



# STATE ROUTE 82 RELINQUISHMENT EXPLORATION STUDY

## Final Report

October 2015



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# EXECUTIVE SUMMARY

## OVERVIEW

The State Route 82 (SR 82) Relinquishment Exploration Study was initiated by the Grand Boulevard Initiative (GBI) Task Force and Metropolitan Transportation Commission (MTC) to investigate the Caltrans relinquishment process, potential benefits and estimated costs associated with relinquishing SR 82 from state ownership to the individual local jurisdictions.



One of the key challenges identified by the Grand Boulevard Initiative and other cities in redesigning urban highways like El Camino Real is the process for transforming state highway facilities into complete, multimodal, sustainable streets that encourages walkability within communities and mixed-use development investments.

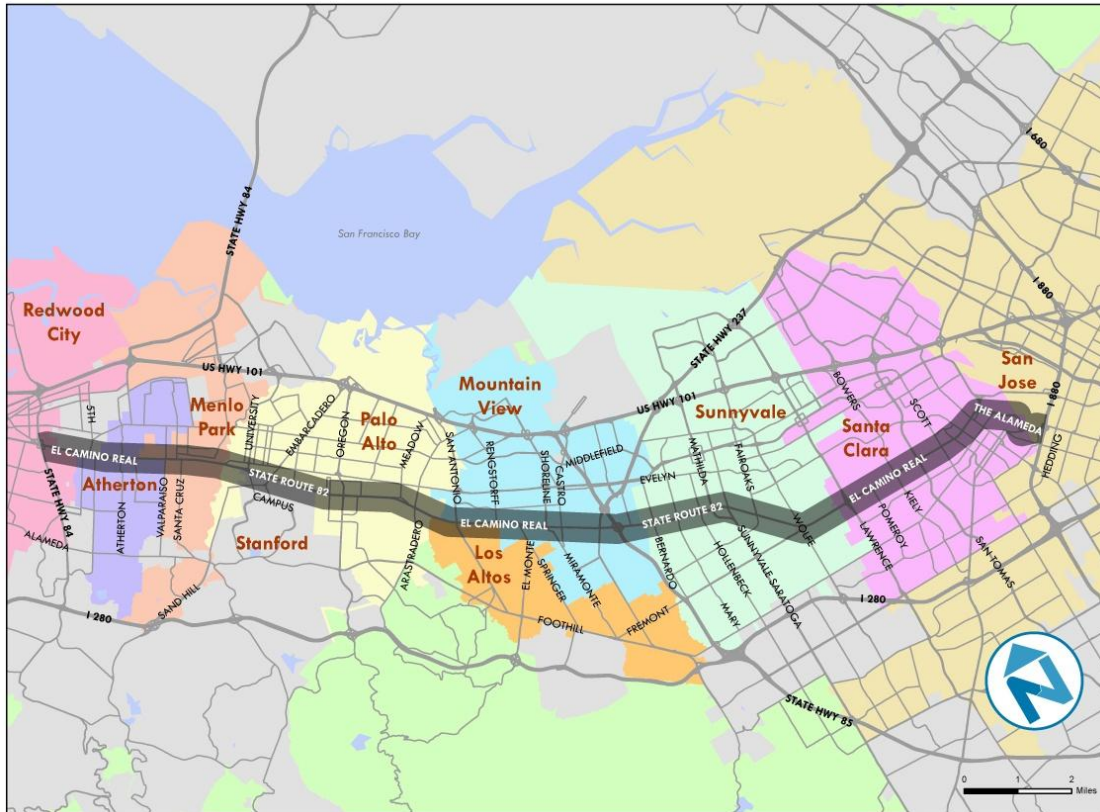
The investigation of relinquishment supplements an earlier effort by the Grand Boulevard Initiative in its Removing Barriers to Sustainable Communities Tiger II Complete Street Project Report, December 2013.

The study area selected for the SR 82 Relinquishment Exploration Study extends approximately 20 miles along El Camino Real from I-880 in San Jose to State Route 84 in Redwood City. In this study area, the US-101 and I-280 freeways provide interregional routes that run parallel to SR 82 through the Peninsula and South Bay. The study area and its context in relation to these parallel routes can be seen in Figure 1.

This report presents the following findings from this investigation:

- Caltrans' Relinquishment Process
- Relinquishment Case studies
- Existing Conditions of SR 82 Study Area
- Operating and Maintenance Cost Analysis
- Potential Funding Sources

Figure 1 Study Area



## GRAND BOULEVARD INITIATIVE

The Grand Boulevard Initiative is a collaborative planning effort of 19 cities, counties, local and regional agencies, as well as representatives from private businesses and non-profit organizations along the Peninsula, united to improve the performance, safety and aesthetics of El Camino Real.

The full scope of the Initiative focuses on the 43-mile stretch of El Camino Real/Mission Street (SR 82) from the San Francisco/Daly City boarder to the downtown San Jose.

The Vision of the Initiative is that:

“El Camino Real will achieve its full potential as a place for residents to work, live, shop and play, creating links between communities that promote walking and transit and an improved quality of live.”

## SR 82 EL CAMINO REAL

Historically, El Camino Real functioned as a thoroughfare for 500 miles, facilitating travel between California’s missions. Today, the El Camino Real corridor functions as an urban arterial that operates between U.S. 101 and I-280, two of the principal freeways for moving vehicular traffic along the Peninsula. SR 82 is the only arterial that connects each of the downtown areas between San Francisco and San José. In some cities, El Camino Real has been maintained as a city street. It serves not only automobile traffic, but also significant volumes of pedestrian, bicycle, and bus traffic.

The corridor is in proximity to Caltrain, a regional transit network, which has been the backbone for SamTrans and VTA bus service. State Route 82 is of specific interest given that the Grand Boulevard Initiative and VTA Bus Rapid Transit studies proposed revitalization of the streetscape, which could be facilitated by transferring the corridor's authority to the cities. In particular, the Grand Boulevard Initiative Task Force surveyed its members and found interest among Santa Clara County cities to explore the relinquishment process.

## **STUDY PURPOSE**

The purpose of the study is not to make a recommendation regarding whether cities should pursue relinquishment but rather to provide sufficient information about the relinquishment process for cities that may be considering relinquishment to understand the process.

The main goals of the SR 82 El Camino Real Relinquishment Exploration Study is to provide communities and stakeholders in Santa Clara and San Mateo counties, as well as other cities in the Bay Area, with information to help make informed decisions about relinquishment. This information includes the following:

- An understanding of Caltrans relinquishment policies and processes;
- Case studies of recent highway relinquishments including schedules, budgets, and staffing resources; and
- An assessment of existing conditions and public infrastructure along El Camino Real including estimate costs of relinquishment, annual maintenance costs, and discussion on potential funding sources.

## **STUDY APPROACH**

The approach for the State Route 82 Relinquishment Exploration Study was developed in consultation with a number of stakeholders from multiple agencies including the Metropolitan Transportation Commission (MTC), Santa Clara Valley Transportation Authority (VTA), San Mateo County Transportation Authority (SamTrans), and the California Department of Transportation (Caltrans). Input was also provided by members of the Grand Boulevard Initiative including the cities of Redwood City, Atherton, Menlo Park, Palo Alto, Mountain View, Los Altos, Sunnyvale, Santa Clara, and San Jose.

The approach included literary research on the State's relinquishment process and legal requirements, an examination of recent relinquishment projects using case phone and interviews with local agency staff, an assessment of existing roadway conditions and state of good repair, estimated operations and maintenance costs and identification of funding sources.

It should be noted here that the scope for this study was reduced from its original concept of covering 43 miles from Mission Street in Daly City to The Alameda in San Jose due to political sensitivity about relinquishment and resources needed from the local cities to support the study. The current study area was selected based on logical terminus points for relinquishment and voluntary participation from the local cities.

## THE RELINQUISHMENT PROCESS

Relinquishment as defined by Caltrans is “the conveyance of all rights, title, interests, liability, and maintenance responsibilities of a State highway, or portion thereof, to another government entity.”<sup>1</sup>

The first section of the study investigates the rationale, process, and legal requirements associated with relinquishment of a state highway facility, based on current statutes, guidelines, and the recent relevant experience of a number of cities within California. Remy Moose Manley, LLP conducted a review of the legal process associated with relinquishment, and Nelson\Nygaard provided an examination of the motivations for relinquishment and the timeline for completion. This section also includes an overview of the documents, plans, and legislative actions that must be completed as part of the relinquishment process (summarized in Figure 2).

The most straightforward relinquishments occur when Caltrans builds a highway that bypasses a historic route, directly eliminating its usefulness to regional travel. This study focuses on a second class of relinquishment, which occurs by legislative enactment, and does not include a bypass being constructed. This scenario is more directly relevant to the El Camino Real study area.

This review found that cities pursue relinquishment of state roadways for various reasons, including the following:

- Changing street function over time
- Desire for more flexible street design
- Issues of control over traffic management
- Shorter permit process for changes along the route, both to street design and development patterns

The state has generally been receptive to relinquishment of conventional highways (non-freeways) that do not serve a regional or interregional function due to the potential cost savings of no longer maintaining the roadway. As a result, cities often are successful in negotiating with Caltrans for one-time repair costs to the roadway as part of relinquishment. The trade-off of relinquishment for cities, however, is the added cost of taking on maintenance and liability for the roadway into perpetuity.

Even as Caltrans seeks to relinquish more conventional state highways that no longer (or never did) serve a regional or interregional function, however, the agency has also recently endorsed new guidelines that may make it easier for cities to accomplish their street design goals without taking ownership of the roadway. Caltrans has indicated that the organization intends to shift away from *design exceptions* toward a model of *design approval*, which emphasizes greater flexibility to find design solutions to roadway challenges that may not be spelled out explicitly in the agency’s Highway Design Manual. The ultimate outcome of these changes remains to be seen, but in some cases cities that previously would have pursued relinquishment may wish to attempt to work with Caltrans to achieve street design changes before going down the path of relinquishment.

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<sup>1</sup> Caltrans Project Development Procedures Manual, Chapter 25, December 12, 2014.

The major steps included in relinquishment are summarized in Figure 2, including the approximate time they occur relative to finalizing the relinquishment (note that this timeline refers to a case where a city is pursuing relinquishment, but relinquishment may also be pursued by a county if the roadway is in an unincorporated area). This timeline can vary widely depending on a variety of factors, such as the parties’ ability to agree on the terms of relinquishment, and should be taken as a general guideline. In some cases, such as the current negotiations over Tiburon Boulevard in Tiburon, the process can stall completely for periods of time, in which case the timeline will be greatly extended. Each step is discussed in much greater detail in Chapter 2 of this study.

**Figure 2**      **Timeline of the Relinquishment Process (Approximate)**

Time Prior to Relinquishment (Approximate)	Action(s)
2+ years to relinquishment	City requests relinquishment of state highway segment from Caltrans Caltrans prepares Relinquishment Assessment Report (RAR) for potential highway or highway segment to be relinquished to determine whether relinquishment is "in the best interests of the State" Caltrans determination that segment no longer serves state needs
18 months to relinquishment	Enactment of state legislation authorizing relinquishment Project Scope Summary Report (PSSR) prepared to identify costs and benefits for state
12 months to relinquishment	Negotiation on terms of agreement between Caltrans and city, incorporated into final relinquishment agreement
90 days to relinquishment	Caltrans sends notice of intention to relinquish to local City Council
Relinquishment	California Transportation Commission (CTC) resolution authorizing relinquishment and any transfer of funds
After Approval	Caltrans files of a certified copy of the CTC resolution with City Clerk

## RELINQUISHMENT CASE STUDIES

The case studies include interviews covering five cities where relinquishment was recently completed, two cities where relinquishment is currently being considered, and one city where relinquishment was considered but not pursued. All examples are from California and several are from the Bay Area (Caltrans District 4), similar to El Camino Real. The case studies include an evaluation of the motivations behind relinquishment, the negotiation process with Caltrans, the costs and funding sources associated with relinquishment, and any street design changes cities made after taking control of the roadway. In each case, the roadway was a conventional urban highway that was not bypassed by a new freeway, similar to El Camino Real. Other recent relinquishment examples were reviewed as well as part of the investigation, but the following case studies were chosen for being both recent and most relevant to the study area. It is important to note that, while the following case studies generally involved compensation from Caltrans for making improvements to the roadway condition, many other relinquishment processes are “no cost” relinquishments, and involve no compensation for bringing the roadway to a state of good repair.

The following cities were included in the case study interviews:

**Figure 3 Relinquishment Case Studies**

Date	Road Name (Route)	City (Caltrans District)	Length (miles)	Relinquishment Agreement
2010	Mission Boulevard, Foothill Boulevard, Jackson Ave (SR 238/185/92)	Hayward (District 4)	5.1	\$0 <sup>2</sup>
2012	The Alameda, Monterey Highway, Alum Rock Ave (SR 82, SR 130)	San Jose (District 4)	12.6	\$12.4 million <sup>3</sup>
2012	Lincoln Boulevard (SR 1)	Santa Monica (District 7)	1.25	\$2.2 million
2014	Las Positas Boulevard (SR 225)	Santa Barbara (District 5)	4.7	\$819,000
Ongoing	Tiburon Boulevard (SR 131)	Tiburon	1	N/A
Ongoing	Jackson Road (SR 16)	Sacramento (District 3)	11	N/A
~2019	Tower Bridge (SR 275)	Sacramento / West Sacramento (District 3)	0.14	\$2.0 million (5 years O&M)
N/A	Van Ness (U.S. 101)	San Francisco (District 4)	2	N/A

From the investigation of these case studies, the following key lessons emerged:

- Cities most often request relinquishment to achieve street design goals and avoid the Caltrans permitting process
- Most cities negotiate for funding to bring the roadway to a state of good repair, or Caltrans performs these repairs before relinquishing the roadway
- Cities often have concerns about liability, as they generally become responsible for all future crashes that occur on the relinquished roadway
- Some cities were surprised by non-transportation assets they inherited, e.g. stormwater drainage facilities, especially if these assets were not in good condition
- Historic assets can be an issue for cities if they need to be preserved
- Some cities choose not to pursue relinquishment to avoid ongoing operations, maintenance, and liability costs

Based on these case studies, the following key questions emerged for cities to consider:

- What are the city’s aspirations for the corridor? What are the city’s expectations for the street compared to Caltrans' current design flexibility and permit process?
- What is the state of repair of assets to be relinquished?
- What resources are available for negotiating and studying relinquishment?
- What resources is Caltrans willing to provide to cover repair costs? Are other funding sources available?

<sup>2</sup> The City of Hayward received money from the state through another source, as discussed in the case study in Chapter 3.

<sup>3</sup> This funding was provided in part through a complicated funding swap at the expense of other programmed projects, and therefore may not be directly applicable to other relinquishment processes.



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- What funding sources are available for future costs associated with ownership of the roadway?
- What is the City's relationship with neighboring jurisdictions? Could multiple cities join together in pursuing relinquishment jointly?

The case studies also highlight Caltrans' preference for relinquishing roadways in logical segments, generally the end of the route segment or between two other state highways. There were numerous exceptions to this policy, however, and in some cases, such as State Route 1 in Santa Monica, a roadway that continues through several jurisdictions was relinquished in pieces over a period of time to different jurisdictions. A different model for El Camino Real is provided by the example of the Tower Bridge, which spans two cities, Sacramento and West Sacramento. Negotiations are still underway for that relinquishment, and cities along El Camino Real may benefit from watching it closely for examples of a joint relinquishment process.

Fact sheets for each case study are provided on the following pages.

# Case Study 1: Mission Boulevard & Foothill Boulevard (formerly SR 92, 185, 238) in the City of Hayward

*Mission and Foothill Boulevards are historic urban routes between San Jose and the East Bay in the City of Hayward.*

## Anticipated Benefits of Relinquishment

The city pursued relinquishment of 5.1 miles of these routes to improve traffic flow through implementation of a one-way street system, reduce project implementation time, facilitate local street design, and allow for use of local standards.

## Relinquishment Details

The facility was relinquished as-is, without financial contribution from Caltrans. Formal relinquishment took approximately two years, concluding in 2010.

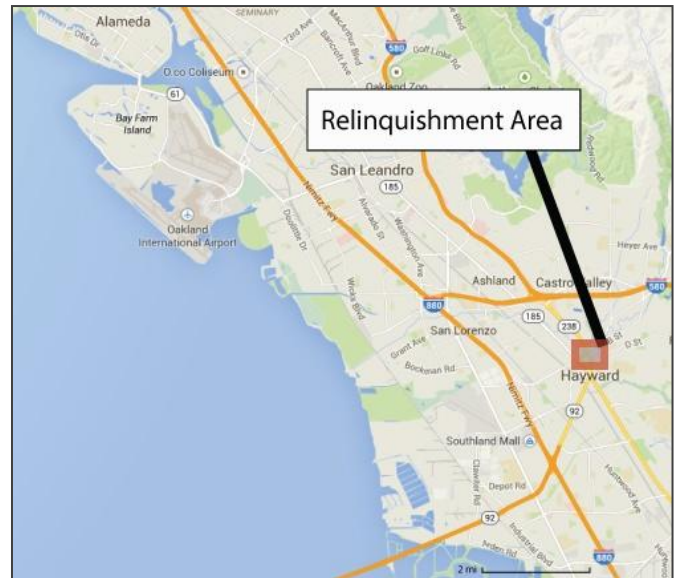
## Roadway Changes and Costs

Phase 1 of the roadway changes implemented after relinquishment was completed in 2013 and funded using Alameda County Measure A funds (\$80 million), Caltrans LATIP funds (\$8 million), PG&E Rule 20 funds (\$6 million), and City funds (\$1.5 million). The remaining \$22 million of Caltrans LATIP funds will be used on subsequent phases.

## Other Issues and Costs

Relinquishment-related costs included in-house labor such as the city attorney and Sacramento-based lobbyist. Ongoing maintenance costs have been rolled into regular city maintenance costs.

All Caltrans assets within the right-of-way were relinquished to the City, including freeway wayfinding signage and stormwater infrastructure owned by Caltrans and operated in agreement with Alameda County Flood Control District. The latter asset incurred unexpected costs as a result of infiltration and groundwater contamination.



Base map: Google Maps



Before



After

Source: Google Maps

## Case Study 2: The Alameda, Monterey Highway, and Alum Rock Avenue (formerly SR 82, 130) in the City of San Jose

*The Alameda, Monterey Highway, and Alum Rock Avenue are historic routes. The Alameda is an urban road that connects to El Camino Real. Monterey Highway has been superseded by other state routes.*

### Anticipated Benefits of Relinquishment

The city pursued relinquishment of 12.6 miles of facility to streamline economic development, facilitate roadway changes, create more walkable, bicycle-friendly places, support BRT implementation, and authorize special events without the need for encroachment permits or design exceptions.

### Relinquishment Details

Relinquishment took two years and occurred in 2012. The city received \$12.41 million from Caltrans (\$1 million/mile) through a transfer of federally programmed funds, which required MTC approval. Caltrans and the city estimated that the facility would cost \$20 million to bring to state of good repair.

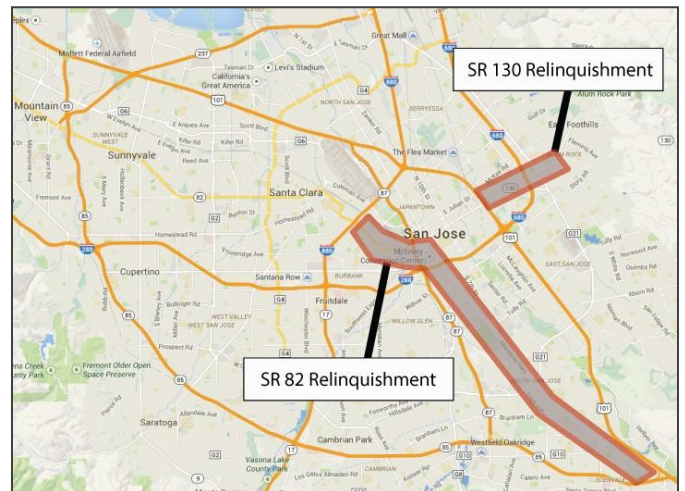
### Roadway Changes and Costs

Roadway changes such as repaving, bulbouts, and landscaped medians were funded using Caltrans' transferred funds (\$12.4 million), VTA BRT / HSR funds (\$6.1 million), and a local match from gas tax funds (\$1.45 million).

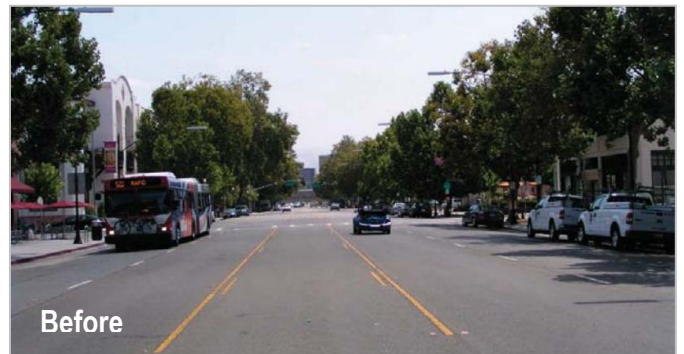
### Other Issues and Costs

The City spent considerable staff hours on relinquishment and independent studies. The City had hoped to receive maintenance funding as well, but settled for the above agreement to meet funding deadlines.

Historic resources, including Native American remains, were a concern during negotiation. After relinquishment, the city became aware of a pumping station when it flooded, incurring unexpected costs.



Base map: Google Maps



Source: City of San Jose, "A Plan for The Beautiful Way" (4/2010)



Source: NelsonNygaard

# Case Study 3: Lincoln Boulevard (formerly SR 1) in the City of Santa Monica

*Lincoln Boulevard is an urban thoroughfare in Santa Monica.*

## Anticipated Benefits of Relinquishment

The city pursued relinquishment of 1.25 miles of Lincoln Boulevard to facilitate streetscape changes aimed at enhancing walkability, local identity, and business vitality without needing to go through the process of obtaining Caltrans design approval and encroachment permits.

## Relinquishment Details

Relinquishment took two and a half years and occurred in 2012. The city received a deferred payment of \$2.2 million from Caltrans (\$1.8 million per mile), which was equivalent to the estimated cost to bring the facility to a state of good repair.

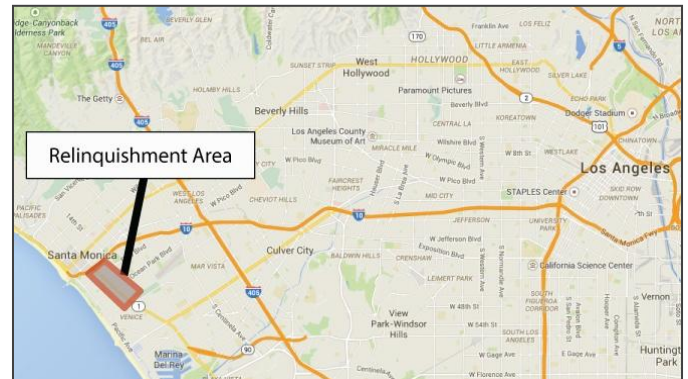
## Roadway Changes and Costs

Rehabilitation activities including repaving, new crosswalks, and video detection were undertaken in 2012–2013. This was funded by Caltrans using federal Surface Transportation Program funds (\$0.6 million) and other Caltrans federal earmark funds (\$1.6 million), before relinquishment funds were received.

The city is now undertaking more comprehensive redesign of the street, potentially including lane reconfiguration, a bus-only lane, enhanced crosswalks, trees, and art and identity-forming elements.

## Other Issues and Costs

SR 1 has been relinquished in a non-contiguous manner by Santa Monica (and other cities such as Dana Point). As part of the relinquishment, the city sought to ensure that there were no negative impacts on, or objections from, the neighboring jurisdiction of City of Los Angeles.



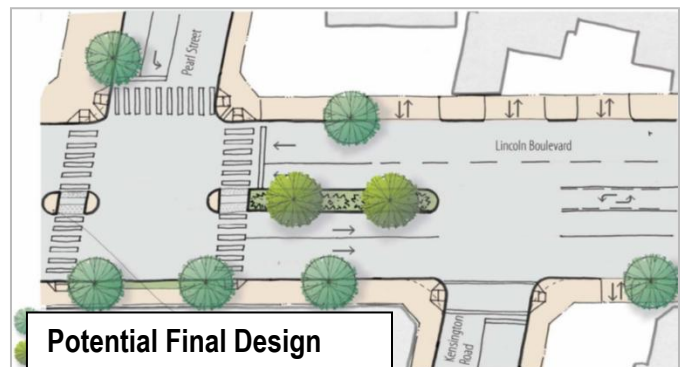
Base map: Google Maps



Before



After Rehabilitation



Potential Final Design

Source: City of Santa Monica, LiNC Workshop, 2/23/2015

## Case Study 4: Las Positas Road, Cliff Drive, and Castillo Street (formerly State Route 225) in the City of Santa Barbara

*Las Positas Road, Cliff Drive and Castillo Street are coastal roads in Santa Barbara that more served as an alternative route for US-101 within the city.*

### Anticipated Benefits of Relinquishment

Local community members were interested in relinquishment of a 4.7-mile stretch of SR 225 to facilitate complete streets design and quicker implementation of safety improvements.

