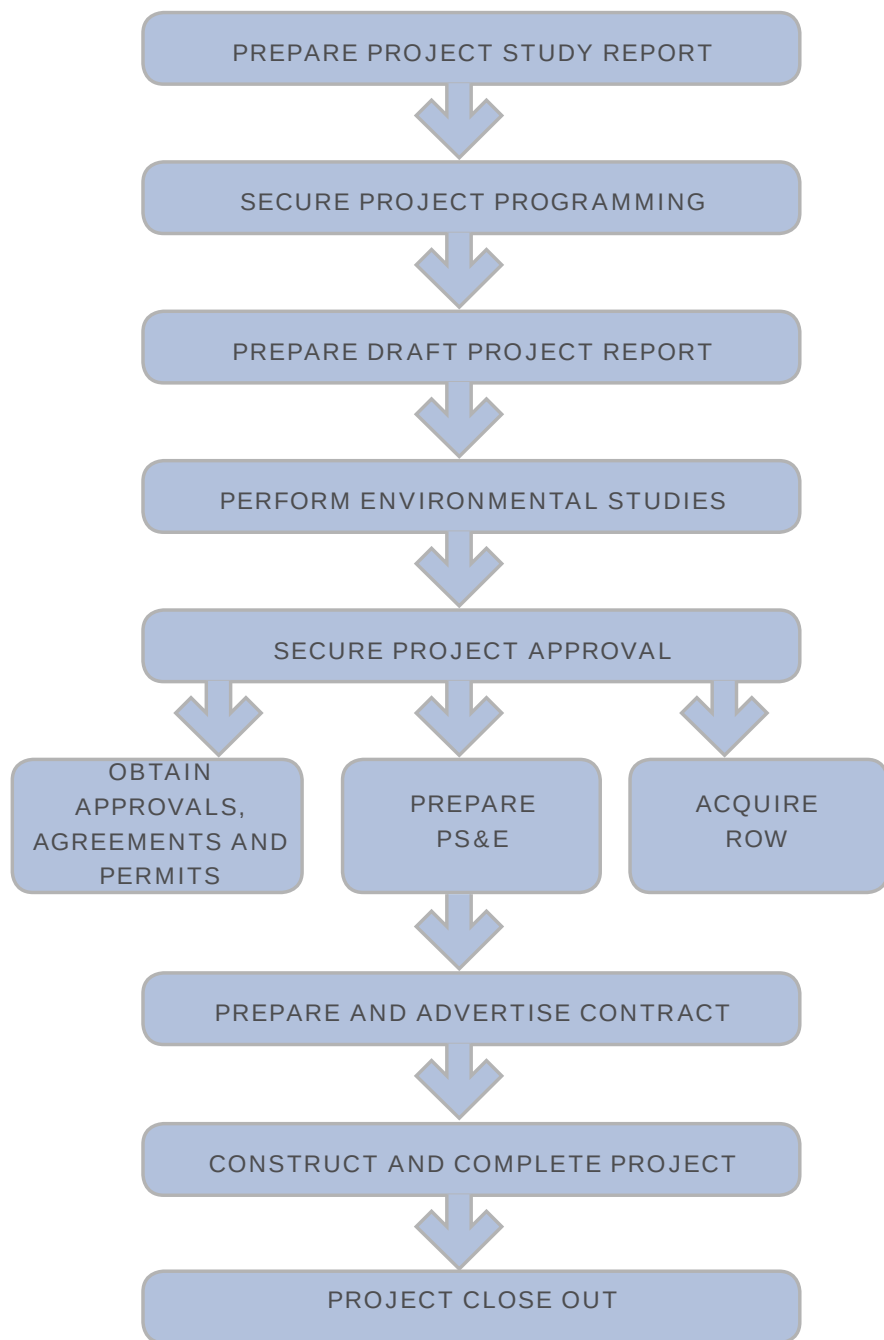
This stage is typically 2 years or less depending on project size and develops all levels of the approved design from roadways engineering to landscape and aesthetics. During this stage the right of way is acquired to assure there is physical room to build the project. This also includes all permitting and agreements needed as a part of the ROW acquisition and final design process which could include cooperative agreements, freeway and access agreements, relinquishment agreements and maintenance agreements.

Construction and Project Close Out

When design is complete a contractor is selected and a construction contract is awarded for the construction of the project.

The Needs and Purpose need to be met so careful consideration should be given to develop a clear and compelling statement.

A successful PSR will involve resource agencies at the beginning of the project. A process will be developed to manage Memorandums of Understanding and have a well developed scope and schedule. Since the timeline can be extensive, concurrent development by specialized consultants will help to expedite the process. Be sure to involve outreach to stakeholders, agencies at critical times to achieve consensus.



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APPENDIX MARKET ANALYSIS

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APPENDIX Public Outreach Documents

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APPENDIX

Transportation Report

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