### Relinquishment Details

The formal relinquishment process took a year and a half and was finalized in 2014, though it was discussed for nine years in total. Under the agreement, Caltrans provided \$819,000 (\$0.17 million per mile) for repairs to roadway drainage. Road pavement, curb ramps, and sidewalks had recently been improved. The relinquishment amount was equivalent to the estimated cost to bring the road to a state of good repair.

### Roadway Changes and Costs

The city has implemented traffic signal integration and is considering adding bike lanes, pedestrian crossings, improved lighting, a center left turn lane, and traffic calming features.

### Other Issues and Costs

The city was concerned about potential discrepancies in crash data and their implications for accepting liability.

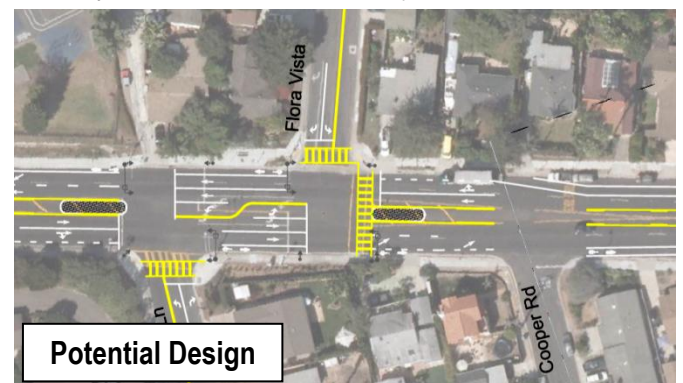
The city had incurred considerable costs to replace Cabrillo Boulevard Bridge that was part of a previous relinquishment of SR 225. For the 2014 relinquishment, the city was unwilling to accept risks associated with groundwater and structural issues affecting the underpass at Castillo Street. As a result, this underpass was excluded from the relinquishment.



Base map: Google Maps



Source: City of Santa Barbara, Cliff Drive Workshop, 11/5/2014



Source: City of Santa Barbara, Cliff Drive Workshop, 11/5/2014

## Case Study 5: State Route 131 / Tiburon Boulevard in the Town of Tiburon

*Tiburon Boulevard is a rural coastal road until it reaches downtown Tiburon, where it serves as a retail main street. It was designated as a state route in anticipation of a bridge to San Francisco that was never built.*

### Anticipated Benefits of Relinquishment

The town is considering relinquishment of the downtown portion of Tiburon Boulevard in response to a desire for local control over downtown parking management and street design.

### Relinquishment Considerations

Under consideration is a 0.7-mile stretch of Tiburon Boulevard. The town has agreed to pay for the completion of a Project Scope Summary Report (PSSR) costing \$108,000. Official discussions regarding relinquishment commenced in 2013 and halted temporarily pending deliberations by the town.

### Roadway Changes and Costs

If relinquished, the town is interested in implementing parking reconfiguration and management as well as street design changes to improve pedestrian safety and accessibility.

### Other Issues and Costs

After Caltrans announced its endorsement of alternative design guidelines in 2014, the town of Tiburon temporarily withdrew from the process of relinquishment. The town has also expressed interest in controlling

sidewalks and parking lanes but not the roadway.



Base map: Google Maps



Photo: Nelson\Nygaard

## Case Study 6: State Route 16 / Jackson Road in the City of Sacramento

*State Route 16 is a largely rural road that links Yolo County west of Sacramento, with Amador County, east of Sacramento. The road passes through urbanizing portions of Sacramento city and county.*

### Anticipated Benefits of Relinquishment

The city has requested relinquishment of a portion of SR 16 in response to a developer proposal. This proposal triggered discussion regarding the desire for a faster approval process and greater street design flexibility in anticipation of future development and a more urban character along the corridor.

### Relinquishment Considerations

Potential relinquishment would involve an 11-mile segment, including an initial 2.5-mile segment within Sacramento. Caltrans has repaved the road and repaired culverts to bring the roadway to a state of good repair. A Transportation System Analysis and Evaluation (TSAE) report has been prepared and legislation has been passed. Parties estimate relinquishment will take three years and be complete in 2016.

### Roadway Changes and Costs

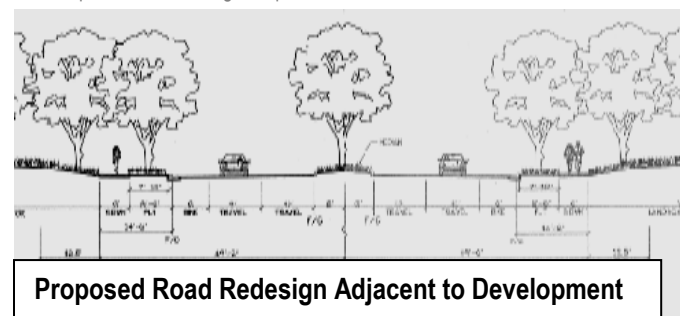
The city wishes to implement streetscape improvements in line with local design guidelines, which emphasize pedestrian friendliness, bikeability and transit supportiveness. These improvements would be paid for by future developments.

### Other Issues and Costs

The relinquishment process has been delayed due to traffic and economic concerns raised by the eastern counties of Amador, Alpine, and Calaveras. These parties were not included in initial development-related discussions between Caltrans, Sacramento, the City of Rancho Cordova, and Sacramento Regional Transit.



Base map and source: Google Maps



Source: Raney Planning & Management, Aspen 1 – New Brighton Draft Environmental Impact Report Vol 1, 7/2012

# Case Study 7: US Highway 101 / Van Ness Avenue in the City of San Francisco

*Van Ness Avenue is an urban thoroughfare in San Francisco that is designated as part of the interstate freeway system.*

## Anticipated Benefits of Relinquishment

The city informally considered relinquishment of the road in order to speed up the bus rapid transit (BRT) design process and give the city control over various street design elements that were not included in the Highway Design Manual.

## Relinquishment Considerations

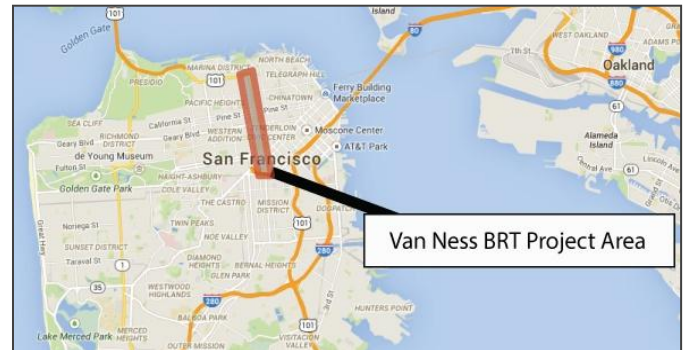
The city decided against pursuing relinquishment for the 2-mile segment of US-101 known as Van Ness Avenue. This decision was based on the loss of maintenance revenues currently provided under the maintenance agreement with Caltrans.

## Roadway Changes and Costs

The city is currently planning to implement substantial street design changes in conjunction with BRT along the corridor. This project is being funded by the FTA Small Starts for BRT fund (\$75 million), San Francisco Prop K sales tax monies (\$36.3 million), SFMTA funds (\$25.6 million), Central Freeway parcel revenues (\$12.7 million), Caltrans SHOPP funds (\$7.3 million), development impact fees (\$5 million), and SFCTA funds (\$0.2 million).

## Other Issues and Costs

There were several areas of disagreement between the city and Caltrans in relation to the design of bulbouts, station platforms, lane widths, street trees, design speeds, and construction hours. To advance the project, the city compromised on desired dimensions of bulbouts, saving street trees, and lane widths, including widening of existing lane widths to meet Caltrans standards.



Base map and source: Google Maps



Source: San Francisco Municipal Transportation Agency



Source: San Francisco Municipal Transportation Agency



## Case Study 8: State Route 285 / Tower Bridge in the Cities of Sacramento and West Sacramento

*The Tower Bridge is a historic four-lane vertical lift bridge connecting Sacramento and West Sacramento. The roadways on both sides of the bridge were already relinquished, leaving it disconnected from the state highway network.*

### Anticipated Benefits of Relinquishment

Local interest in relinquishment is based on a desire to reduce delay and uncertainty associated with obtaining Caltrans encroachment permits for the many events that occur on the bridge. There is also interest in design flexibility to facilitate multimodal transportation improvements.

### Relinquishment Considerations

The City of Sacramento has formally expressed interest in relinquishment of the 0.14-mile bridge, contingent on agreement by the City West Sacramento and further investigation of costs and issues. The City of West Sacramento has also expressed interest, pending further cost analysis.

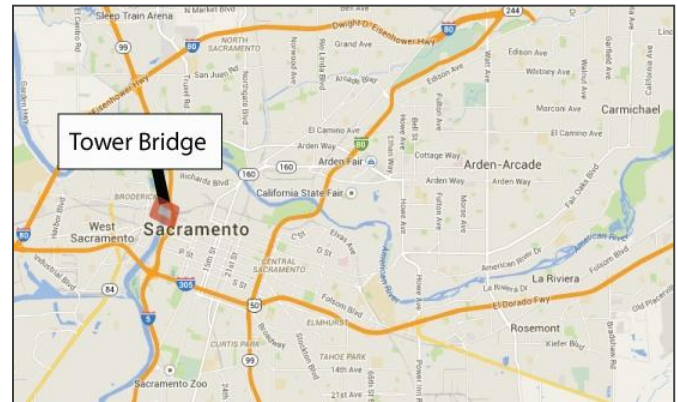
Caltrans is interested in a joint agreement with both cities. Under this agreement, the bridge would be relinquished in 2019. If the cities agree to relinquish, Caltrans has offered \$2 million to cover five years of operating and maintenance costs.

### Roadway Changes and Costs

Caltrans is currently undertaking a SHOPP rehabilitation project to replace the front fenders of the bridge. This work is expected to be complete in 2019.

### Other Issues and Costs

Under a joint relinquishment agreement, both cities would need to agree to relinquish. They would also need to agree upon the distribution of Caltrans monies as well as contributions to ongoing operations and maintenance costs.



Base map: Google Maps



Source: Sacramento Convention and Visitors Bureau



Source: Flickr user Sacramento Heritage Inc.

## EXISTING ROADWAY CONDITIONS

To better understanding the existing conditions and plans for SR 82 in the study area, the study team completed an existing conditions assessment that includes the following components:

- An overview of **corridor characteristics**, including an assessment of the multimodal transportation facilities currently provided, traffic volumes, and collision statistics
- A summary of **existing planning efforts** underway that affect El Camino Real in the study area, including city transportation and land use plans, county transportation projects, and the efforts of the corridor-wide Grand Boulevard Initiative
- A **state of good repair<sup>4</sup> assessment** that evaluates pavement conditions by city and associated costs required to bring the roadway to a condition local agencies find acceptable for relinquishment, as well as a preliminary inventory of other assets to investigate further before pursuing relinquishment

### Corridor Characteristics and Existing Planning Efforts

The overviews of corridor characteristics and existing planning efforts found that El Camino Real within the study area is in transition from a mostly auto-oriented place to a more multimodal environment. Accommodations for bikes and pedestrians are relatively limited at present, and many of the fronting land uses are designed to prioritize automobile access over other modes, consistent with the roadway's history as a state highway. Many of the cities along the corridor have plans to change this, however, by encouraging denser development, adding bike lanes, redesigning intersections to shorten crossing distances, and implementing other street design elements that prioritize walking, biking, and taking transit. There are also plans in Santa Clara County and San Mateo County to eventually add enhanced bus service, such as Bus Rapid Transit (BRT).

Figure 4 El Camino Real in Atherton (Left) and Sunnyvale (Right)



Photos: Nelson\Nygaard (left); Andrew Boone/Streetsblog San Francisco (right)

<sup>4</sup> Caltrans defines roadway "state of good repair" to mean that the roadway is safe, drivable, and well-maintained. For the purpose of this study, "state of good repair" more specifically means that all components of the roadway have been maintained such that no major repairs are necessary in approximately the next five years. For instance, recently repaved roadways would qualify as good repair, but distressed pavement would not. Signals requiring replacement immediately would not qualify as good repair; signals that could last at least another five years would likely qualify as good repair. In practice, individual cities generally negotiate with Caltrans to determine what level of improvement is needed to bring the roadway to a state of good repair by their own definition.

## State of Good Repair Assessment

The cost of bringing a roadway up to a state of good repair—as defined in a way that is mutually agreed upon by the local agency and Caltrans—is often the single most important point in the negotiations that lead to highway relinquishment. The general methodology for this study’s assessment of state of good repair improvement costs is to gather data on the state of each roadway asset whenever possible; identify typical unit costs for repair; and estimate total repair costs by jurisdiction. If data on the condition of a roadway asset is not available, an inventory of the asset is provided, such as a list of bridges and signalized intersections, without stating their state of good repair or the cost to repair them.

### Pavement Condition

For the analysis of pavement condition along SR 82, the project team performed visual observations of pavement quality and reviewed the 2013 Caltrans State of the Pavement Report (CSPR)<sup>5</sup>, as well as available data for recently completed and soon-to-be completed paving projects. In keeping with the CSPR, this report uses lane-miles as the base unit for quantifying paving conditions and costs associated with improvements<sup>6</sup>. Roadway segments were determined to be in one of the following categories: good repair (requiring maintenance only); fair condition; or poor condition.

**Figure 5** Pavement Exhibiting Signs of Possible Structural Distress on El Camino Real in Palo Alto



Photo: Nelson\Nygaard

The unit costs (per mile) for bringing roadways in various conditions to a state of good repair are summarized in the following table. For example, if the three northbound lanes on a stretch of

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<sup>5</sup> California Department of Transportation, 2013. “2013 State of the Pavement Report”  
[http://www.dot.ca.gov/hq/maint/Pavement/Pavement\\_Program/PDF/2013\\_SOP\\_FINAL-Dec\\_2013-1-24-13.pdf](http://www.dot.ca.gov/hq/maint/Pavement/Pavement_Program/PDF/2013_SOP_FINAL-Dec_2013-1-24-13.pdf)

<sup>6</sup> “Lane-miles” refers to the length of a particular road segment multiplied by the number of travel lanes. For example, a one-mile segment of road with six lanes (three in each direction) would equal six lane-miles.

road that is 2 miles long need repair, and the current pavement condition is fair (moderate wear), the cost to repair would be (3 lanes x 2 miles x \$309,000) = \$1,854,000.

**Figure 6 Cost to Repair Pavement by Pavement Condition**

Pavement Condition	Cost Per Lane-Mile	When to Replace/Repair	Expected Service Life With Repairs
Recently repaved (past 5 years)	No cost	1-20 years <sup>7</sup>	N/A
Good/excellent condition (5+ years old)	\$106,000	0-2 years	4-7 years
Fair condition	\$309,000	Needs replacement	4-7 years
Poor condition (minor structural distress)	\$309,000	Needs replacement	5-10 years
Poor condition (major structural distress)	\$842,000	Needs replacement	20 years

The chart below (Figure 7) identifies the number of lane-miles in each condition by jurisdiction and includes estimated costs to return to good repair. Conditions by jurisdiction range from all newly replaced pavement in Sunnyvale, Atherton, and Menlo Park, where resurfacing projects were recently completed, to mostly distressed in Palo Alto, Mountain View, and Santa Clara.

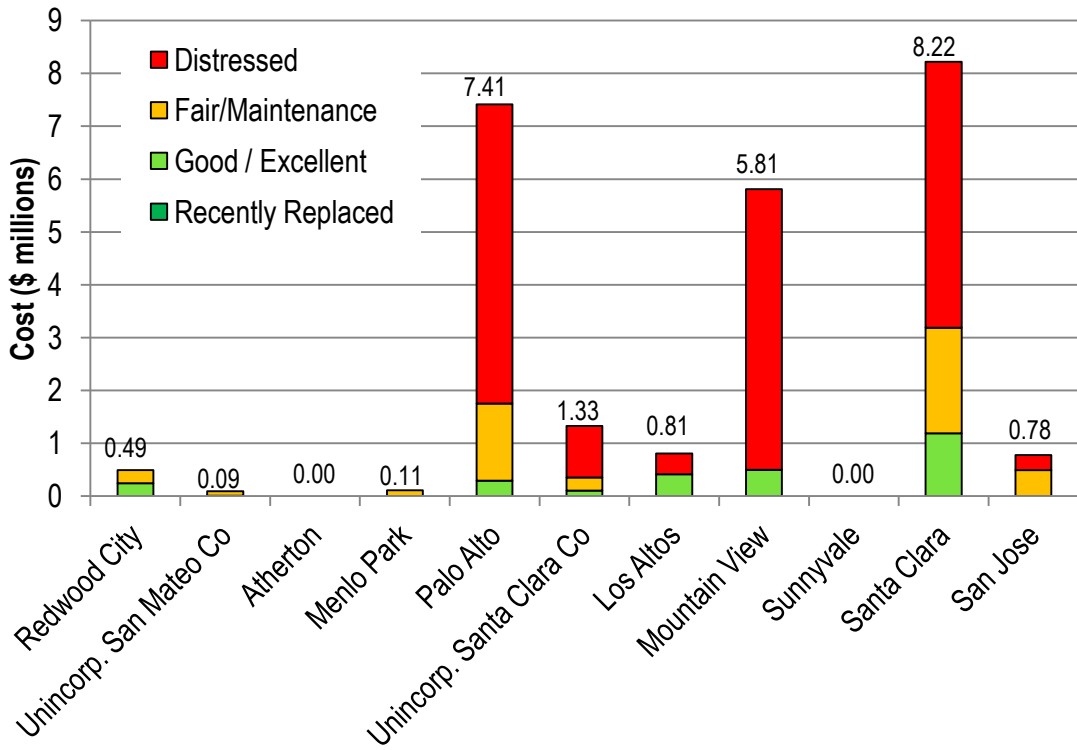
Costs for bringing SR 82 pavement into a state of good repair are identified in the charts below, and correspond with information shown in the aerial exhibit maps. The total pavement repair cost is \$25 million for the study area, but this could rise to as high as \$55 million if pavement that currently has minor distress is allowed to degrade to a state of major distress.

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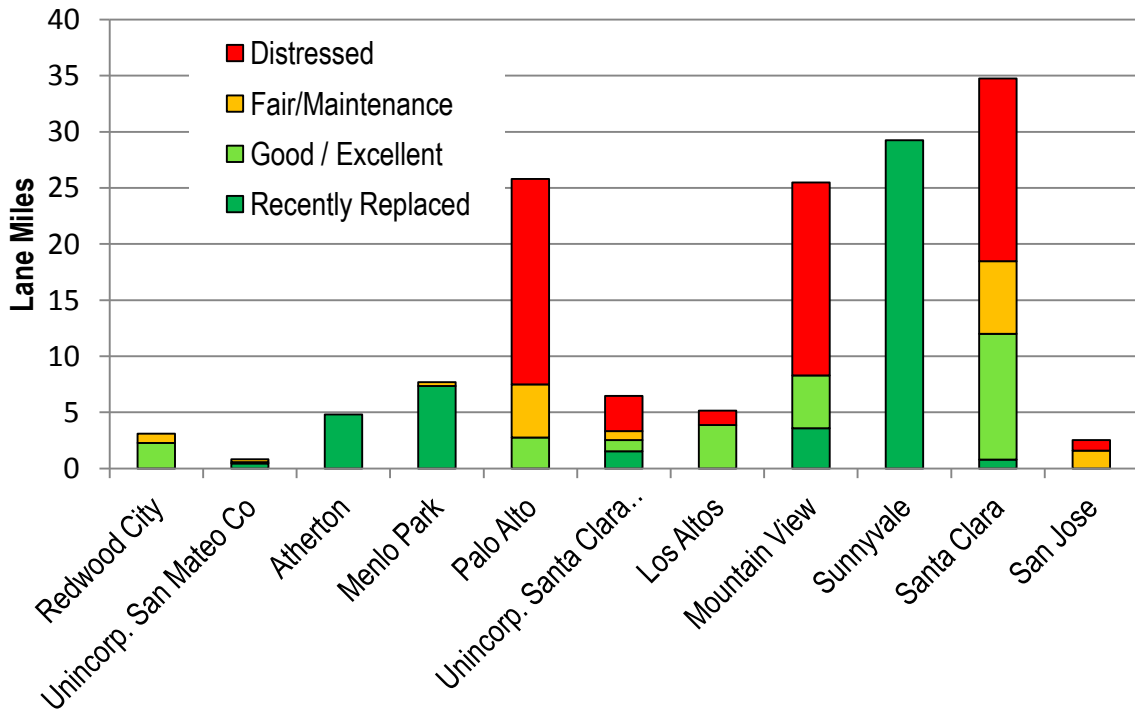
<sup>7</sup> The pavement replacement timeline is contingent on the type of pavement repair or replacement that was implemented most recently.

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**Figure 7 Estimated Pavement Repair Cost, by City (\$2013 million)**



**Figure 8 Pavement Assessment by City (Lane-Miles)**



## Other Roadway Elements

Pavement maintenance is likely to be the largest expense in bringing SR 82 up to a state of good repair, but there are numerous other assets that would transfer to local jurisdictions as well. Bridges, Caltrans-managed utilities, signals, landscaping, pedestrian crossings, and sidewalks/curb cuts should be considered during relinquishment evaluation. The full report provides a more detailed breakdown of these assets, including a list of all bridges in the study area, but cost estimates for repair are generally not available. An exception is the upgrading of curb ramps to comply with the American Disabilities Act, which is estimated to cost approximately \$9.16 million.

## OPERATION AND MAINTENANCE COSTS

Operations and maintenance (O&M) costs are another major concern for cities considering relinquishment. These costs include all regular efforts required to keep the travelled way and related infrastructure operational. O&M includes such activities as pavement patching, re-striping, litter management, upkeep of stormwater conveyances, maintenance of bridges and signals, and landscaping/weed abatement. Additional operational costs not reflected in this report include ongoing fees for electrical and water use related to signal operation and landscaping. O&M costs do not include capital improvement projects, such as major repaving required to bring a poor section of road into good repair. For the sake of this study, it is assumed that cities will assume O&M responsibilities once paving has been brought into good repair.

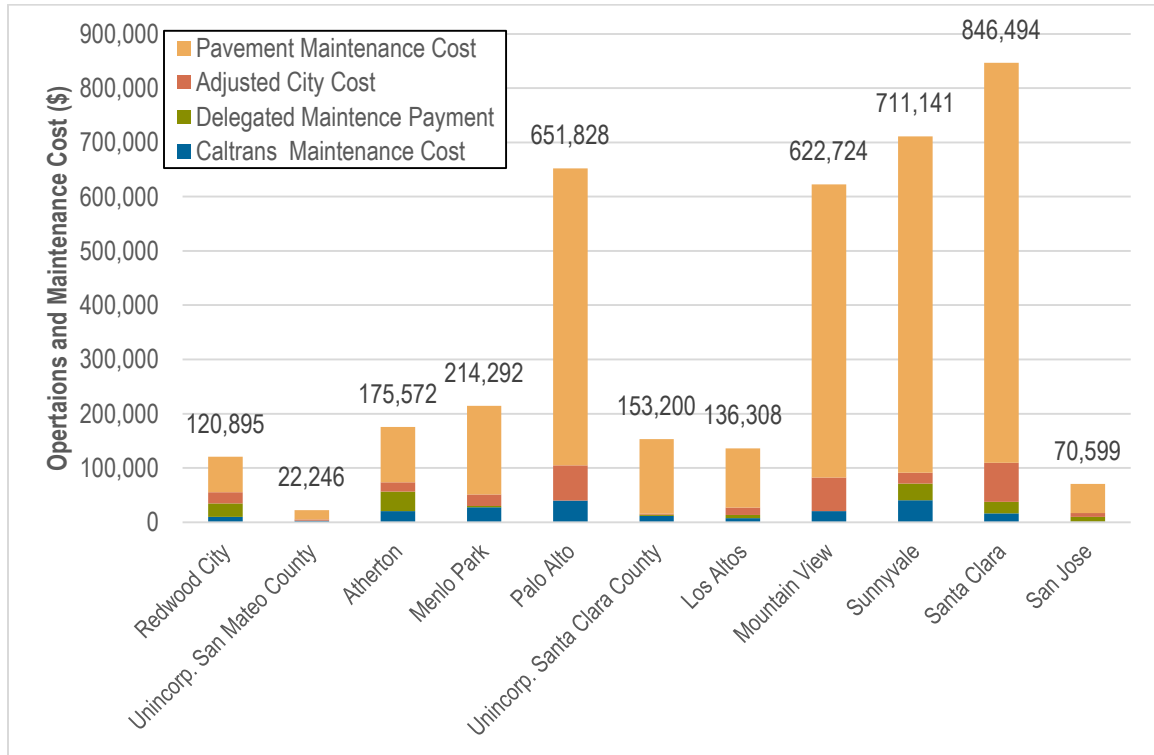
The data available to perform the analysis of O&M costs consisted of the following:

- Caltrans repair costs from 2004-2014
- Delegated maintenance payment invoices from the cities to Caltrans
- Limited city records of additional O&M costs
- Pavement lane-miles in each jurisdiction

## Summary of O&M Costs

The resulting average annual O&M cost per jurisdiction is presented in the graph below. The total for each jurisdiction represents the estimated total annual O&M cost the jurisdiction would carry in the case of relinquishment. A more detailed summary of expenses by type and jurisdiction is included in the full report (Chapter 5). As is shown in the graphic, the largest expense, by a substantial margin, is the annualized cost of performing regular pavement maintenance on the roadway. This assumes that cities perform preventative maintenance on pavement every five years.

Figure 9 Operations and Maintenance Costs by Jurisdiction



## FUNDING SOURCES

Each city or county that enters into a relinquishment agreement will need to create a funding strategy. Cities have generally paid for relinquishment using a combination of different funding and financing sources. In the case of SR 82, potential sources of funding could include some combination of the following:

- **Caltrans contributions**, which must be negotiated on a case-by-case basis
- **General Fund revenues**, including revenues from property tax, sales tax, and other jurisdiction-wide tax revenues
- **Taxes and fees for local streets and roads**, which are collected at the state or county level and distributed to local governments for roadway projects
- **Property-based funding and financing tools**, including direct developer contributions as well as fees, assessments, and special taxes that leverage property value appreciation and real estate development that occurs within a specific area to pay for local infrastructure improvements (these are often known as “value capture” tools)
- **Competitive grants**, obtained from state or regional agencies
- **Project related funds**, such as design and construction of BRT facilities and operations and maintenance of dedicated lanes
- **Utility user fees and rates**, or charges for utilizing storm drainage facilities or other publicly-owned infrastructure

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The range of potential uses for each of the funding sources is summarized in Figure 10, and described in greater detail below. As discussed in Chapter 2, most cities that have gone through the relinquishment process have absorbed ongoing operations and maintenance costs for the relinquished facilities into their general operating budgets. Typically this kind of roadway and storm drainage maintenance is provided by Public Works departments, and funded by some combination of General Fund revenues, taxes and fees for streets and local roads, and (for storm drainage maintenance) user fees and rates. In some cases, there may also be revenues available for operations and maintenance from property-based tools.

A wider variety of potential sources are available for capital improvements, including state of good repair improvements and more extensive roadway redesign improvements. The means by which capital improvements costs will be funded will depend on a number of factors, including the timing and scale of cost of specific improvements and the extent to which they are related to new development projects. For instance, capital projects that are required to increase capacity to serve new development can often be funded in part by property-based tools (such as development impact fees, direct developer contributions, or Community Facilities Districts); however the cost to repair existing deficiencies in the system or improve service within a broader network may require other types of funding sources.

The funding sources listed below are described in much greater detail in Chapter 6.

**Figure 10 Summary of Potential Funding Sources and Uses for SR 82**

Funding Source	Relinquishment		Street Redesign
	<i>State of Good Repair</i>	<i>Operations &amp; Maintenance</i>	
<b>Negotiated Caltrans Contributions</b>	X	X	
<b>General Fund Revenues</b>	X	X	X
<b>Taxes and Fees for Local Streets and Roads</b>	X	X	X
<b>Property-Based Funding &amp; Financing Tools</b>			
<b>Mello-Roos Community Facilities District (CFD)</b>	X	X	X
<b>Enhanced Infrastructure Financing District (EIFD)</b>			X
<b>Special Benefit Assessment District</b>	X	X	X
<b>Parcel Tax</b>	X	X	X
<b>Development Impact Fee</b>			X
<b>Direct Developer Contributions</b>	X		X
<b>Competitive Grants</b>	X		X
<b>Project Related Funds</b>	X	X	X
<b>User Fees and Rates (Storm Drainage Utilities)</b>	X	X	X

Note that actual funding availability will vary depending on the specific details of each project..



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# 1 INTRODUCTION

## OVERVIEW

State Route 82 (SR 82), locally known as Mission Street, El Camino Real, and The Alameda along its route from San Francisco to San Jose, runs through the center of most cities along the Peninsula and South Bay regions of the Bay Area. During the last century, the identity and function of the corridor have dramatically changed with the construction of parallel routes such as US-101 and I-280, and urbanization in the Bay Area. Today, SR 82 is the only arterial that connects all downtown areas between San Francisco and San Jose, with an alignment that functions as the backbone for SamTrans and VTA bus service, and is immediately adjacent to Caltrain throughout San Mateo County. It serves not only automobile traffic, but also significant volumes of pedestrian, bicycle, and bus traffic. Many of the densest population centers in San Mateo and Santa Clara counties are now within a mile of the facility and, with many priority development areas (PDAs) identified along the route, the corridor is set to play an even greater role as a spine of development, transit, and pedestrian activity.

Figure 11 El Camino Real (SR 82) at Stanford Avenue in Palo Alto

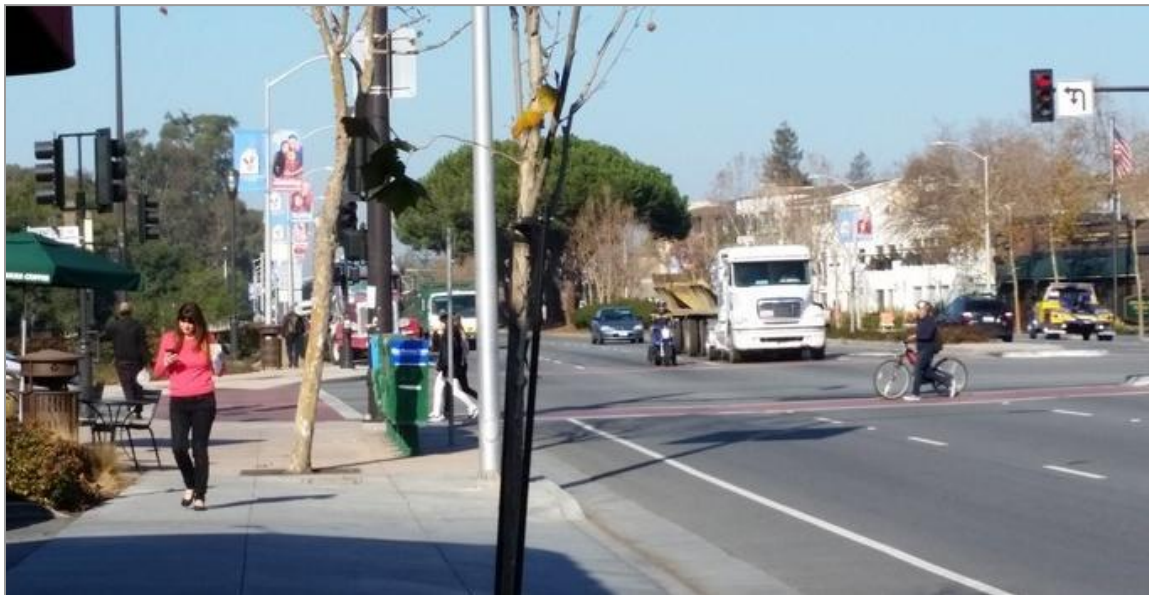


Photo: Nelson\Nygaard

As El Camino Real has shifted from being primarily a long-distance traffic route to a highly urban boulevard, cities and agencies have sought to influence the road's design and operation to support its function as a *place* and not merely a traffic conduit. These concerns are clearly expressed by the Grand Boulevard Initiative, which seeks a more collaborative approach to revitalizing the corridor as a series of places, rather than a roadway optimized solely for vehicle throughput. They

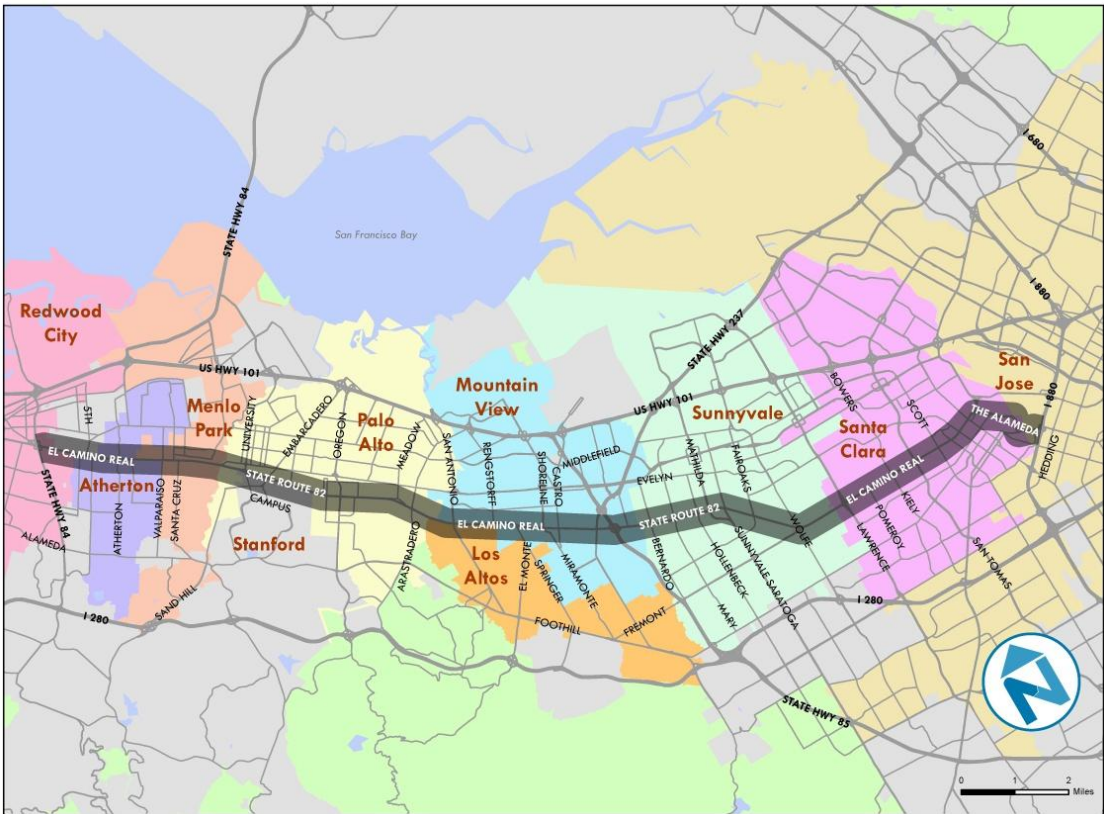
are also reflected in the regional *Plan Bay Area*, which has designated many areas along El Camino Real as priority development areas (PDA) for future infill development in pedestrian-friendly environments near transit.

To better understand the implications of relinquishment, this State Route 82 Relinquishment Exploration Study considers the conditions, costs, and processes that would likely be involved if Caltrans were to relinquish State Route 82 within the study area between State Route 84 in Redwood City and I-880 in San Jose. The study explores the relinquishment process, investigates relinquishment case studies, undertakes a detailed assessment of existing conditions, and estimates likely costs associated with bringing SR 82 up to a state of good repair, processing a relinquishment, and operating and maintaining the facility on an ongoing basis.

**Study Area**

This study is focused on an approximately 20-mile stretch of El Camino Real (and The Alameda, as SR 82 is called in San Jose) between State Route 84 (Woodside Road) in Redwood City and I-880 in San Jose. This stretch of road passes through the cities of Redwood City, Atherton, and Menlo Park in San Mateo County; and Palo Alto, Los Altos, Mountain View, Sunnyvale, Santa Clara, and San Jose in Santa Clara County.

**Figure 12 SR 82 Relinquishment Exploration Study Area**



## STUDY APPROACH

The approach for the State Route 82 Relinquishment Exploration Study was developed in consultation with a number of stakeholders from multiple agencies including the Metropolitan Transportation Commission (MTC), Santa Clara Valley Transportation Authority (VTA), San Mateo County Transportation Authority (SamTrans), and the California Department of Transportation (Caltrans). Input was also provided by member jurisdictions of the Grand Boulevard Initiative including the cities of Redwood City, Atherton, Menlo Park, Palo Alto, Mountain View, Los Altos, Sunnyvale, Santa Clara, and San Jose.

The study comprises the following chapters:

- **Chapter 1: Introduction.** An overview of the study approach.
- **Chapter 2: Relinquishment Process and Case Studies.** A review of the legal requirements and general process associated with relinquishment.
- **Chapter 3: Relinquishment Case Studies.** An investigation of case studies on prevailing practices through interviews with officials from cities and Caltrans districts that have previously undergone or considered relinquishment of a state facility.
- **Chapter 4: Existing Conditions Assessment.** The existing conditions assessment includes pavement assessment based on visual observation and prior studies as well as estimation of costs associated with bringing the road to a state of good repair. The assessment also includes a basic inventory of various roadway assets including bridges, traffic signals, and ADA compliant (or non-compliant) curb cuts.
- **Chapters 5 and 6: Cost and Funding Analysis.** Finally, the study provides a planning level estimate of one-time costs associated with relinquishment, recurring maintenance costs that will be taken on by cities post-relinquishment, and potential funding sources for implementation of relinquishment.

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**Figure 13** SR 82 / El Camino Real at Lawrence Expressway in Santa Clara



Photo: NelsonNygaard

## 2 STATE HIGHWAY RELINQUISHMENT PROCESS

This chapter investigates the rationale, process and requirements associated with relinquishment of a state facility based on current statutes, guidelines, and the recent relevant experience of a number of cities within California. The chapter is made up of three key components:

- an evaluation of why cities pursue relinquishment;
- an examination of the decision-making process related to relinquishment; and
- a review of the legal and procedural requirements associated with relinquishment.

### COMMON MOTIVATIONS FOR RELINQUISHMENT

Cities pursue relinquishment of state roads for various reasons resulting from changed street function, including a desire for more flexible street design, issues of control over traffic management, and a shorter permit process for changes along the route. Each of these motivations is discussed below. The state has generally been receptive to relinquishment of conventional highways (non-freeways) that do not serve a regional function due to the potential cost savings.

#### Changing Street Function

A primary reason for pursuing relinquishment is a mismatch between the current and future function of the road and its past design as a conventional highway facility. In many cases, roads that were historically designated as inter-regional state routes have gradually become more urban in nature, or never truly served a regional function. In this case, cities may wish to pursue relinquishment to allow the street to better serve its neighborhood, business, and city-related purposes, while Caltrans may wish to pursue relinquishment to reduce costs for maintenance, permits, and other review staff, and focus its maintenance efforts on the core freeway system.

As urbanization has intensified, development has happened around and along these roads. Over time, the development of roughly parallel freeways within the urban area have provided redundancy within the urban and interurban road network and have alleviated inter-regional travel so that the historic route now serves mostly local neighborhood or access trips.

New development and a fine-grained network of local streets along the historic route means that the facility increasingly serves as a multimodal city street, business destination, and social place, rather than a conventional highway. Taking ownership of the roadway may allow the city to reduce the complexity of pursuing development approval by removing the layer of Caltrans review. It may also give added flexibility for street design that reflects the role of the street as a community main street, as discussed below.

Figure 14 Tres Pinos Road in Hollister (Formerly SR 25)



## Street Design Flexibility

In many cases, relinquishments have occurred because the city did not want to be constrained by state design standards that are more stringent, inflexible, and ill-suited to urban thoroughfares than local standards.

The current process for local agencies to propose modifications to a State highway includes three major phases:

- Project Initiation Document (e.g. Project Study Report)
- Project Approval and Environmental Document (e.g. Project Report)
- Final Design and Encroachment Permit

The project development track is based on the complexity and construction cost associated with modifications. Projects over \$3 million are required to undergo the Standard Project Development Process, which includes a Project Study Report/Project Development Support, a Project Report and Environmental Document, Final Design (including Plans, Specifications and Estimate (PS&E)) and obtaining an Encroachment Permit. Less complex projects, or projects between \$1 million and \$3 million, require a combined Permit Engineering Evaluation Report instead of separate documents for the Project Study Report, Project Report and Environmental Documentation. Projects under \$1 million require only an Encroachment Permit.

In general, the design of state highways is guided by the Highway Design Manual (HDM), which emphasizes the safety and integrity of the state highway system from the perspective of motorists. The HDM has been criticized for hindering implementation of complete streets design. In order to implement non-standard design features, local agencies must therefore go through the Caltrans design exception process and develop Design Exception Fact Sheets to establish legal support for the non-standard features.

## Streetscape Design Features

As discussed in relation to Lincoln Boulevard (formerly SR 1) in Santa Monica, some cities have pursued relinquishment of a state facility because they wished to undertake streetscape design projects that could not be accommodated within the parameters of the Caltrans Highway Design Manual (HDM), or receiving design approval would require a lengthy process, though this process is evolving at Caltrans. These types of redesign efforts may relate to a range of elements such as those listed below:

- Traffic calming features such as road diets, lane narrowings, raised crosswalks, tighter turning radii, corner bulbouts, chicanes, tree-planted medians, and landscaped parking bulbouts
- Multimodal improvements such as lane conversions to accommodate dedicated bus lanes, Class II or Class IV bicycle lanes, and wider sidewalks
- Identity-forming elements such as special signage, overhead gateway treatments, public art, and landscaping designed to enhance traffic calming
- Commercially-oriented uses of the right-of-way such as café seating along sidewalks or within parklets, and on-street bicycle corrals

**Figure 15** Relinquished Portion of The Alameda (Formerly SR 82) in San Jose After Streetscape Redesign, With Bulbouts and Wide Pedestrian Refuge Islands



Photo: NelsonNygaard



In conjunction with the above streetscape features, cities may wish to implement corresponding land use changes such as higher density commercial uses and compact mixed use development around transit nodes along the corridor.

### Changing Policy Direction on Design Flexibility and Design Delegation

Caltrans has recently adopted changes to its street design policies that could impact cities' view of whether relinquishment is necessary to achieve local street design objectives. On April 10, 2014, Caltrans released a memorandum recognizing the need to provide more flexibility in its highway design standards and procedures, especially in the context of urban environments and multimodal design. This memorandum stated that “A ‘one-size-fits-all’ design philosophy is not Departmental policy,” and “The state highway system needs to be multimodal, not just for cars and trucks.”<sup>8</sup>

The memo also referred to publications, in addition to the existing HDM, that Caltrans and local entities could reference when making planning and design decisions relating to the state’s highway system, and local streets and roads<sup>9</sup>. These additional design guidelines include the following:

- American Association of State Highway and Transportation Officials (AASHTO), “Guide for the Development of Bicycle Facilities”<sup>10</sup>
- Caltrans, “Main Street, California, a Guide for Improving Community and Transportation Vitality”<sup>11</sup>
- Institute of Transportation Engineers (ITE), “Designing Urban Walkable Thoroughfares”<sup>12</sup>
- National Association of City Transportation Officials (NACTO), “Urban Bikeway Design Guide”<sup>13</sup>
- National Association of City Transportation Officials (NACTO), “Urban Street Design Guide”<sup>14</sup>

Caltrans’ endorsement of design guidelines outside of its HDM increases flexibility in street design to allow for more multimodal, pedestrian-oriented, bicycle-friendly, and transit-oriented design of public roads. It may also have implications for development standards relating to sidewalk improvements, bicycle parking, and bicycle accommodations within front setbacks or along interstitial easements.

*“The state highway system needs to be multimodal, not just for cars and trucks.”*

Caltrans, Design Flexibility in Multimodal

<sup>8</sup> Memorandum from Timothy Craggs, Chief, Division of Design to Highway Design Manual Holders on “Design Flexibility in Multimodal Design,” April 10, 2014. [www.dot.ca.gov/hq/oppd/design/2014-4-2-Flexibility-in-Design.pdf](http://www.dot.ca.gov/hq/oppd/design/2014-4-2-Flexibility-in-Design.pdf)

<sup>9</sup> State of California Department of Transportation. *Design Flexibility in Multimodal Design*. 2014. <http://www.dot.ca.gov/hq/oppd/design/2014-4-2-Flexibility-in-Design.pdf>

<sup>10</sup> [http://safety.fhwa.dot.gov/ped\\_bike/docs/b\\_aashtobik.pdf](http://safety.fhwa.dot.gov/ped_bike/docs/b_aashtobik.pdf)

<sup>11</sup> [http://www.dot.ca.gov/hq/LandArch/mainstreet/main\\_street\\_3rd\\_edition.pdf](http://www.dot.ca.gov/hq/LandArch/mainstreet/main_street_3rd_edition.pdf)

<sup>12</sup> <http://library.ite.org/pub/e1cff43c-2354-d714-51d9-d82b39d4dbad>

<sup>13</sup> <http://nacto.org/cities-for-cycling/design-guide/>

<sup>14</sup> <http://nacto.org/usdg/>

At present, not all Caltrans staff members are aware of the shift toward greater design flexibility, an issue that was evident from some interviews with Caltrans district staff around the state. In order to improve understanding of Complete Streets and design flexibility, executives from the California State Transportation Agency (CalSTA) and Caltrans will therefore roll out training on these topics shortly.<sup>15</sup> While awareness is increasing, it is possible that early precedent-setting efforts to exercise design flexibility may face more obstacles than later efforts.

It should also be noted that there is an important distinction between an *endorsement* of alternative design guidelines and an *approval* of such standards. Therefore, while it is now possible for localities to use design standards other than the HDM on state-owned roads, proposed changes that do not follow the HDM would still require approval by Caltrans, and will not be allowed in all cases. This approval process means that local jurisdictions still need to go through the process of obtaining *design exceptions* for any design features that are not included in the HDM.

In the case of Van Ness Avenue, which is discussed in the next chapter, the design exception process was an iterative process where the City requested exceptions and Caltrans district staff requested research findings and evidence regarding the safety of each feature, then negotiated design details relative to the HDM, and submitted exceptions to the Caltrans Headquarters Division of Design, and waited for a response, which sometimes included a request for further evidence, and so on. This process consumed considerable time and resulted in designs that represent a compromise relative to what the local jurisdiction would consider an ideal solution.

In 2015, Caltrans implemented a program to delegate design decisions to local district staff, rather than requiring all decisions to go through the Caltrans Headquarters. This change is likely to improve the processing time for design exceptions. On the other hand, there is still a pervasive concern among Caltrans and city engineers that labeling street design features as “exceptions” leaves staff vulnerable to legal challenges and loss of their license if they have to defend the design exception down the track. There is therefore reluctance to entertain design exceptions even when they are designed to improve safety, multimodal performance, and context sensitivity.

Caltrans Headquarter staff also intend to evaluate *adoption* rather than just *endorsement* of alternative design approaches. Adoption of alternative standards would mean that the standards would be incorporated into the HDM and therefore not subject to the design exception process, requiring additional evidence. Taken together, Caltrans' evolving design standards and approach to design flexibility, design delegation and design approval may reduce the need to pursue relinquishment as a means to achieving local street design objectives.

## **Control Over Traffic Management**

An issue that is often implemented in conjunction with street design changes is control over traffic management. In some cases, jurisdictions wish to pursue relinquishment as part of an effort to implement a range of traffic management strategies such as installation and operation of red light cameras, signal coordination at a district or corridor level, advanced pedestrian and bicycle intervals, and transit priority treatments.

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<sup>15</sup> Interview with Kate White from CalSTA, Chris Ganson from Caltrans Office of Planning Research (OPR), Bijan Sartipi from Caltrans District 4, and Bob Masys from the San Francisco County Transportation Authority, January 29, 2015.

## Length of Permit Process

While Caltrans now allows greater flexibility in street design, cities may still wish to have state facilities relinquished to avoid the need for Caltrans approval and shorten the process by which changes are made to roadways. While a road remains a state route, the city needs to go through the Caltrans permit process any time changes are made along the route.

Figure 16 New Development on SR 82 Near Monroe Drive in Los Altos



Photo: Nelson\Nygaard

Changes that would trigger the Caltrans permit process include the following:

- Excavation
- Utilities work such as sewer upgrades
- Installing mail boxes
- Altering driveways
- Installing red light cameras
- Planting or trimming vegetation
- Erecting advertisements
- Holding special events
- Commercial filming
- Installing detours
- Placing café seating on the sidewalk

The permit process generally takes at least 4 to 6 weeks for the most simple permits and longer for more complex issues. This permit process is considered cumbersome by many cities.<sup>16</sup> For more complex issues, the permitting process may require review and interaction with more than one division within Caltrans, which adds further time to the permitting process.

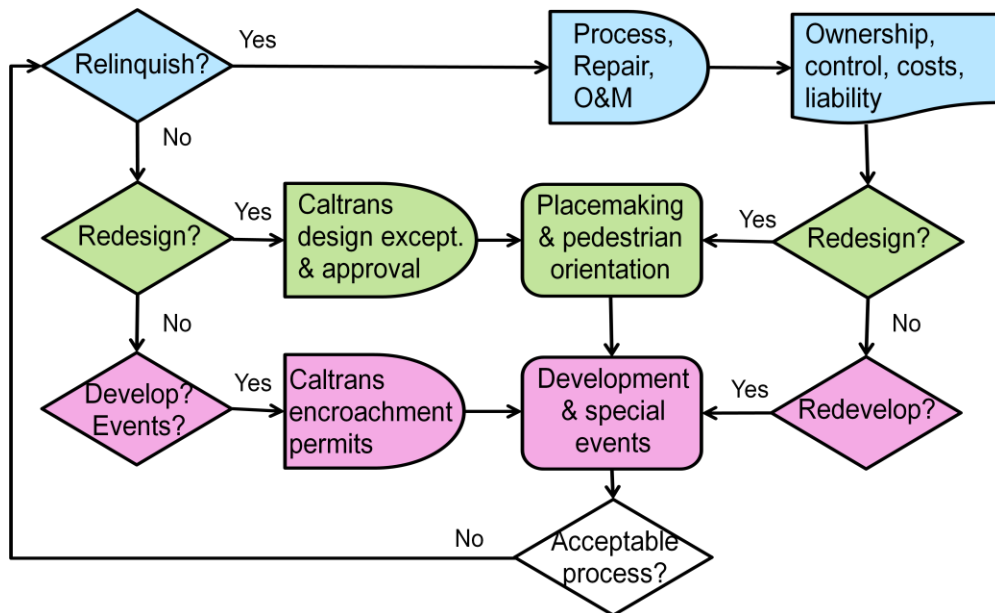
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<sup>16</sup> Interview with Neil Hashiba, Anthony Phan and Guillermo Potes, Caltrans District 7, Division of Planning, January 21, 2015.

## DECISION MAKING PROCESS FOR RELINQUISHMENT

The question of whether to pursue relinquishment is tied to the city’s goals and aspirations related to street redesign and corridor redevelopment, as well as the costs associated with pursuing relinquishment. The decision-making process about whether to request relinquishment is often iterative, with subsequent questions and changes in policy on redesign and redevelopment informing answers to the initial question of relinquishment. Key decision points and outcomes are displayed in the following diagram, which represents an iterative decision making process on relinquishment, redesign and redevelopment:

Figure 17 Relinquishment Decision Making Flow Chart



### To Relinquish or Not to Relinquish

The first decision point in this process is the question of whether to relinquish. In this study, we explore this initial question of relinquishment by describing the process and resources associated with this step. For this issue, the key questions are:

- How important is it for the city to have control over the road?
- What is the state of the assets to be relinquished including roadway, signals, drainage, and historic assets?
- How much money and effort is the city willing to expend for the relinquishment process?
- Does the city understand the up-front and ongoing costs associated with relinquishment?
- Is the city willing to assume ongoing costs to operate, maintain and upgrade the road?
- Is the city willing to accept liability for all relinquished assets?
- What resources is Caltrans offering in association with the relinquishment?

As suggested by these questions, the cost of relinquishment can be significant. The process and approval for relinquishment can take several years to complete within state, regional, and local government agencies. Prior to relinquishing the facility, parties must come to an agreement on the transfer price, the current state of the facility, and the cost associated with bringing the facility

up to a state of good repair. Local jurisdictions must also consider their ability to financially manage operations and maintenance of the relinquished roadway, especially when it still carries large volumes of traffic. This study provides a planning level assessment of roadway assets, along with likely repair costs, operating and maintenance costs, and other considerations.

In deciding whether or not to relinquish, cities must also think through the potential relinquishment model to be used. For example, relinquishment of SR 82 could occur through a variety of mechanisms, including the typical approach of relinquishment to individual cities; individual relinquishment with pooled resources among cities; or separate but concurrent relinquishment with agreement between neighboring cities, possibly through a joint powers agreement (JPA).

Relinquishment via the above cooperative arrangements may alter expected costs, since relinquishment costs would be shared among multiple jurisdictions and additional staff time would be required to address inter-jurisdictional agreements with respect to payments, operations and maintenance. Given that city boundaries do not currently fall along the centerline of SR 82, inter-jurisdictional negotiations may occur even if cities relinquish individually, since maintenance costs and/or city boundaries would need to be addressed.

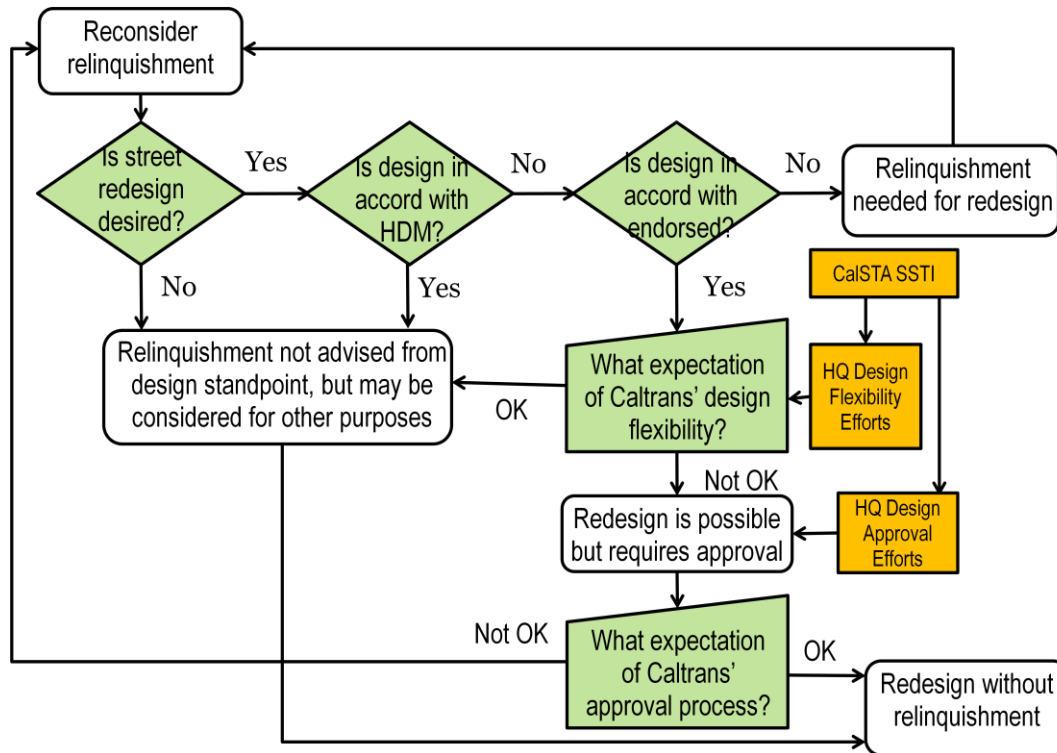
## **Street Redesign**

Relinquishment cannot be considered in isolation. The question of whether to relinquish also depends on whether the city intends to redesign the road, and whether such a redesign would be difficult or impossible under Caltrans ownership. This issue, in turn is associated with two questions:

- What is the city's aspiration for the corridor in terms of street design?
- What are the City's expectations of Caltrans design flexibility and permit processes?

In the past, many cities have requested relinquishment when their street design vision was inconsistent with the Highway Design Manual (HDM) and therefore not possible under Caltrans ownership. Caltrans standards have evolved considerably in recent years, however, as discussed earlier this chapter. This decision-making process is outlined in Figure 18.

Figure 18 Street Redesign Issues that affect Relinquishment Decision



## Corridor Development and Events

An additional consideration that may affect a city’s desire for relinquishment is that of aspirations for development, events and activities that trigger the need for Caltrans encroachment permits. In relation to this issue, the key questions are as follows:

- How much development does the city anticipate or aspire to along the facility?
- What is the relationship between street design and anticipated development potential?
- What events or activities are anticipated that will trigger the need for Caltrans encroachment permits?
- What is the level of sensitivity to delay and uncertainty for development and events?

If the city anticipates a large amount of future development along the corridor, the city may consider whether street design and the need for Caltrans encroachment permits is likely to affect the development approval process to the extent that it reduces the feasibility of development. If development feasibility is likely to be affected, the city should weigh the cost of relinquishment against other potential changes that it could make to improve typical development pro forma.

Finally, the decision to relinquish may also be affected by the likelihood that some street design changes will be paid for or implemented in conjunction with developments. Where a large amount of development is anticipated and substantial street design is designed, the city may wish to consider relinquishment in order to provide greater control over this process.

## THE RELINQUISHMENT PROCESS

Once the city has decided to request relinquishment, the process of relinquishment generally spans a period of at least two to three years depending upon the type and complexity of the relinquishment. In some instances, the process takes longer, such as the case of the Tower Bridge between Sacramento and West Sacramento, which is projected to take approximately seven years, including Caltrans completion of a State Highway Operation and Protection Program (SHOPP) project prior to final relinquishment.

### Types of Relinquishments

Sections 73 and 73.5 of the Streets and Highways Code provide the statutory direction for the California Transportation Commission (CTC) to relinquish state highways. According to this statute, there are four means of relinquishing a state highway:

1. Deleting a state highway by legislative enactment
2. Superseding an existing highway by relocation
3. Relinquishing frontage or service roads
4. Relinquishing nonmotorized transportation facilities by agreeing with a local agency to accept those facilities that are not part of the main traveled pathway and are constructed by a state highway project

The first method of relinquishment is applicable to El Camino Real in the study area, which does not meet the criteria of the other three paths to relinquishment. For that reason, only the process for relinquishment by legislative enactment is described below.

Interviews with some Caltrans District 4 staff indicated that Caltrans is unlikely to accept the last relinquishment option listed above (nonmotorized transportation facilities). However, other District 4 staff indicated that there are precedents for relinquishing non-motorized transportation facilities along urban highway facilities and therefore this should also be considered an option. For example, Caltrans relinquished sidewalks along Big Basin Way (Highway 9) in Saratoga, and along San Pablo Ave (State Route 123) in El Cerrito.

### Requirements for Legislative Relinquishments

Relinquishment by legislative enactment uses legislative action to remove a portion of a state highway from the State Highway System that no longer serves inter-regional or statewide transportation needs, for example a state highway that can be characterized as a conventional city street or county road.<sup>17</sup> Potential relinquishments by legislative enactment can be proposed by either Caltrans or the appropriate local agency.<sup>18</sup>

Relinquishment occurs by a CTC resolution.<sup>19</sup> If relinquishing by legislation, the relinquishment becomes effective the first date of the next calendar year or fiscal year, whichever occurs first after

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<sup>17</sup> Caltrans Division of Design, Project Development Procedures Manual, 2014 (“PDPM”). p.25-5,25-8.  
[http://www.dot.ca.gov/hq/oppd/pdpm/chap\\_pdf/chapt25.pdf](http://www.dot.ca.gov/hq/oppd/pdpm/chap_pdf/chapt25.pdf)

<sup>18</sup> Caltrans Memorandum “Relinquishment of State Highways by Legislative Enactment” (2005) (“Caltrans Memo”), p. 1.  
<http://www.dot.ca.gov/hq/oppd/design/State-Highway-RelinquishmentwAttach.pdf>

<sup>19</sup> Streets & Highways Code, § 73; PDPM, 25-24.

the effective date of the legislative enactment and after the relinquishment has been approved by the CTC.<sup>20</sup>

Before this can occur, there are several requirements or phases of effort as described below. For a more detailed description of the required documents mentioned in this timeline, see the "Required Documents and Agreements" section below.

**~2+ years prior to CTC authorization of relinquishment:**  
**Determination that segment no longer serves state needs**

A state highway segment will be considered for relinquishment upon determination by the Caltrans district director, in consultation with the Caltrans Headquarters Division of Transportation and Planning, that the segment does not serve regional or statewide transportation needs.<sup>21</sup> Thus, prior to pursuing relinquishment by legislative enactment, the appropriate Caltrans district must obtain concurrence from the Division of Transportation Planning that the route is no longer an appropriate state highway.<sup>22</sup>

Based on Chapter 25 of the *Caltrans Project Development Procedures Manual* (PDPM) as well as interviews with Caltrans and city staff, this phase generally involves the following tasks:

- District Planning Division identifies candidate route segments for relinquishment
- City obtains support from community and Council
- City seeks support from all adjoining jurisdictions if necessary
- City seeks support from a member of the legislature for enacting legislation
- City provides memo to Caltrans district to request relinquishment
- District Planning Division seeks input from other divisions, regional agencies, and relevant transit districts (typically about 17 units within Caltrans)<sup>23</sup>
- District Planning Division completes Transportation System Assessment and Evaluation (TSAE) (see Appendix D for an example) or Relinquishment Assessment Report (RAR). This step may take approximately 4 months with two staff members working on it.
- City interacts with Caltrans district planning division in preparation of TSAE or RAR
- Caltrans district planning division obtains approval from district executive staff
- Caltrans district planning division obtains approval from Caltrans Headquarters

Where more than one city wishes to relinquish a facility concurrently, the cities may also wish to seek agreements with adjoining jurisdictions at this stage. According to Caltrans district staff, however, it is not typical to relinquish in more than one city at a time. Therefore, the process usually focuses on relinquishing portions of state routes when the respective cities are ready. However, in a case such as SR 82, it may be desirable to pursue relinquishment jointly across multiple cities if possible, rather than a piecemeal approach that would involve a separate process with each city.

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<sup>20</sup> PDPM, 25-6.

<sup>21</sup> PDPM, 25-12.

<sup>22</sup> Ibid.

<sup>23</sup> Interview with Neil Hashiba, Anthony Phan and Guillermo Potes, Caltrans District 7, Division of Planning, January 21, 2015.



**~18 months prior to CTC authorization of relinquishment:  
Enactment of legislation**

By definition, a legislative relinquishment requires the passage of legislation. This means that jurisdictions need to find a legislative sponsor to introduce the legislation. The legislation enacted to relinquish the state highway will require that the transaction is “in the best interests of the State,” as determined by the RAR.<sup>24</sup>

<sup>25</sup>

Where a state highway is relinquished by legislative enactment, Caltrans has no statutory obligation to put a facility into a state of good repair, construct improvements, or incur any financial obligation to relinquish; however, it may be in the best interest of the state to negotiate with the local agency a level of work or contribution to facilitate relinquishment.<sup>26</sup>

Once legislation is passed enabling relinquishment, Caltrans prepares a further analysis (typically included in a Project Scope Summary Report) identifying anticipated savings to its own department such as reduced maintenance and operation costs, anticipated capital improvement costs, and permitting costs.<sup>27</sup>

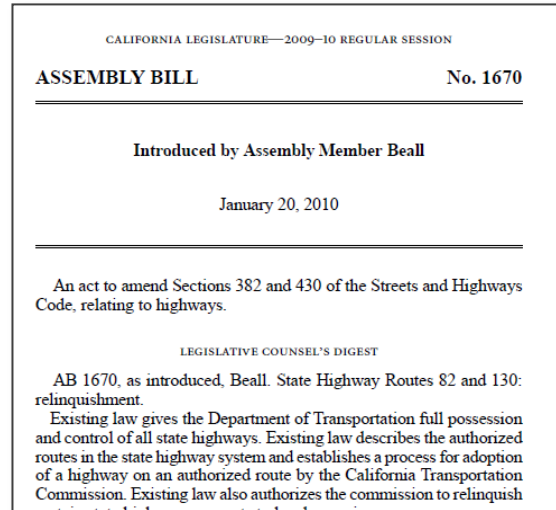
**~12 months prior to CTC authorization of relinquishment:  
Negotiation on terms of agreement**

Once there is concurrence that the route is no longer an appropriate or necessary state route, the Caltrans district is responsible for negotiating the terms of the relinquishment with the agency that will accept ownership.<sup>28</sup>

Stakeholder interviews indicated that this process is generally focused on an assessment of the roadway relative to a state of good repair, as well as associated repair costs that would be required to return the road to this state. As defined in the Streets and Highway Code Section 73, the statewide definition of “state of good repair” is a safe, driveable, well-maintained road. This definition does not include betterments or capacity-increasing improvements. A state of good repair does requires maintenance (as defined in Streets and Highways Code section 27) including litter removal, weed control, and tree and shrub trimming to the time of relinquishment.

In the documents reviewed for this study, Caltrans and the local agencies have all followed a general formula for the cooperative agreement (relinquishment agreement) or MOU. This

**Figure 19 Excerpt from AB 1670, Authorizing Relinquishment of SR 82 in San Jose**



<sup>24</sup> PDPM, 25-15; Streets and Highways Code, § 73.01, subd. (a).

<sup>25</sup> Caltrans Memo, p.2.

<sup>26</sup> PDPM, 25-3, 25-11.

<sup>27</sup> PDPM, 25-7.

<sup>28</sup> PDPM, 25-13.

suggests that the process is straightforward from a legal standpoint or that Caltrans has not been interested in addressing other issues in the agreements. Stakeholder interviews suggested that cities did not generally engage private attorneys to help with reaching a relinquishment agreement, but relied upon in-house resources such as the city attorney, and Caltrans staff.

During this phase, Caltrans and city staff also clarify the exact right-of-way to be relinquished. In some cases, Caltrans may wish to maintain ownership and control of parts of the facility such as off-ramps, bridges, crossings to other state facilities, or easements that are required to access other Caltrans facilities.

Within this step, the following tasks are normally carried out by Caltrans and City staff:

- District Design Division assesses state of good repair in conjunction with City staff
- City negotiates with District Design Division regarding repair costs and terms of relinquishment agreement
- District ROW Division determines exact right-of-way in conjunction with City staff
- City obtains approval from Council regarding proposed Relinquishment Agreement
- City may reach interagency agreement with adjoining Cities
- District Design Division reaches agreement with City
- Environmental review of the project should also be completed at this stage by the City

If district staff cannot reach an agreement regarding the terms of the relinquishment, the District Director will review Caltrans' recommendations.<sup>29</sup> Any outstanding issues will go to a Relinquishment Resolution Committee, and, if needed, the Chief Engineer.<sup>30</sup>

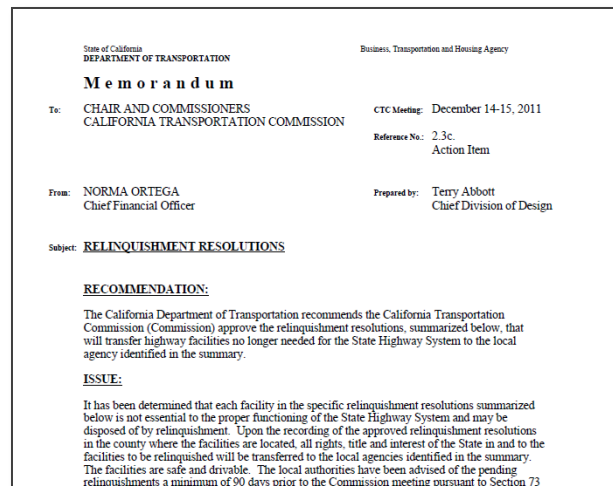
### **90 days prior to CTC authorization of relinquishment: Caltrans notice of intention to relinquish**

Prior to relinquishing any portion of a state highway to a county or a city, Caltrans must give 90 days' notice in writing of the intention to relinquish to the board of supervisors or the city council.<sup>31</sup> Within the 90-day period, the board of supervisors or the city council may object in writing to the CTC.<sup>32</sup>

As illustrated in the case of Mission Boulevard in Hayward, cities may choose to waive this notice.

### **Relinquishment: CTC resolution and authorization of funds**

**Figure 20      CTC Resolution Relinquishing SR 82 in San Jose**



<sup>29</sup> PDPM, 25-25, 25-26.

<sup>30</sup> PDPM, 25-26.

<sup>31</sup> PDPM, 25-7.

<sup>32</sup> Ibid.

Once negotiation has occurred and conflicts, if any, have been resolved, the CTC takes two actions to remove the highway from the State Highway System. First, the CTC approves the relinquishment and discusses the cost to relinquish the highway.<sup>33</sup> Second, the CTC authorizes the transfer of capital funds to the local agency, unless the highway is in adequate condition and construction work is not needed.<sup>34</sup>

Tasks associated with this phase are listed below:

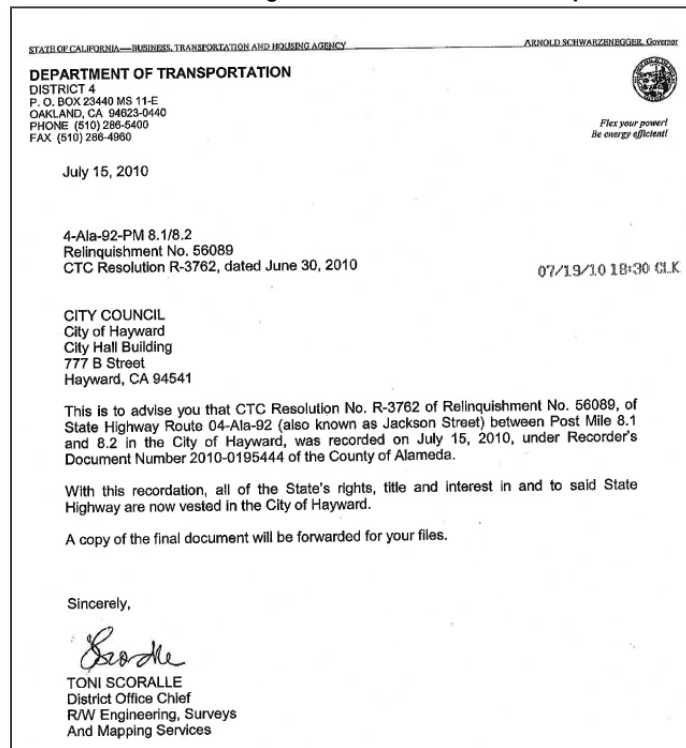
- For relinquishments that involve capital projects, the district prepares Plans, Specifications & Estimates (PS&E)
- For relinquishments that involve capital projects or financial contribution only (FCO), the district submits a funds request to the Caltrans Headquarters Programming Division
- Caltrans Headquarters Right of Way Division prepares the relinquishment agenda and books the item with the CTC
- CTC approves funds request and relinquishment

### After CTC approval of relinquishment: Filing of resolution

A certified copy of the resolution must be filed with the board of supervisors or the city clerk.<sup>35</sup> A certified copy of the resolution must also be recorded in the office of the recorder of the county where the land is located and, upon its recordation, all right, title, and interest of the state in and to that portion of any state highway shall vest in the county or city, and that highway thereupon constitutes a county road or city street.<sup>36</sup> The vesting of all right, title, and interest of the state in and to the highway is thereby relinquished by the CTC.<sup>37</sup>

This process is illustrated in Figure 22.

Figure 21 Excerpt from Letter from Caltrans to Hayward  
Confirming Recordation of SR 92 Relinquishment



<sup>33</sup> PDPM, 25-13, 25-15.

<sup>34</sup> PDPM, 25-13, 25-21.

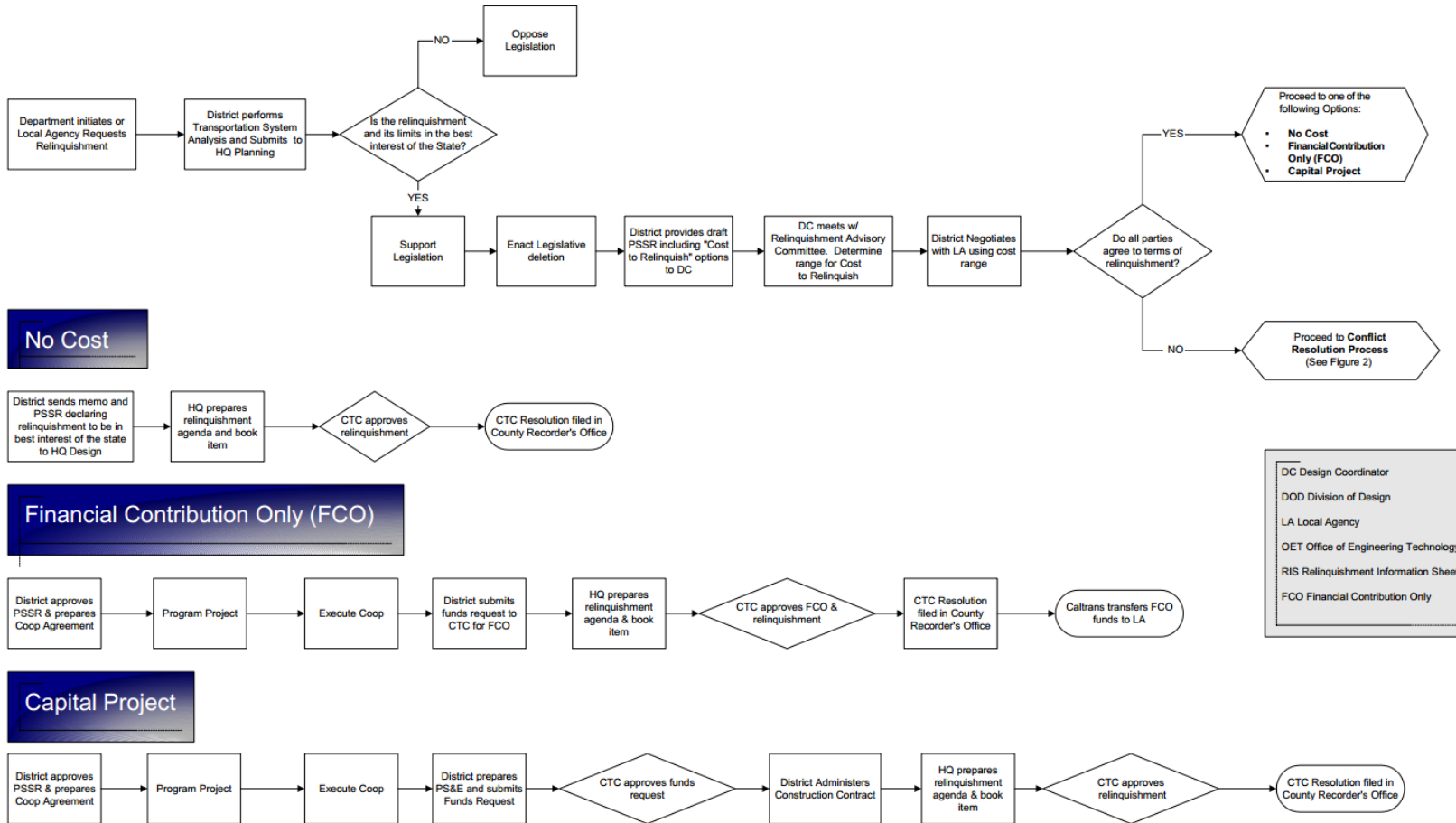
<sup>35</sup> Streets & Highways Code, § 73.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

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**Figure 22 Caltrans Process for Legislative Relinquishments<sup>38</sup>**



<sup>38</sup> PDPM, 25-13, 25-15.

## Considerations Regarding Proposed Senate Bill 254

In February 2015, Senate Bill 254 was introduced to amend Section 73 of the Streets and Highways Code. This bill is intended to streamline the state’s relinquishment process and reduce costs to the state for ongoing maintenance and repair of state highway system. The Senate Rules Committee provided the following comments on the bill:

“This bill authorizes the California Transportation Commission (CTC) to relinquish portions of the state highway system to a county of city without legislative action...

According to the [Bill’s] author, there appear to be a number of state highways defined in existing law that no longer serve the purpose of a typical highway. They may be urban routes through heavily populated areas, or main streets for burgeoning suburbs. It doesn’t make sense for the state to bear the cost of maintaining these roads, nor is it practicable for local governments to have to work through the state bureaucracy to make important changes like adding parking or turning a thoroughfare into a ‘complete street.’ This bill makes it easier for relinquishment to take place but only when both the state and local government agree that it is in everyone’s best interest.”<sup>39</sup>

Key changes that are proposed under the bill include the following:

- Removal of the clause that requires the relinquished portion of road to be deleted from the state highway system by legislative enactment or superseding by relocation
- Additional requirements for Caltrans to report on facilities that do not primarily serve interregional needs, identify potential candidates for relinquishment by April 1, 2016 and every two years thereafter.

In their analysis of the bill, staff from the Alameda County Transportation Commission (Alameda CTC) recommended to oppose the bill unless it was amended in several ways. Their key concerns related to joint definition of state of good repair by the local jurisdiction and Caltrans; requirements to bring the facility to a state of good repair; and requirements to proceed with relinquishment only if requested by a local jurisdiction. In particular, the Alameda CTC expressed concern about the significant financial implications and responsibilities that might be taken on as a result of the Bill. These implications include additional operations and maintenance costs as well as liabilities associated with assuming operations of the state route.<sup>40</sup>

## Environmental Review

Relinquishment could trigger the California Environmental Quality Act (CEQA) review, if the relinquishment could be considered a "project" subject to CEQA—an activity that could cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change.<sup>41</sup> There is a host of cases examining whether an agency has “approved” a “project” subject to CEQA when it has approved some form of an agreement. There is no case law clarifying the application of CEQA to highway relinquishments, and thus the facts of any relinquishment would need to be examined to determine if CEQA review is required.

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<sup>39</sup> Senate Rules Committee. SB 254 Third Reading, 6/2/2015.

<sup>40</sup> Alameda County Transportation Commission, Memorandum: State Route Relinquishment Proposal by Caltrans, May 21, 2015. [http://www.alamedactc.org/files/managed/Document/16350/8.2\\_Combo.pdf](http://www.alamedactc.org/files/managed/Document/16350/8.2_Combo.pdf)

<sup>41</sup> Public Resources Code, § 21065.

The City of Sacramento determined that executing an agreement to relinquish the Tower Bridge was not a project subject to CEQA, citing Guidelines section 15378, subdivision (b)(5). That section states that “organizational or administrative activities of governments that will not result in direct or indirect physical change in the environment” are not “projects” subject to CEQA. Assuming the agreement does nothing more than provide for relinquishment (and potentially funding), it is likely that this was an appropriate determination.

Even if relinquishment is considered a project under CEQA, it may fall within an exemption to CEQA. The City of San Jose cited the Class 31 exemption for historical resource restoration/rehabilitation when it entered into a cooperative agreement for the relinquishment of a portion of SR 82.<sup>42</sup> (Appendix E, p. 8.) Other categorical exemptions may apply, such as Class 1 or 2. A Class 1 exemption consists of the “operation, repair, maintenance, permitting, leasing, licensing, or minor alternative of existing public or private [facilities].” A Class 2 exemption consists of “replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose.”

**Figure 23 Excerpt from Memo to San Jose City Council, Citing Exemption from CEQA for SR 82**

The proposed relinquishment funding in conjunction with upcoming projects will bring the facilities to a near term state of good repair for approximately a 10 year period. However future maintenance of the facilities will need to be incorporated as part of the City’s maintenance programs.

**CEQA**

Exemption 15331: Historical Resource Restoration/Rehabilitation

In addition to CEQA, the National Environmental Policy Act (NEPA) could be triggered if a federal action is being taken as a part of the relinquishment process, or if a federal funding source applies. Should NEPA be triggered as the result of relinquishment, a Categorical Exclusion, Environmental Assessment, a Finding of No Significant Impact, or an Environmental Impact Statement may be one of the resulting processes. A Categorical Exclusion can be granted if the federal action does not “individually or cumulatively have a significant effect on the human environment.” Given that the action is a transfer of authority, it likely that a categorical exclusion can be pursued for relinquishment.

## Required Documents and Agreements

The following documents are required to be prepared as part of the relinquishment process. For a timeline of when these documents are required, see the timeline above under “Requirements for Legislative Relinquishments.”

## Transportation System Analysis and Evaluation (TSAE) or Relinquishment Assessment Report (RAR)

Caltrans prepares a TSAE or (formerly) RAR to evaluate the proposed relinquishment and recommend whether the route should be relinquished. The TSAE summarizes the following issues:

- the purpose and need for the relinquishment
- a description of the route including route designations, the basis for the request for relinquishment, current and projected traffic, and existing maintenance agreements with the city
- relinquishment recommendations that relate to interregional travel demand

A sample TSAE for SR 82 in San José is provided in Appendix D.

## Relinquishment Information Sheet (RIS)

The responsible Caltrans district prepares an RIS summarizing the efforts to date to effect the relinquishment. This sheet serves as the basis by which the Relinquishment Resolution Committee evaluates relevant issues. The contents of the RIS include a description of the highway to be relinquished (its limits, functionality, connections to other state highways or other relinquishments, and results of system analysis decision); a summary of the draft PID (see below); summary of local agency's primary concerns; description of local agency proposal; information regarding any delay; Caltrans district's opinion of potential for settlement of any protest; chronological history of relinquishment efforts; maps; and contact information.<sup>43</sup>

## Project Initiation Document (PID)

The Project Initiation Document (PID) outlines Caltrans' estimated cost to relinquish, if any, and how those funds will be transferred to the local agency.<sup>44</sup> Typically, Caltrans uses a project scope summary report (PSSR) as the PID and project approval document. (See Appendix F for an example of this document.)

## Relinquishment agreement (RA)

An RA is a type of cooperative agreement that would be executed between Caltrans and the city. It documents the terms and conditions under which Caltrans relinquishes any portion of a state highway or facility to either a city or county. It appears that either party can prepare this agreement, though it is likely best if prepared by Caltrans, given that it sets out Caltrans' terms and conditions.<sup>45</sup> The relinquishment agreement takes the form of a cooperative agreement. The city council or board of supervisors can adopt a resolution executing that cooperative agreement,

Figure 24 San Jose SR 82 TSAE

The image shows the cover page of a report titled "California Department of Transportation Transportation System Analysis and Evaluation (TSAE) For the Relinquishment of SR 82 (US 101 to I-880) in San Jose". The page includes the Caltrans logo at the top. Below the title, there is a section for "Approved by:" with three entries, each consisting of a signature, a name and title, and a date. The first entry is for Katie Bousour, Office Chief, District 4 Office of System Planning, dated 3/17/10. The second entry is for Lee Tsuboneck, Deputy District Director, District 4 Division of Transportation Planning & Local Assistance, dated 17 March 2010. The third entry is for Kelly Eagan, Interim Office Chief, Office of Advance System Planning and Economics, Headquarters Division of Transportation Planning, dated 3/18/2010.

<sup>43</sup> PDPM, 25-27 – 25-28.

<sup>44</sup> PDPM, 25-10.

<sup>45</sup> PDPM, 25-5, 25-22.

unless authority has already been delegated to agency staff to approve the agreement. (See Appendix A.)

### Memorandum of understanding (MOU)

In addition to the relinquishment agreement, in some cases Caltrans and the city or county may enter into an MOU to establish additional arrangements related to the relinquishment. However, an MOU is a type of informal agreement and cannot be used to commit resources or funding.

## Cost of Relinquishment

There are various costs associated with relinquishment. These are discussed here in general, with more detail provided on specific case studies in the following section.

### Repair costs

Legislation enacted to relinquish state highways requires that the transaction is “in the best interest of the State.”<sup>46</sup> Recent relinquishment experiences suggest that cities are often successful in negotiating for funds associated with repair costs for the relinquished facility. In the case of Sacramento’s Tower Bridge, the state also offered operating and maintenance costs for a transfer period during which Caltrans is to complete a construction project on the facility.

The financial terms of relinquishment agreements from the case studies are presented in Figure 26. Most past relinquishments have focused on costs associated with bringing the road to a state of good repair as determined in consultation with the local jurisdiction. More recently, Caltrans District 4 staff indicated that the “state of good repair” is not defined and will not be part of the discussion regarding future relinquishments.<sup>47</sup>

**Figure 25** Deficient ADA Ramp on Alum Rock Ave. and Pavement Deterioration Along The Alameda in San Jose (Formerly SR 82)



City of San Jose, Summary of Relinquishment of State Routes 82 & 130 (June 30, 2011).

<sup>46</sup> PDPM, 25-15.

<sup>47</sup> State Route 82 Relinquishment Exploration Study Technical Working Group Meeting 21/5/2015



### **Staffing resources**

In addition to repair costs, cities can expect to spend considerable staff resources to pursue relinquishment with Caltrans. Stakeholder interviews indicated that the relinquishment process generally spanned a period of two to three years, and was considered part of the general staffing costs of the city.

In some cases, the city outsourced advocacy efforts to obtain support from a member of the legislature to enact relinquishment legislation, or to work with Caltrans Headquarters on issues related to the relinquishment agreement and other issues.

### **Facility operating and maintenance costs**

Once the facility is relinquished, the local jurisdiction becomes responsible for ongoing operating and maintenance costs associated with the facility. This includes signal operations, street sweeping, garbage collection, landscaping, and periodic maintenance of all associated infrastructure including pavements, curbs, gutters, stormwater assets.

### **Liability**

In connection with relinquishment, the local jurisdiction also accepts liability for the above assets as defined in the relinquishment agreement.

## 3 RELINQUISHMENT CASE STUDIES

This chapter provides examples of recent legislative relinquishment projects that have been completed as well as examples of cases where local jurisdictions are still in the relinquishment process within the last five years. As part of this study, eight projects were included in the analysis based on similarities and relevance to the El Camino Real corridor. All examples are from California and several are from the Bay Area (Caltrans District 4).

For presentation and comparison purposes, the case studies have been organized as follows:

- Description of Relinquishment Projects
- Motivation and Anticipated Benefits
- Relinquishment Status and Schedule
- Relinquishment Agreement and Cost
- Other Relinquishment Costs

**Figure 26 Relinquishment Case Studies Evaluated**

Date	Road Name (Route)	City (Caltrans District)	Length (miles)	Relinquishment Agreement
2010	Mission Boulevard, Foothill Boulevard, Jackson Ave (SR 238/185/92)	Hayward (District 4)	5.1	\$0 <sup>48</sup>
2012	The Alameda, Monterey Highway, Alum Rock Ave (SR 82, SR 130)	San Jose (District 4)	12.6	\$12.4 million transfer
2012	Lincoln Boulevard (SR 1)	Santa Monica (District 7)	1.25	\$2.2 million
2014	Las Positas Boulevard (SR 225)	Santa Barbara (District 5)	4.7	\$819,000
Ongoing	Tiburon Boulevard (SR 131)	Tiburon	1	N/A
Ongoing	Jackson Road (SR 16)	Sacramento (District 3)	11	N/A
~2019	Tower Bridge (SR 275)	Sacramento / West Sacramento (District 3)	0.14	\$2.0 million (5 years M&O)
N/A	Van Ness (U.S. 101)	San Francisco (District 4)	2	N/A

<sup>48</sup> The City of Hayward received money from the state through another source, as discussed on page 3-6.

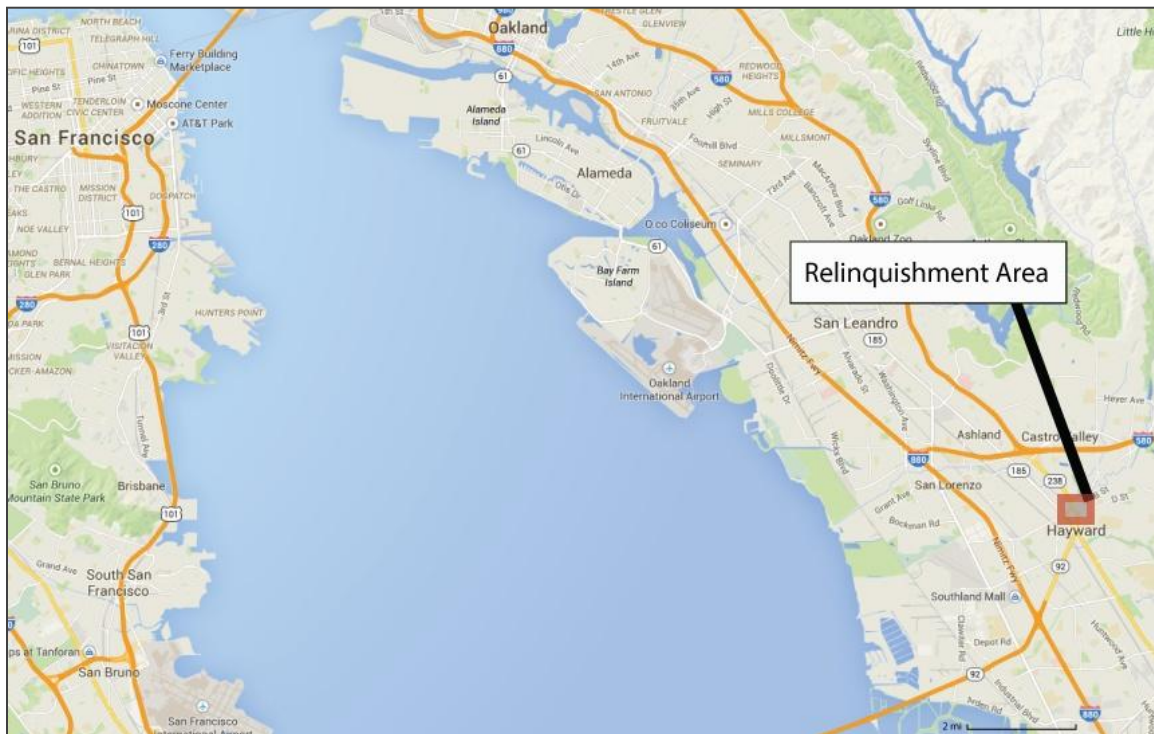
## CASE STUDY 1: MISSION BOULEVARD AND FOOTHILL BOULEVARD (FORMERLY STATE ROUTES 92, 185, AND 238, 185) IN THE CITY OF HAYWARD

Mission and Foothill Boulevards are historic routes that connected San Jose with the Niles District in Fremont and other settlements to the north. When the I-880 was built in the late 1950s, the road became a reliever facility for I-880 and was later posted as State Route 238. In 2010, Caltrans relinquished the following road segments: <sup>49</sup>

- State Route 238 / Mission Boulevard from Industrial Parkway to Apple Avenue (4.7 miles)
- State Route 92 / Jackson Street from Mission Boulevard to south of Atherton Street (0.1 mile)
- State Route 185 / Mission Boulevard from Foothill Boulevard to A Street (0.3 miles)

While Caltrans has authorized the full relinquishment listed above, the initial relinquishment phase includes only the roadway segments within the Hayward Loop project area. See Figure 27 for a map of the relinquishment area at a regional scale, and Figure 28 for a zoomed-in map of the relinquishment area.

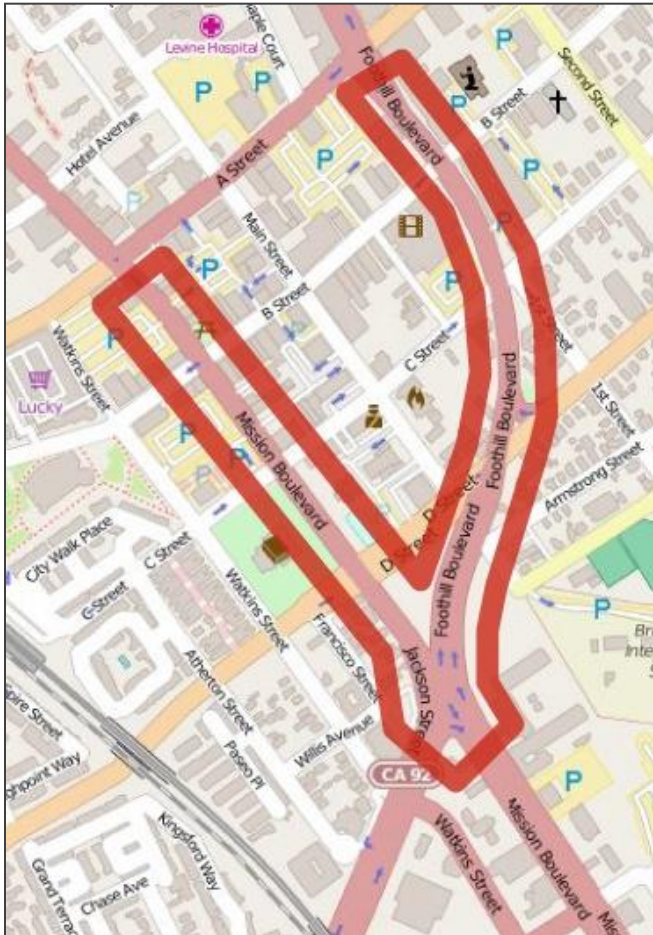
Figure 27 Hayward Relinquishment Area (Regional View)



Base map: Google Maps

<sup>49</sup> Caltrans, Project Scope Summary Report to Document Relinquishment of Portions of SR 238, SR 92 & SR 185 in the City of Hayward, February 9, 2010.  
[http://www.dot.ca.gov/dist4/systemplanning/docs/pssr/pssr\\_sr\\_238\\_92\\_185\\_hayward\\_relinquishment\\_final.pdf](http://www.dot.ca.gov/dist4/systemplanning/docs/pssr/pssr_sr_238_92_185_hayward_relinquishment_final.pdf)

Figure 28 Boundaries for First Phase of Relinquishment in Hayward (SR 92, 185, and 238)



Base map: OpenStreetMaps

## Motivations and Anticipated Benefits

In 1961, the California Highway Commission planned to construct a proposed Foothill Freeway to bypass Hayward; however, a class action lawsuit halted the bypass project on the basis of environmental concerns.<sup>50</sup> In 2005, Assembly Bill 1462 authorized local agencies to develop a local alternative transportation improvements program (to the bypass proposal), and the City of Hayward subsequently developed the Route 238 Corridor Improvement Project—a project which could not be constructed according to Caltrans standards. The City of Hayward therefore sought the relinquishment to facilitate local street design, better traffic operations flow, construction and inspection according to City rather than Caltrans standards. Simultaneously, efficiency improvements associated with this and other projects relating to I-880, BART and local

<sup>50</sup> La Raza Unida of Southern Alameda County, et al v. United States Department of Transportation, et al, No. C-71-1166 RFP as quoted by: California Department of Transportation District 4, “SR 238 Hayward Bypass Program.” <http://www.dot.ca.gov/dist4/238hayward/238haywardfaq.htm>

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circulation provided Caltrans with a rationale for relinquishing portions of State Routes 238, 185 and 92 in Hayward.<sup>51</sup>

**Figure 29** Hayward Loop Project Area Before (Above) and After (Below) Relinquishment



Source: Google Maps

Since relinquishment, the City has converted several roads in downtown to a one-way loop system to increase vehicle throughput as part of the 238 Corridor Improvement Project. The City has also implemented the following roadway changes:

- Repaved the road
- Undergrounded overhead utility lines
- Replaced sidewalks, curbs and gutters

<sup>51</sup> Caltrans District 4 Office of System Planning, "Corridor Plan: Interstate/State Route 238," 2010. [http://www.dot.ca.gov/dist4/systemplanning/docs/cp/i\\_sr238.pdf](http://www.dot.ca.gov/dist4/systemplanning/docs/cp/i_sr238.pdf)

- Installed new wayfinding signs and continental crosswalks (piano keys)
- Planted 300 new trees and Bay-friendly landscaping
- Provided new LED street lightings and pedestrian lighting
- Implemented a Sydney Coordinated Adaptive Traffic System (SCATS) with traffic video detection and monitoring<sup>52</sup>

Figure 30 Aerial View of the Relinquished Roadways in Hayward



Source: City of Hayward, "Route 238 Corridor Improvement Project -- Report on Status and Accomplishments" (November 18, 2014)

Since implementation, the City has measured improved traffic conditions and travel time reductions of 10-30% along the corridor. The City also anticipates that the design changes will create a more pedestrian- and bicycle-friendly environment that attracts desired retail land uses into the area.<sup>53, 54</sup>

## Relinquishment Status and Schedule

1961	Foothill freeway bypass project proposed by Caltrans
1971	La Raza Unida of Southern Alameda County files class action law suit against Volpe (United States Department of Transportation)

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<sup>52</sup> City of Hayward, "Hayward Loop." <http://haywardloop.org/>

<sup>53</sup> Cheng, Nick. "Hayward considers improvements to Mission Boulevard." *The Pioneer*, January 23, 2014. <http://thepioneeronline.com/19925/politics/hayward-considers-improvements-to-mission-boulevard/>

<sup>54</sup> Interview with Kevin Briggs, City of Hayward Public Works Department, January 15, 2015.

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10/2005	AB 1462 authorizes local agencies along SR 82 to advance a Local Alternative Transportation Improvement Program
3/2007	Route 238 Corridor Improvement Program DEIR released <sup>55</sup>
11/27/2007	City Council approves the Route 238 Corridor Improvement Project and certifies the Final Environmental Impact Report
6/17/2008	City Council passes resolution to initiate the process of relinquishment of portions of State Routes 238, 92, and 185 City seeks support from Assemblyperson Mary Hayashi
6/1/2010	City notifies Caltrans District Director that the City Council has approved relinquishment and waived the 90 day notice
6/30/2010	CTC passes Resolutions to relinquish portions of State Route 92, 238, and 185 CTC also approves Local Alternative Transportation Improvement Program (LATIP) funds
7/12/2010	Caltrans Headquarters Division of Right of Way and Land Surveys files a record of the CTC relinquishment resolution with the County Recorder
8/2010	Construction and utility relocation commences
2013	Roadway changes for Phase I are complete

## Relinquishment Agreement

The City of Hayward did not receive any payment from Caltrans' for bringing the facilities up to a state of good repair.<sup>56</sup>

The Loop project was paid for primarily using Alameda County Measure B funds (\$80 million).<sup>57</sup> For Phase I, the City also drew upon \$8.1 million of the \$30 million in Caltrans Local Area Transportation Improvement Program (LATIP) funds associated with sale of excess land from the abandoned Foothill Freeway / Hayward Bypass project.<sup>58</sup> Another \$22 million in LATIP monies are expected for Phase II. The City is still seeking funding for Phase III of the project and is investigating Measure BB funds as well as federal grants.

For the undergrounding of utilities, the City received an allocation of approximately \$6 million in PG&E Rule 20 funds, as well as developer fees associated with development projects in the area.<sup>59</sup>

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<sup>55</sup> Wong, Simon, "Route 238 Hayward Corridor Improvement" *Tri-City Voice*, February 18, 2009.  
<http://www.tricityvoice.com/articlefiledisplay.php?issue=2009-02-18&file=Route+238.txt>

<sup>56</sup> Interview with Val Ignacio, Caltrans District 4, January 21, 2015.

<sup>57</sup> Alameda County Transportation Commission. Capital Projects Program: Project Fact Sheet: Route 238 / Mission - Foothill - Jackson Corridor Improvements  
[http://www.alamedactc.org/files/managed/Document/4644/ACTA5060\\_Rte238MissionFoothillJacksonCorridorImprovement\\_factsheet.pdf](http://www.alamedactc.org/files/managed/Document/4644/ACTA5060_Rte238MissionFoothillJacksonCorridorImprovement_factsheet.pdf)

<sup>58</sup> Interview with Kevin Briggs, City of Hayward Public Works Department, January 15, 2015.

<sup>59</sup> Ibid.

## Other Relinquishment Costs

Most of the other relinquishment-related costs to the City were associated with in-house services or labor, including the use of the city attorney. Right-of-way mapping for this relinquishment was relatively more involved than others studied. The City also had a lobbyist who helped with finding a sponsor for the initial legislation in Sacramento as well as getting items on the CTC schedule.

Everything that Caltrans owned within the right-of-way was relinquished to the City. This included freeway wayfinding signage and Alameda County stormwater drainage infrastructure. As was the case for the City of San Jose during the relinquishment of SR 82 and SR 130, the City of Hayward was surprised to find that stormwater infrastructure, which was owned by Caltrans and operated in agreement with the Alameda County Flood Control District, became City property during the relinquishment. This newfound asset resulted in unexpected costs as a result of infiltration issues related to the storm drain filtration system and groundwater contamination.<sup>60</sup>

Other costs associated with relinquishment include ongoing maintenance costs, which have been rolled into citywide street maintenance costs. A contractor on the streetscape project became responsible for maintenance during the 3-year construction period. After this time, the City took over maintenance of the road as well as the new landscaping.

Finally, in order to complete the Route 238 Corridor Improvement Project, the City needed to acquire some property, and that has been included in the project cost. The City funded design work for Phase I using Alameda CTC Measure B funds. The City also funded \$1.5 million of the conceptual studies and engineering.

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<sup>60</sup> Ibid.



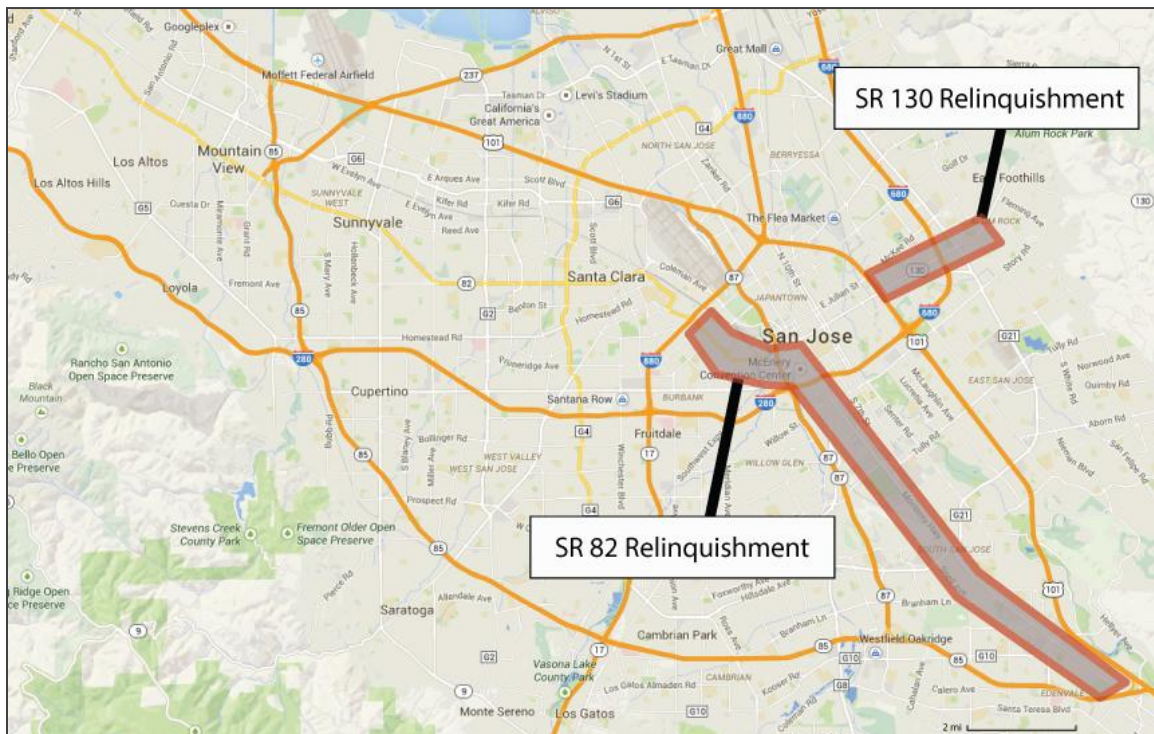
## CASE STUDY 2: THE ALAMEDA, MONTEREY HIGHWAY AND ALUM ROCK AVENUE (FORMERLY STATE ROUTES 82 AND 130) IN THE CITY OF SAN JOSE

The Alameda is a historic street in San Jose that links Santa Clara Street in downtown San Jose to El Camino Real near Santa Clara University. The Alameda functioned as a stagecoach route in 1849 and was signed as US 101 from 1928 to 1964. Like The Alameda, Monterey Highway is also a historic road that links 1<sup>st</sup> Street in downtown San Jose to Monterey, which was the former Mexican capital of California. In 1964, what was formerly known as “Bypass 101” became US-101 and the Alameda, along with Monterey Highway, became part of State Route 82.<sup>61</sup>

Alum Rock Avenue was built in the late nineteenth century as a link to Alum Rock Park, a historic health resort and California’s first municipal park. The 7-mile avenue connects directly to Santa Clara Street in downtown San Jose. Alum Rock Avenue was designated as part of SR-130 during the Caltrans renumbering of state routes in 1964.

See Figure 31 for a map of the relinquishment area at a regional scale, and Figure 32 for a zoomed-in map of the relinquishment area.

Figure 31 San Jose Relinquishment Area (Regional View)

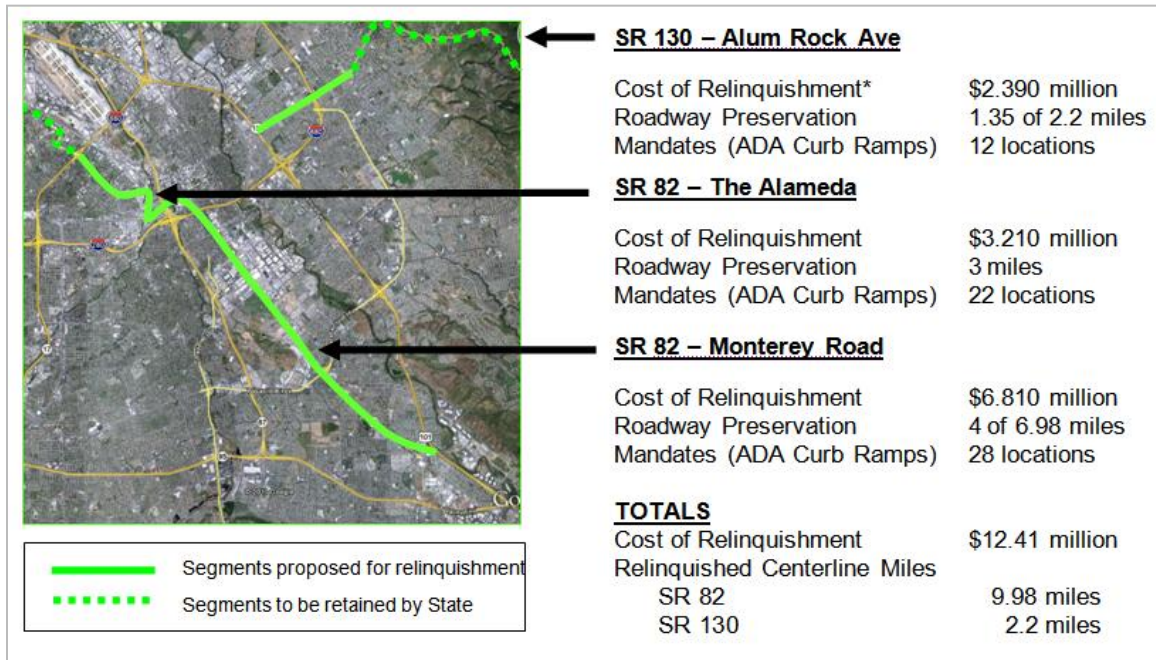


Base map: Google Maps

<sup>61</sup> California Highways <http://www.cahighways.org/081-088.html#082>

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**Figure 32 San Jose SR 82 and SR 130 Relinquishment Area**



Source: Summary of Relinquishment of State Routes 82 & 130 in San José, California. Provided by the City of San Jose.

## Motivations and Anticipated Benefits

The City of San Jose sought relinquishment of The Alameda and Monterey Highway in order to allow for greater design flexibility and the freedom to make changes without needing to seek encroachment permits or design exceptions from Caltrans.<sup>62</sup> The City of San Jose identified relinquishment as a key part of moving toward their Vision Zero goals, in order to reduce the high number of fatalities occurring on Monterey Highway and Alum Rock Avenue. In terms of design flexibility, the City sought to redesign the routes to make them bicycle- and pedestrian-friendly, with a viable and walkable business district. The roads were wide, auto-oriented, and in poor condition. The City was also supportive of VTA's efforts to implement BRT, including a dedicated bus lane on Alum Rock Avenue. As of summer 2015, VTA has moved forward with BRT construction along the corridor, with the exception of the one intersection that remained under Caltrans authority. The intersection is still awaiting encroachment permits.

<sup>62</sup> Interview with Nick Saleh, Caltrans District 4, January 21, 2015.

Figure 33 The Alameda in San Jose before Relinquishment



Source: City of San Jose, "A Plan for The Beautiful Way" (April 2010)

Figure 34 The Alameda features a Road Diet, Bulbouts, Landscaped Median, and Continental Crosswalks



Source: Nelson\Nygaard

The City argued that relinquishment would also allow for streamlining and reduced uncertainty associated with key economic development and transportation processes. In the immediate term, the City wished to avoid the lengthy process of obtaining Caltrans approval for design exceptions

associated with the Santa Clara / Alum Rock BRT project.<sup>63</sup> Other processes of concern to the City included the following:

- Facilitating private development by eliminating the need to obtain encroachment permits from Caltrans (such as for driveways) in addition to City approval
- Integrating transportation and land use planning associated with Diridon Station Area Plan, Convention Center Expansion, and Alum Rock Form Based Zoning District
- Authorizing special events such as the Rock n’ Roll Half Marathon and dozens of other events that occur along the Alameda each year
- Approving transportation projects such as the Alameda / El Camino Real Bus Rapid Transit (BRT), Monterey Highway BRT, and California High Speed Rail
- Implementing streetscape improvements such as “The Beautiful Way” improvements within the Alameda Neighborhood Business District<sup>64,65,66</sup>

Both Caltrans’ District 4 staff and the City argued that SR 82 in San Jose was of limited statewide significance and was made redundant by US-101 and other highways in the area. Caltrans District 4 staff indicated that Caltrans Headquarters initially resisted “giving away real estate” due to concerns regarding future needs in the case of an emergency. Caltrans Headquarters ultimately agreed to the relinquishment on the basis of the findings in the TSAE that the facility functioned as a conventional city street and did not provide any benefit to interregional or regional travel demand (see Appendix D) as well as estimated reductions in state operating costs.

## Relinquishment Status and Schedule

In the case of the Alameda, the timeframe from development of plans to execution was approximately three to five years, but the concept of relinquishing SR 82 was raised more than a decade earlier. A timeline of events over this period is provided below:

1996	Assembly Bill 2259 is introduced but does not pass. The Bill aims to create a two-tiered State Highway System (SHS) with primary state highways deemed critical to interregional travel, and secondary state highways being candidates for relinquishment. SR 82 is identified as a secondary route.
~2000	City initiates informal conversations with Caltrans regarding relinquishment.
2005	Caltrans District 4 reviews state routes within the district and ranks SR 82 among its top 10 candidate routes for relinquishment.
2009	City Department of Transportation initiates discussion with Caltrans regarding relinquishment of SR 82 and SR 130.
2009	City staff seek support from local Assembly member Jim Beall.
12/15/2009	Council approves <i>2010 Legislative Guiding Principles Priorities and Advocacy Issues</i> report including relinquishment as a priority.

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<sup>63</sup> Caltrans has yet to issue an encroachment permit for the remaining portion of the BRT where Alum Rock crosses I-680.

<sup>64</sup> Larsen, Hans. Memorandum on Relinquishment of State Routes 82 and 130. City of San Jose, November 18, 2011.

<sup>65</sup> Salvano, Ray. “State Routes Relinquished to San Jose” *One Square Mile*, February 1, 2012.  
<http://1sqmile.blogspot.com/2012/02/state-routes-relinquished-to-san-jose.html>

<sup>66</sup> Interview with Hans Larsen, Ray Salvano, Zahir Gulzadah, City of San Jose, January 26, 2015.

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1/20/2010	Assemblymember Jim Beall introduces legislation.
3/18/2010	Transportation System Analysis and Evaluation (TSAE) approved for 9.98 miles between US 101 and I-880.
3/22/2010	AB 1670 authorizes CTC to relinquish 11 miles of SR 82, referred to as The Alameda and Monterey Highway, and 2.25 miles of SR 130, referred to as Alum Rock Avenue (see Appendix C). <sup>67</sup>
2010	Caltrans completes Condition Assessment (CA) <sup>68</sup>
2011	City seeks amendment of the Transportation Improvement Program (TIP) with MTC to include pavement and ADA improvements on the relinquished corridors
2/2011	Categorical Exemption from CEQA approved
10/2011	Caltrans prepares Project Study Report (PSSR). In this case, the City actually prepared a PSSR and sent it to Caltrans.
11/29/2011	Council approves Relinquishment Agreement for 9.92 miles of SR 82 between I-880 and US-101 and 2.6 miles of SR 130 from US-101 to White Street. Council also approves a required local match of \$1.45 million (11.47%).
12/15/2011	CTC approves the Relinquishment Agreement and programming of funds
12/2011	Caltrans submits letter to MTC regarding increased federal programming authority to the City
2012	Relinquishment completed
3/2013	MTC programs the funds through its standard budgeting process
2013	City identifies local funds and submits request for Authorization to Proceed

## Relinquishment Agreement

Prior to relinquishment, the City owned sidewalks and landscaped medians along the route, and was responsible for repairing potholes, pavement cracks and sidewalks, doing street sweeping, and maintaining signals, lighting, signing and striping through a maintenance agreement with reimbursement from Caltrans. Given the very limited maintenance budget, the facility had deteriorated to what was considered a poor condition.

Caltrans and the City estimated that \$20 million would be required to bring the roadway up to an acceptable state of good repair and mitigate near-term maintenance costs.<sup>69</sup> Three sources of funds were identified to cover this cost: firstly, the Relinquishment Agreement between Caltrans and the City of San Jose involved a transfer of \$12.41 million of federal programming authority from Caltrans to the City, subject to appropriation through MTC and approval of the CTC. Secondly, the agreement required a local match of \$1.45 million (11.47%), which came from gas tax funds that were earmarked for pavement maintenance projects in the City. Finally, the agreement assumed that \$6.14 million of roadway improvements would be provided in conjunction with upcoming projects such as the VTA's Santa Clara / Alum Rock and El Camino

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<sup>67</sup> Assembly Bill 1670 – as amended March 24, 2010.

<sup>68</sup> Larsen, Hans. Memorandum on Relinquishment of State Routes 82 and 130. City of San Jose, November 18, 2011.

<sup>69</sup> Ibid.

Real BRT projects, and the High Speed Rail project on Monterey Road. In this way, relinquishment of SR 82 in San Jose provides a good example of how various types of funds can be leveraged for the process, including those associated with private development or BRT projects.

As part of the relinquishment deal, the City hoped to obtain money to repair the road to a state of good repair in addition to 10 years of funding for operations and maintenance. After approximately five years of negotiation, and with impending projects, the City settled for the above agreement for state of good repair funds only.

Under the relinquishment legislation, the City of San Jose is still required to maintain directional signs to Caltrans facilities. Section 382 of the Streets and Highways Code states the following:

“Route 82 is from Route 880 in San Jose to Route 280 in San Francisco... The relinquished former portion of Route 82 within the City of San Jose is not a state highway and is not eligible for adoption under Section 81. For the relinquished former portion of Route 82, the City of San Jose shall maintain within its jurisdiction signs directing motorists to the continuation of Route 82 and shall ensure the continuity of traffic flow on the relinquished former portion of Route 82, including any traffic signal progression. The city may apply to the department for approval of a business route designation in accordance with Chapter 20, Topic 21, of the Highway Design Manual.”

**Figure 35** Proposed BRT on Alum Rock Avenue



Source: City of San Jose.

## Other Relinquishment Costs

Caltrans staff indicated that staff costs associated with relinquishment were built into Caltrans' regular administrative costs and may have amounted to approximately \$500,000 for document preparation (TSAE, CA and PSSR) and right-of-way mapping.<sup>70</sup> Other staff costs included input and review by various divisions and environmental clearance as a Categorical Exemption.

<sup>70</sup> Interview with Nick Saleh, Caltrans District 4, January 21, 2015.

City staff indicated that the process of negotiation consumed staff time for approximately five years prior to officially engaging in the relinquishment process. During the relinquishment process, the City used their in-house staff and legal team. The City also used a full-time Sacramento-based lobbyist to help to advocate on behalf of the City with staff from Caltrans Headquarters. In preparation for relinquishment, the City also completed independent studies of pavement conditions and associated repair costs.

## **Historic Assets**

Relinquishment of SR 82 and SR 130 in San Jose presented several challenges related to the historic nature of the asset. To begin with, the age of the facility meant that there were no original documents delineating Caltrans' ownership of the facility. This situation added time and complexity to real estate aspects of relinquishment, which were ultimately resolved by Caltrans Real Estate staff providing a general description of the entire corridor.

Secondly, the relinquishment process necessitated identification of all the historic resources on the California Register of Historic Resources to ensure compliance with federally and state mandated programs for historic preservation. In this case, historic resources included a historic underpass and Native American remains. Addressing legal liability for historic assets nearly stalled the relinquishment negotiations.

Finally, a related issue was the identification of the many infrastructural components included in the relinquishment such as traffic signals, streets lights, storm systems and pumping stations. The City of San Jose was not fully cognizant of the nature and implications of these infrastructural elements until an area connected to a relinquished pumping station was flooded. This resulted in unexpected costs to the City.

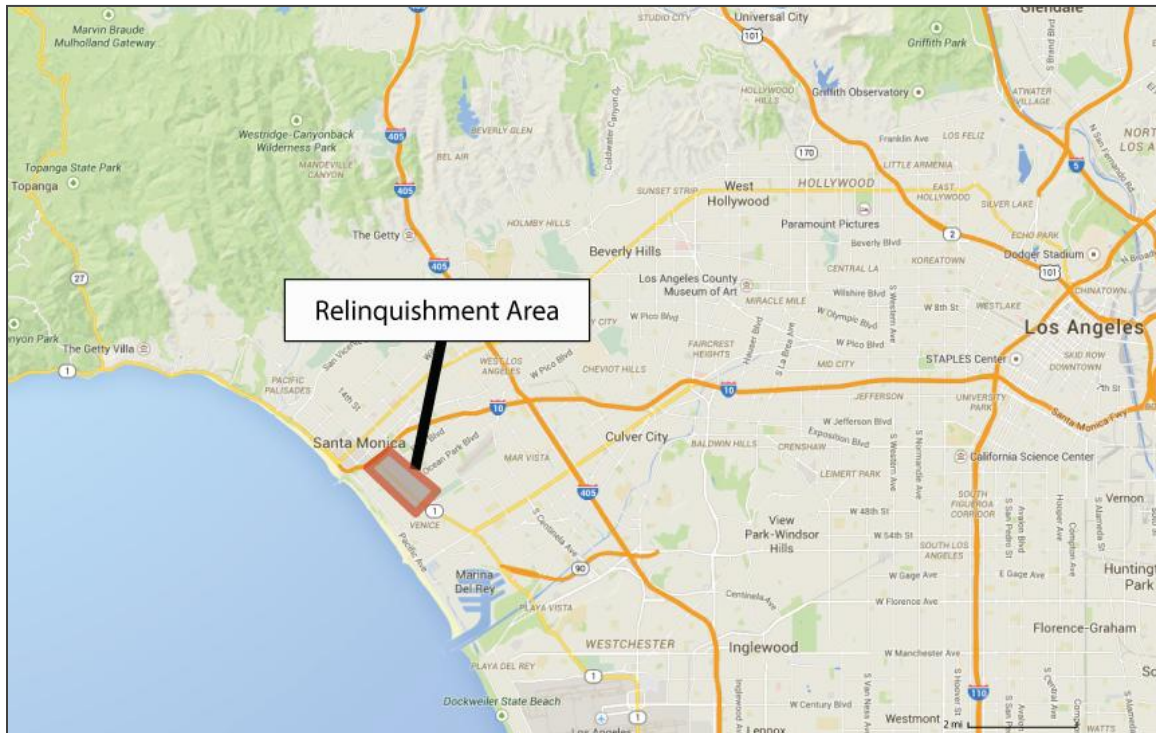
## CASE STUDY 3: LINCOLN BOULEVARD (FORMERLY STATE ROUTE 1) IN THE CITY OF SANTA MONICA

Lincoln Boulevard is an important north-south corridor within the City of Santa Monica and the Los Angeles County. The road carries relatively heavy volumes of trucks and vehicles, and is lined by light industrial uses, car yards, and a range of small businesses. Residential land uses are located immediately behind these businesses with local streets linking directly to the road.

The portions of Lincoln Boulevard affected by relinquishment include the 1.25-mile stretch between the southern limits of Santa Monica and I-10.

See Figure 36 for a map of the relinquishment area at a regional scale, and Figure 37 for a zoomed-in map of the relinquishment area.

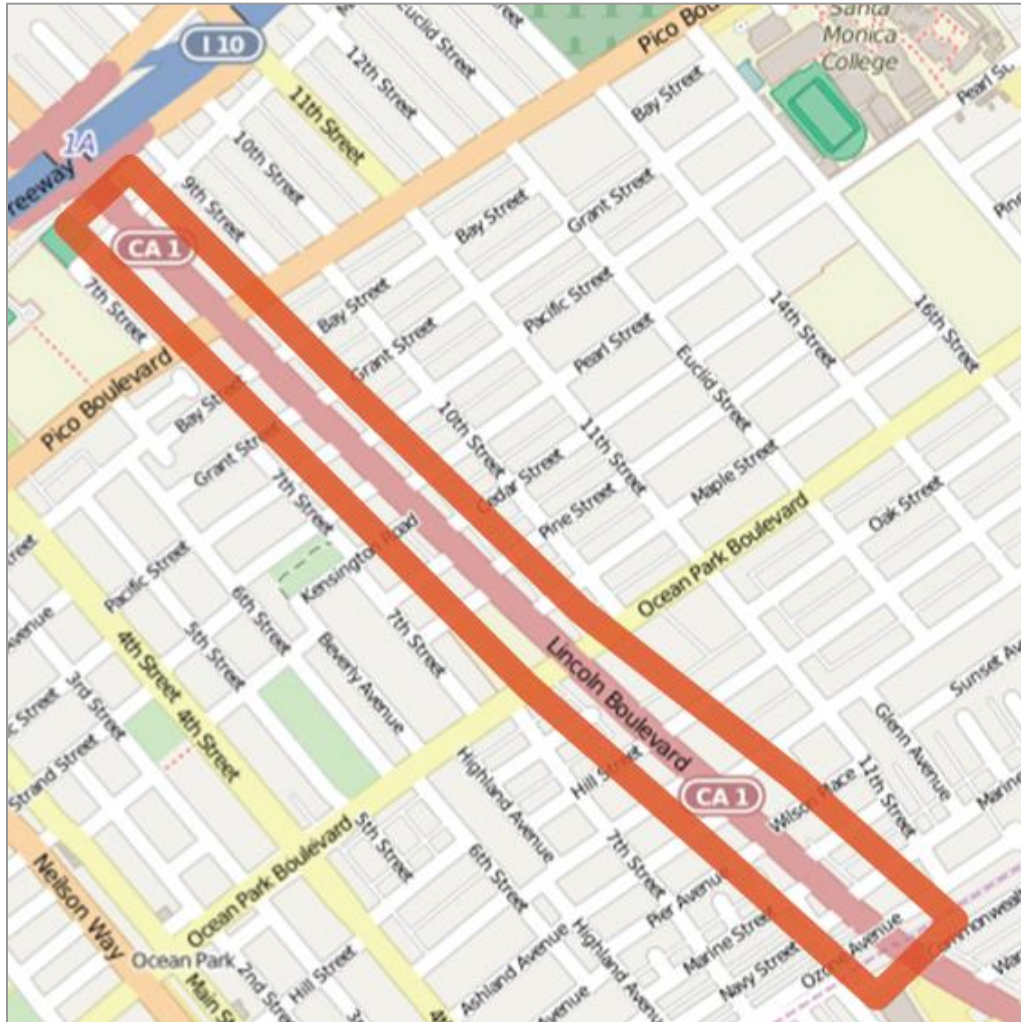
Figure 36 Santa Monica Relinquishment Area (Regional View)



Base map: Google Maps



Figure 37 Boundaries of Relinquishment for SR 1 in Santa Monica



Base map: OpenStreetMap

## Motivations and Anticipated Benefits

According to Caltrans staff, the City of Santa Monica initiated relinquishment of Lincoln Boulevard to avoid dealing with the state’s design standards and the Caltrans permit process. Caltrans had previously identified Lincoln Boulevard as a potential candidate for relinquishment due to the urban nature of the road, which state officials recognized functioned more like a city street than a conventional highway.<sup>71</sup>

The City of Santa Monica was interested in relinquishment as part of a broader vision for Lincoln Boulevard. The City and local community members have expressed a vision for Lincoln Boulevard as a pedestrian-oriented and aesthetically pleasing neighborhood corridor with vibrant businesses and a sense of local identity. Since the relinquishment process, the City has embarked on the

<sup>71</sup> Interview with Neil Hashiba, Anthony Pahn and Guillermo Potes, Caltrans District 7, Division of Planning, January 21, 2015 (“District 7 Interview”).

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Lincoln Neighborhood Corridor Plan (LiNC), which aims to transition the thoroughfare to a more pedestrian-friendly and local-serving neighborhood boulevard that reflects community values for sustainability, public art, and economic viability<sup>72</sup>. The types of changes that may be considered include the following:

- Changed lane configurations
- Transit enhancements including a dedicated bus lane
- Sidewalk, street, and crosswalk treatments
- On-street parking as part of a package of areawide parking management strategy
- Shade trees, landscaping, and urban runoff mitigation opportunities
- Street furniture, gateway design, wayfinding treatments and identity-forming elements
- Correspondence between the streetscape, and local land uses, ground floor spaces, and businesses

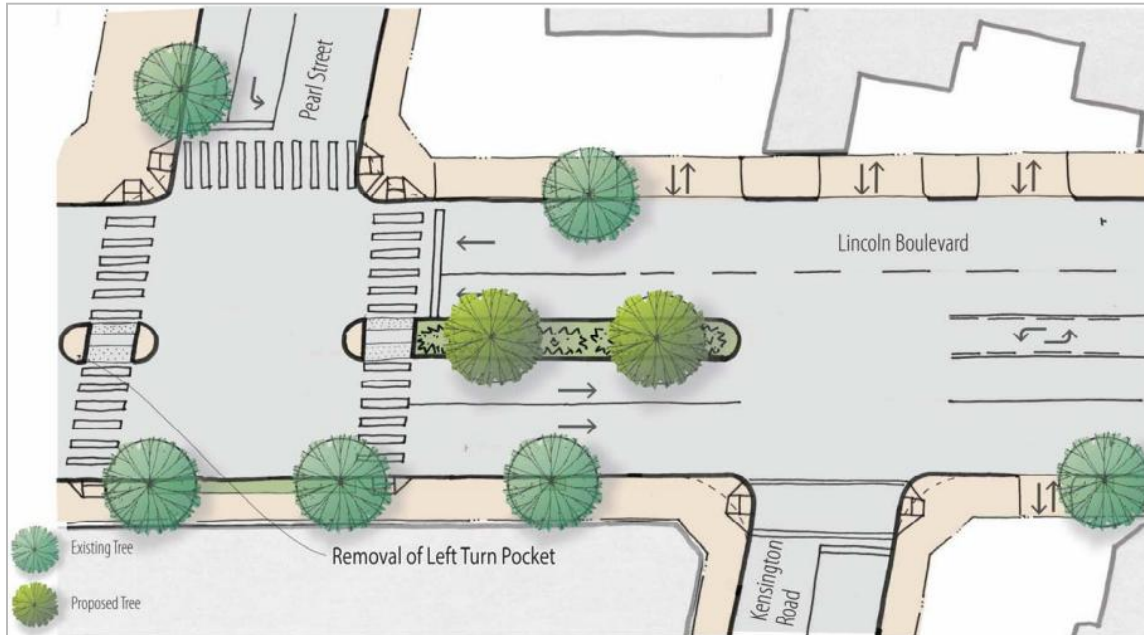
**Figure 38** Current Conditions along Lincoln Boulevard, Santa Monica



Source: City of Santa Monica, Lincoln Neighborhood Corridor Plan "The LiNC", Community Workshop #1 (February 23, 2015)

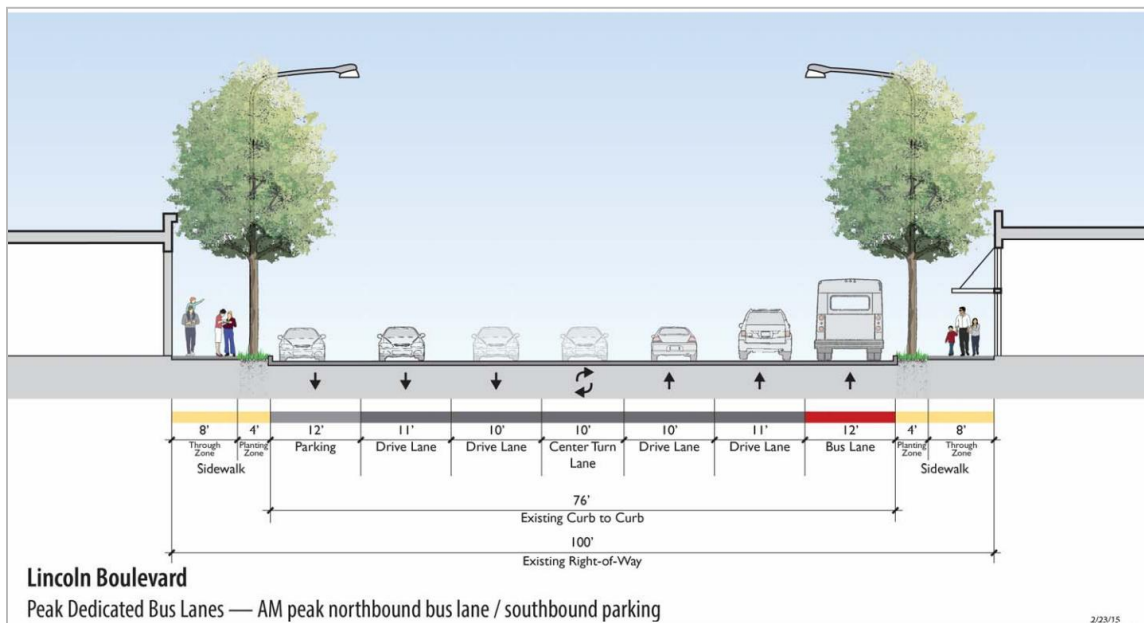
<sup>72</sup> City of Santa Monica, Planning and Community Development Department. Request for Proposals: Lincoln Neighborhood Corridor Plan ("The LiNC"). Outreach, Schematic Design, Business Improvements, Beautification and Transit, Parking and TDM Strategies, April 2014.

Figure 39 Potential Street Redesign Concepts for Lincoln Boulevard, Santa Monica



Source: City of Santa Monica, Lincoln Neighborhood Corridor Plan "The LiNC", Community Workshop #1 (February 23, 2015)

Figure 40 Potential Street Redesign Concepts for Lincoln Boulevard, Santa Monica



Source: City of Santa Monica, Lincoln Neighborhood Corridor Plan "The LiNC", Community Workshop #1 (February 23, 2015)

## Relinquishment Status and Schedule

The relinquishment process for Lincoln Boulevard was completed in 2012. A timeline of events connected with this relinquishment is presented below. This timeline suggests that the

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relinquishment process spanned a period of 16 years, with more active involvement on the process over a period of three years.

1968	Agreement for Maintenance of State Highways between Santa Monica and Caltrans <sup>73</sup>
1996	City participates in relinquishment process for other portions of Lincoln Boulevard <sup>74</sup>
2009	City requests relinquishment of remaining portion of Lincoln Boulevard from Caltrans
2009	City staff work with legislative representatives to achieve necessary approvals for relinquishment <sup>75</sup>
2009	Caltrans District 7 Planning Division seek input from other Caltrans Divisions, SCAG and Metro
12/7/2010	Caltrans District 7 Planning Division complete Transportation System Assessment and Evaluation (TSAE) with sign off from Headquarters <sup>76</sup>
1/1/2010	Legislation allowing relinquishment to proceed becomes effective <sup>77</sup>
2011	City and Caltrans District 7 Design Division conduct on-site meetings to evaluate conditions, tabulate deficiencies and estimate repair costs at \$2.2 million <sup>78</sup>
8/11/2011	Council authorizes City Manager to negotiate and execute a relinquishment agreement, a form of Cooperative Agreement, with the State of California
6/2012	Relinquishment agreement executed between City and Caltrans, officially completing the relinquishment process
7/2012	City initiates work to a bring road to state of good repair using Federal STP-Local (Caltrans) and Prop-C (Metro) funds rather than awaiting Caltrans transfer
6-9/2013	Reconstruction completed including resurfacing, repairing sidewalks, curbs and gutters, improving crosswalks, and installing video detection at five intersections <sup>79</sup>
4/2014	City executes \$395,000 contract to develop the LiNC Plan <sup>80</sup>

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<sup>73</sup> Rohit, Parimal. "Lincoln Boulevard In Santa Monica Has A New Owner" Santa Monica Mirror, Aug. 27, 2011. <http://www.smmirror.com/articles/News/Lincoln-Boulevard-In-Santa-Monica-Has-A-New-Owner/32693>

<sup>74</sup> Staff Report to Mayor and City Council from Martin Pastucha, Director of Public Works on Relinquishment of Lincoln Boulevard, August 23, 2011. <http://www.smgov.net/departments/council/agendas/2011/20110823/s201108238-A.htm>

<sup>75</sup> Ibid.

<sup>76</sup> Interview with Neil Hashiba, Anthony Pahn and Guillermo Potes, Caltrans District 7, Division of Planning, January 21, 2015.

<sup>77</sup> Senate Bill No. 532, Chapter 189, Amendments to the Streets and Highways Code. [http://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=200920100SB532](http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200920100SB532)

<sup>78</sup> Staff Report to Mayor and City Council from Martin Pastucha, Director of Public Works on Relinquishment of Lincoln Boulevard, August 23, 2011. <http://www.smgov.net/departments/council/agendas/2011/20110823/s201108238-A.htm> Repair costs addressed pavement deterioration and curb, gutter, and sidewalk damage. Average pavement condition index (PCI) based on an industry standard visual rating was 62, which is considered fair.

<sup>79</sup> City of Santa Monica, Lincoln Boulevard Project Information. <http://www.smgov.net/bebp/project.aspx?id=33678>

## **Relinquishment Agreement**

As part of the relinquishment agreement, Caltrans was required to provide a financial contribution of \$2.199 million to the City of Santa Monica, which amounts to \$1.759 million per mile of road to be used toward roadway maintenance improvements. All ongoing costs including signal operations and roadway maintenance were taken on by the City of Santa Monica.

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<sup>80</sup> Larios, Daniel "Santa Monica's Lincoln Neighborhood Plan Moves Ahead" *Santa Monica Lookout*, June 9, 2014. [http://www.surfsantamonica.com/ssm\\_site/the\\_lookout/news/News-2014/June-2014/06\\_09\\_2014\\_Santa\\_Monicas\\_Lincoln\\_Neighborhood\\_Corridor\\_Plan\\_Moves\\_Ahead.html](http://www.surfsantamonica.com/ssm_site/the_lookout/news/News-2014/June-2014/06_09_2014_Santa_Monicas_Lincoln_Neighborhood_Corridor_Plan_Moves_Ahead.html)

## CASE STUDY 4: LAS POSITAS ROAD, CLIFF DRIVE, AND CASTILLO STREET (FORMERLY STATE ROUTE 225) IN THE CITY OF SANTA BARBARA

Former State Route 225 was relinquished in two separate segments: in the late 1990s, an approximately 2.5-mile segment (now referred to as Cabrillo Boulevard) was relinquished; in January 2014, a 4.7-mile segment between the US-101/SR-225 interchange at Las Positas Road, along Cliff Drive, and ending at the Castillo Street interchange with US-101 was turned over from the state to the City. The most recent relinquishment did not include the underpass at Castillo Street; ongoing groundwater and structural issues made the City unwilling to take ownership of this asset.

See Figure 41 for a map of the relinquishment area at a regional scale, and Figure 42 for a zoomed-in map of the relinquishment area.

Figure 41 Santa Barbara Relinquishment Area (Regional View)

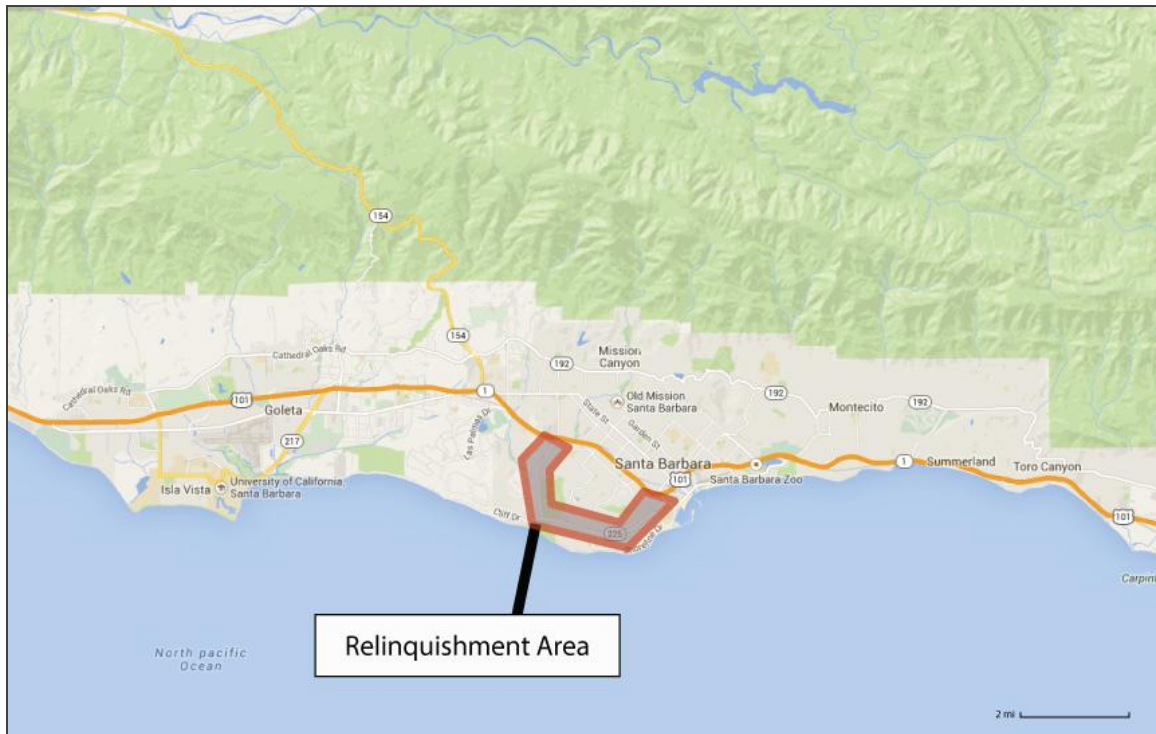
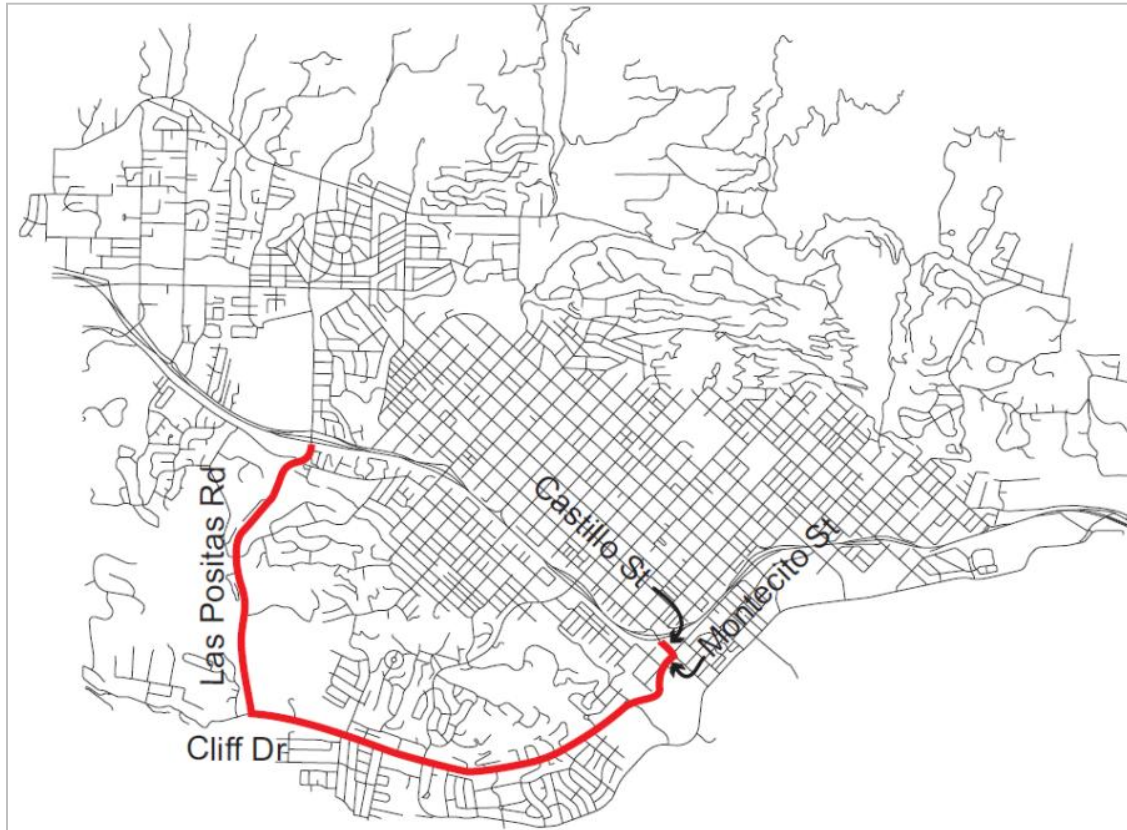


Figure 42 SR 225 Relinquishment Map



Source: City of Santa Barbara. Presentation on Potential Cliff Drive Traffic Safety Project. November 5, 2014.

## Motivations and Anticipated Benefits

The relinquishment of SR 225 was motivated by community input. Residents of Santa Barbara had been concerned about pedestrian safety in this area, particularly along Cliff Drive, since about 2006, when they started organizing to get City Council support for safety improvements. More recently, the city had been interested in gaining more flexibility to make complete streets improvements, some of which were not possible while the route was owned by Caltrans. From Caltrans' perspective, this route was a good candidate for relinquishment due to its evolved function as a US-101 detour route—it no longer serves a regional purpose.

With the roadway relinquished, the City is now considering adding bike lanes, improved and more frequent pedestrian crossings, improved lighting, and a continuous center left turn lane, among other treatments intended to calm traffic and improve pedestrian safety.

## Relinquishment Status and Schedule

The process had many starts and stops, with a major hurdle developing toward the end of the negotiations due to the City Attorney's concerns regarding liability; the City's legal leadership wanted Caltrans to keep liability for the roadway, but Caltrans was unwilling to negotiate on this point. The attorney's argument was fueled by discrepancies between state and local crash data. Ultimately, the City Council decided to support relinquishment with the understanding that the City would be accepting liability upon relinquishment and would be responsible for ongoing

maintenance costs. Community support for relinquishment was a deciding factor, despite staff concerns.

## **Relinquishment Agreement**

For the first relinquished segment, Caltrans repaved the roadway and contributed approximately \$1 million for the restoration of the Cabrillo Street Bridge (which was less than the City estimated was needed for state of good repair).<sup>81</sup> The bridge ultimately needed to be replaced at a cost of \$24 million. It is a current construction project being managed by the City of Santa Barbara Department of Public Works and is being funded by the Federal Highway Administration.<sup>82</sup>

For the more recent relinquishment, Caltrans provided an up-front payment of \$819,000 for the cost of drainage repairs. Caltrans did not commit to funding any ongoing maintenance.

The costs and effort associated with the relinquishment process itself were primarily associated with Caltrans and City staff time, which, similar to the other case studies, was not tracked closely enough to provide a dollar estimate of time spent. About \$15,000 to \$30,000 was spent to perform an analysis of collisions along the corridor and develop potential safety improvements that could address the causes of those collisions.<sup>83</sup> Additionally, at the beginning of the relinquishment process, the City had hired a consultant to prepare a Relinquishment Study to document the current state of the infrastructure along the route, which was used as a basis of negotiations. The City also incurred a one-time cost upon relinquishment to integrate the seven existing traffic signals along the corridor into the City's network.

## **Key Findings**

The Santa Barbara case study highlights the difficulty and delay that can enter the process due to conflicting priorities, both internal and external to the City. City staff, City Council, the City Attorney, and Caltrans staff brought different perspectives to the table at different points in the process, slowing forward progress. Stakeholders involved with this process suggest identifying the parameters of negotiation, as well as identifying the condition and needs along the route being considered for relinquishment as early in the process as possible. This includes ensuring that all parties involved have an understanding about where there is latitude for negotiation and where the other party cannot compromise.

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<sup>81</sup> City of Santa Barbara Council Agenda Report, "State Route 225 Relinquishment Update," April 12, 2011.

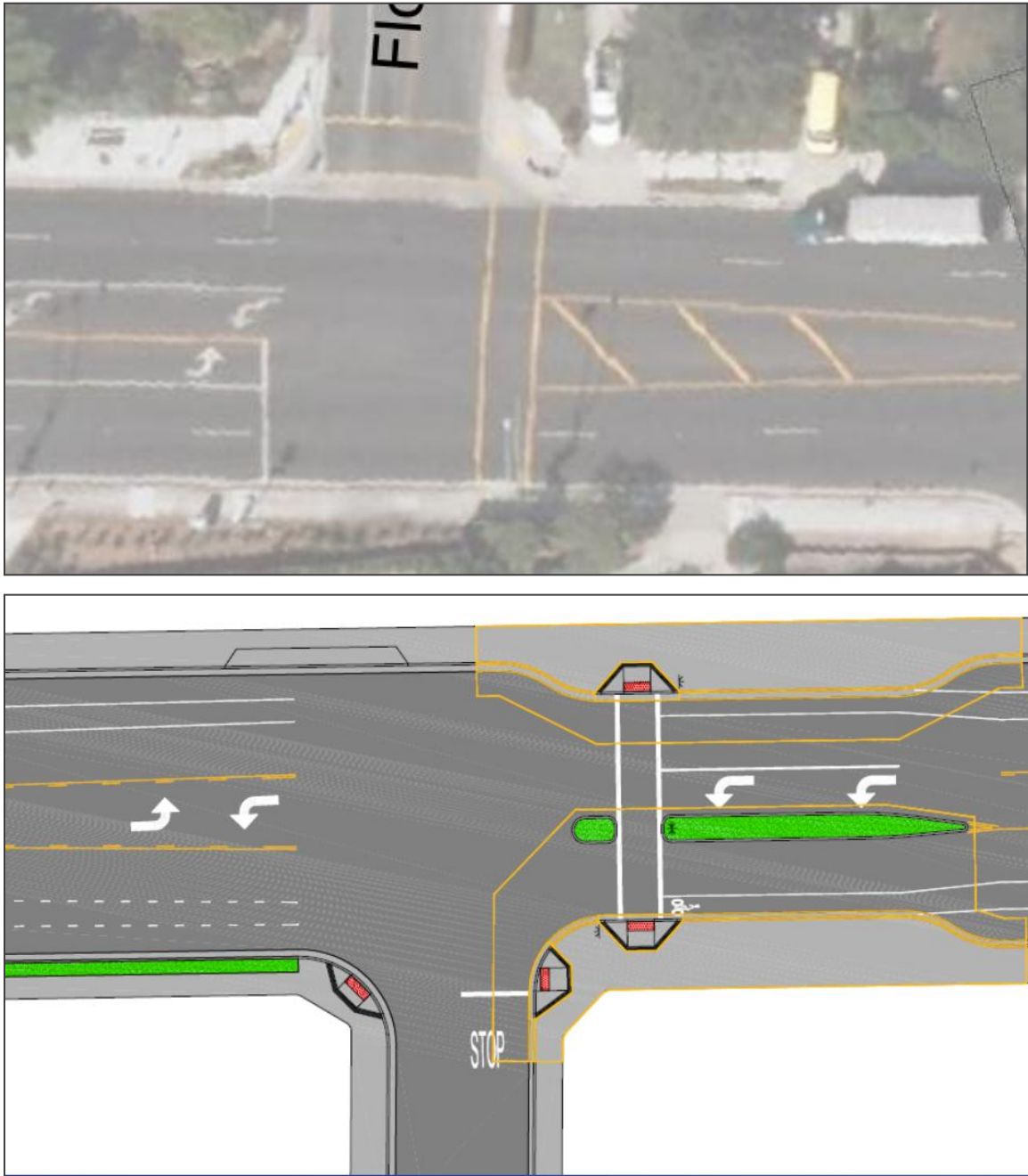
<sup>82</sup> City of Santa Barbara, "Current Bridge Projects."  
<http://www.santabarbaraca.gov/gov/depts/pw/engineering/reports/bridgeproj.asp>

<sup>83</sup> Magnoli, Giana. "Accident Analysis Key in City of Santa Barbara's Exploration of Highway 225 Future." *Noozhawk*. May 20, 2012. [http://www.noozhawk.com/article/city\\_of\\_santa\\_barbara\\_highway\\_225/](http://www.noozhawk.com/article/city_of_santa_barbara_highway_225/)



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Figure 43 Existing Conditions (Top) and Proposed Design Treatments (Bottom) on Cliff Drive



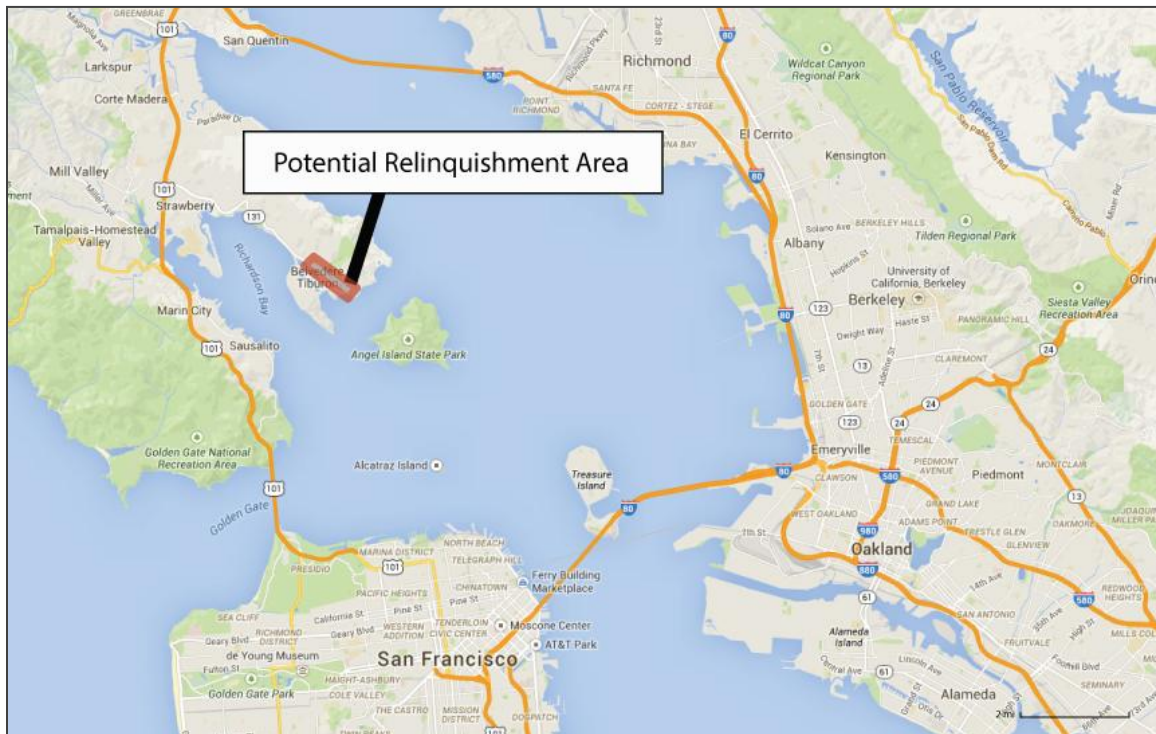
Source: City of Santa Barbara.

## CASE STUDY 5: STATE ROUTE 131 / TIBURON BOULEVARD IN THE CITY OF TIBURON

The proposed relinquishment of State Route 131 (also known as Tiburon Boulevard) in Tiburon is currently in progress. The segment of road under consideration is approximately 0.7 miles long, between Lyford Drive and Main Street, Tiburon's downtown area.

See Figure 44 for a map of the relinquishment area at a regional scale, and Figure 45 for a zoomed-in map of the relinquishment area.

**Figure 44 Tiburon Potential Relinquishment Area (Regional View)**



Base map: Google Maps

Figure 45 Tiburon Boulevard (SR 131) in Tiburon



Base map: OpenStreetMap

## Motivations and Anticipated Benefits

The Town of Tiburon was initially interested in relinquishment due to a desire for local control over curb cuts, crosswalks, parking management, and street design. Pedestrian safety was of particular concern. While localities can establish parking meter zones along state highways through local ordinance, Caltrans may disallow many of these local regulations or particular parking configurations that the locality may desire.<sup>84</sup>

## Relinquishment Status and Likely Process

Official discussions about this process began in 2013 and have included the Town's Council. At that time, relinquishment of the entire right-of-way of the downtown stretch of Tiburon Boulevard was considered. In mid-2014, state legislation was passed permitting relinquishment of SR 131 between Lyford Drive and Main Street;<sup>85</sup> relinquishment will not occur until the Town and Caltrans come to an agreement on terms, however. The legislation initiated Caltrans' required Project Scope Summary Report (PSSR), which the Town of Tiburon has agreed to pay for at an estimated cost of \$108,000. As of January 2015, the Town and Caltrans are still discussing the terms of the relinquishment agreement.

<sup>84</sup> Caltrans Traffic Manual, Chapter 8. <http://www.dot.ca.gov/hq/traffops/engineering/control-devices/pdf/TMChapter8.pdf>

<sup>85</sup> Assembly Bill No. 747. [http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201320140A8747](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140A8747)

Figure 46 Existing Conditions on Tiburon Boulevard (SR 131)



Source: Nelson\Nygaard

## Key Lessons

As the relinquishment process is still in the negotiation stage, no lessons learned have yet emerged from this case study. This case study underscores the importance of having a shared understanding of the basic parameters of what will be relinquished from early in the process.

## CASE STUDY 6: STATE ROUTE 16 / JACKSON ROAD IN THE CITY OF SACRAMENTO

State Route 16 runs east-west across the City of Sacramento. To the east, it is a rural highway through Sacramento and Amador counties. To the west, it runs northwest through Woodland and Yolo County. Within the City, it transitions from a two-lane rural highway called Jackson Road (Figure 50) to a short segment as a four-lane arterial with a center two-way left turn lane and striped bike lanes. There, it is referred to as Folsom Boulevard.

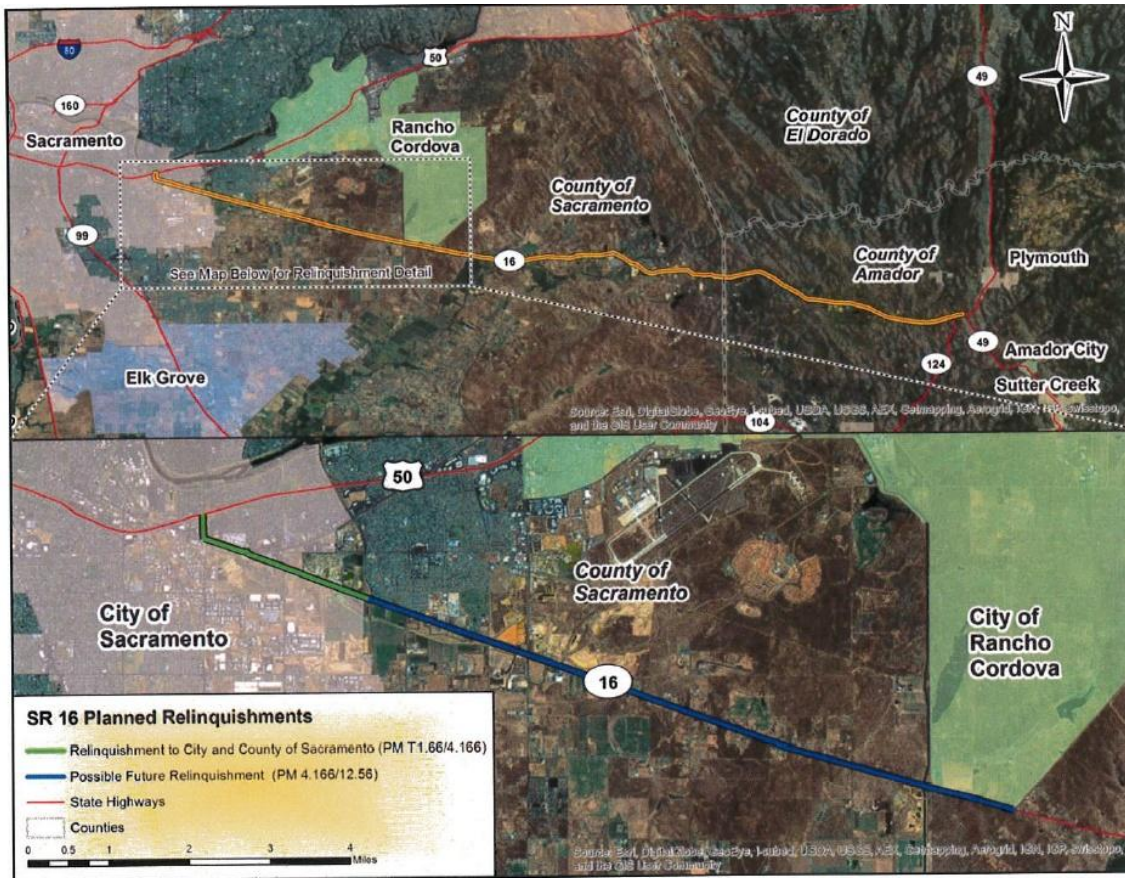
See Figure 47 for a map of the relinquishment area at a regional scale, and Figure 48 for a zoomed-in map of the relinquishment area.

Figure 47 Sacramento Relinquishment Area (Regional View)



Base map: Google Maps

Figure 48 Site of SR 16 Relinquishment



Source: Caltrans TSAE for SR 16 in Sacramento.

## Motivations and Anticipated Benefits

As of January 2015, an approximately 11-mile segment of SR 16 between SR 50 (in the City of Sacramento) and Grant Line Road (in Sacramento County) is being considered for relinquishment by the state to the respective jurisdictions. In 2012, the developer of a proposed mixed-use property to be located at SR 16 and South Watt Avenue (Figure 49) triggered the relinquishment discussion by funding a traffic study of the corridor and looking into the provision of roadway improvements not covered by Caltrans' Highway Design Manual.

Figure 49 SR 16 at South Watt Avenue looking west (site of proposed development on left, far-side)



Figure 50 SR 16 west of Grant Line Road, looking west



Source: Google Maps

The developer was interested in finding out how much SR 16 right-of-way they would need to preserve given the predicted impacts of their development. A project development team composed of representatives from Caltrans, the City of Sacramento, Sacramento Regional Transit, and the City of Rancho Cordova participated in the developer-funded study, but no representatives from the eastern counties (e.g. Amador, Alpine, and Calaveras) were included.

Conversations regarding relinquishment started during this initial study. Proposed development in the area is consistent with the city's community plans, and more development along SR 16 is expected in the future. Therefore, Caltrans was motivated to pursue relinquishment because they believe future development will change the core needs of the corridor towards more urban characteristics and away from interregional travel—Caltrans' core mission. Additionally, Caltrans is not well-positioned to negotiate for traffic impact mitigations with developers on a case-by-case basis. The City of Sacramento was motivated to pursue relinquishment because, through existing plans, they encourage this type of development and want control to require developers to follow

local design guidance regarding pedestrian friendliness, bikeability, and transit supportiveness.<sup>86</sup> The expected benefits of relinquishment are:

- Local design control to the City and County of Sacramento
- Ability to encourage and support development along SR 16 that is more urban in character
- Reduction of costs to Caltrans

## **Costs and Effort to Relinquish**

Though Caltrans' standard relinquishment process takes 13-18 months, the effort required to relinquish SR 16 to the City and County of Sacramento has been ongoing for the past two years and is expected to take approximately one more year to complete. The delay in this case has been caused primarily by the complication associated with mixed jurisdictions along the proposed segment (it runs through both City and County territory) and pushback from the counties to the east of the segment. Those counties (Amador, AlpineC, Calaveras) were concerned that they were not included in the initial study and that their interests (mainly in the provision of interregional travel to serve residents' needs and to support local commerce and tourism) have not been considered.

The process so far has involved the following steps:

1. Initial corridor study by Caltrans, City of Sacramento, City of Rancho Cordova, and Sacramento Regional Transit covers entire segment from SR 50 to Grant Line Road
2. City of Sacramento requests relinquishment be considered by Caltrans
3. Transportation System Analysis and Evaluation (TSAE) report by Caltrans for City of Sacramento segment (SR-50 to South Watt Avenue)
4. State legislation (AB 1957)<sup>87</sup> allows relinquishment to City and County of Sacramento
5. Ongoing and separate political discussions within the City and County before final terms are negotiated

The costs associated with this relinquishment have been comprised primarily with staff time. The developer funded the initial corridor study. Caltrans bore the cost of bringing the corridor up to a state of good repair (repaving, new culverts) in advance of the relinquishment; they will not fund any ongoing maintenance. Otherwise, City, County, and state staff time have been the main costs, and much of that time is incorporated into with normal costs of business for the agencies. None of the project managers were able to estimate hours spent, though a 2-3 year process is expected in total. Once the relinquishment is finalized, it is expected that developers along the city's portion will fund any future improvements or enhancements to the roadway, such as new signals and crossing facilities.

## **Key Findings**

Stakeholders involved with this ongoing process offered the following key lessons learned:

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<sup>86</sup> See, for example, the City of Sacramento Street Design Standards.

<sup>87</sup> [http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201320140AB1957](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB1957)



**Up/Downstream Impacts.** Cities pursuing relinquishment should think about the impacts beyond the jurisdiction(s) directly involved. Communities up and down stream will be impacted and may slow the process if their interests are not aligned with the jurisdiction pursuing relinquishment.

**Internal Stakeholders.** It is important to make sure all parties within an agency involved in the process are on the same page. Sometimes when an individual opposes a relinquishment, they bring their concerns straight to Caltrans' headquarters, rather than engaging with the District involved. Caltrans leadership and any bordering districts will need to support the relinquishment, so engaging all affected parties in the discussions as early as possible may streamline the process. Once a decision is made on relinquishment, it is also important to ensure that it is communicated internally to all staff working in the affected area.

**Property Lines.** Where municipal boundaries split the roadway through its centerline, the details of liability and ongoing maintenance need to be established clearly within relinquishment agreements.

**Legislation Language.** Legislation enabling relinquishment should be thoughtful when describing the extents of relinquishment. If using jurisdictional boundaries to delineate the project extents, note that those boundaries can change over time if they are defined based on features that are moveable, such as the location of a creek.

## CASE STUDY 7: US HIGHWAY 101 / VAN NESS AVENUE IN THE CITY OF SAN FRANCISCO

Caltrans has jurisdiction over U.S. Highway 101, including the two-mile segment between Mission and Lombard streets in San Francisco, also known as Van Ness Avenue. This segment is an example of a Caltrans facility that has undergone redesign without been relinquished. It is included here as a case study of what may be possible without relinquishment. See Figure 51 for a detailed view of the Van Ness BRT project area, and Figure 52 for a map of the project area at a regional scale.

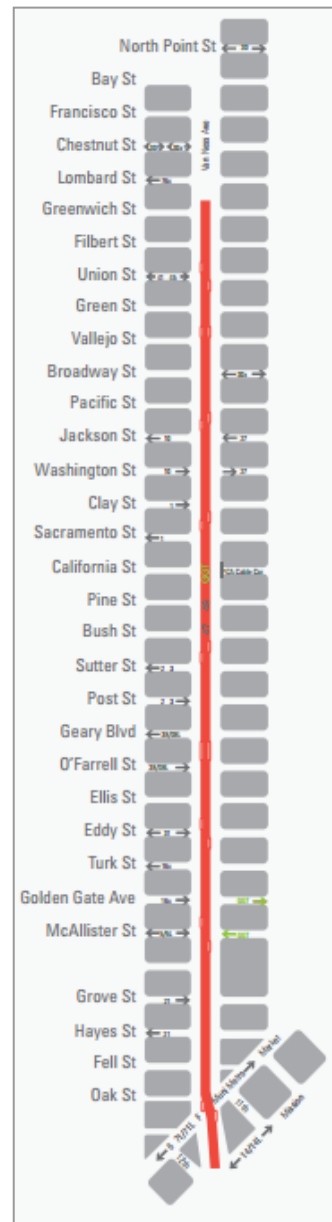
### Motivations and Anticipated Benefits of Not Relinquishing

In 2006, the City and County of San Francisco studied the feasibility of a bus rapid transit (BRT) line along Van Ness Avenue and in 2007 received a recommendation from the Federal Transit Administration to pursue this cost-effective small starts project.<sup>88</sup> Since that time, the San Francisco Municipal Transportation Agency, San Francisco County Transportation Authority, and other parties have worked closely with Caltrans to develop detailed designs.

Through those discussions, there were a few specific areas of disagreement that needed to be negotiated: design of bulbouts and station platforms; lane widths; street trees; design speed; and construction hours. In the case of bulbouts, lane widths and street trees, the City ultimately compromised on their desired street design in order to reach agreement with Caltrans.

Regarding lane widths specifically, existing 10-foot lanes must be widened to 11 feet to meet Caltrans standards. The existing facility has one 11.5-foot outside lane and two 10-foot lanes in each direction. These widths are considered substandard for a highway facility, and, after negotiation, Caltrans required that lanes be increased to at least 11 feet in 16 of the 29 blocks under consideration. For the 13 remaining blocks, a design exception was allowed for 10.5-foot center lanes, which will accommodate station platforms and preserve some trees in the median. This decision to widen the lane widths will result in some loss of street trees and will likely affect the success of several other existing trees. Caltrans' requirements for lane widths have evolved in recent years, however, and the requirements applied to Van Ness Avenue could change in the future as other cities seek approval for more narrow lanes.

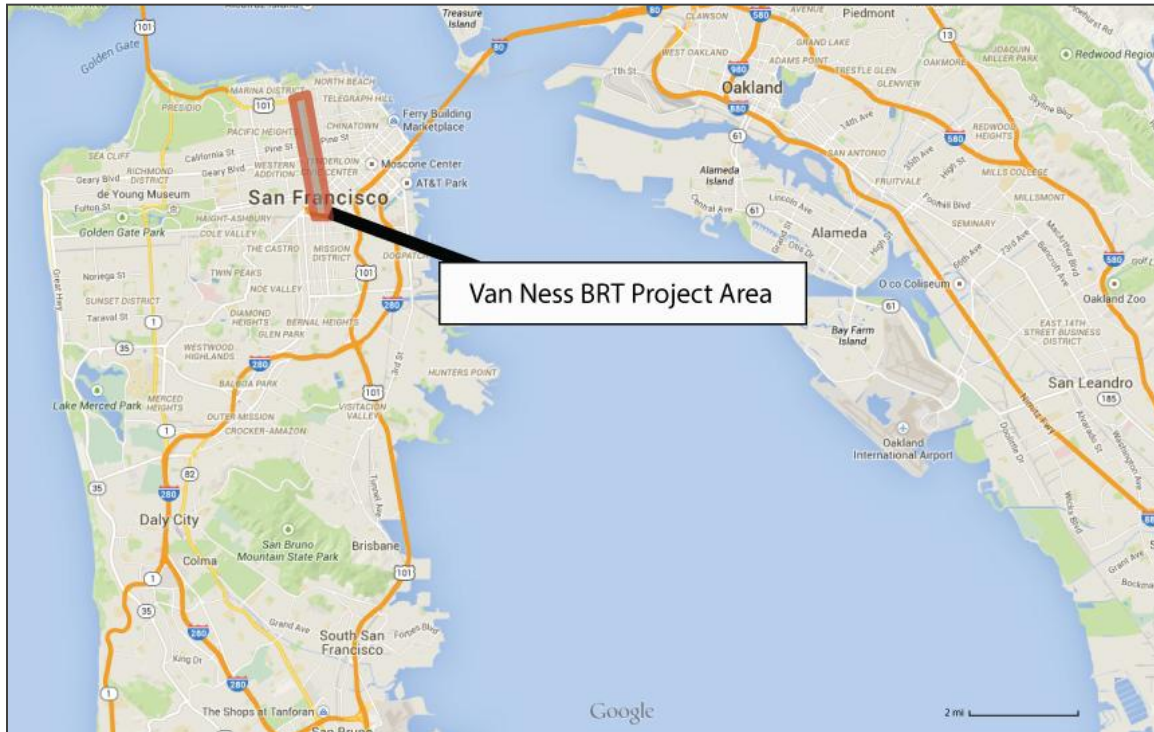
Figure 51 Van Ness BRT Project Boundaries (SFMTA)



<sup>88</sup> Caltrans. "Project Study Report – Project Report to Provide Project Approval." August 1, 2014. [http://www.sfcta.org/sites/default/files/content/Planning/VanNessAvenueBusRapidTransit/Van%20Ness%20BRT%20P%20SR-PR\\_Approved\\_082614.pdf](http://www.sfcta.org/sites/default/files/content/Planning/VanNessAvenueBusRapidTransit/Van%20Ness%20BRT%20P%20SR-PR_Approved_082614.pdf)

A primary driver behind these disagreements over flexibility in street design guidelines is liability. Because Caltrans will maintain ownership, local project sponsors requesting design exceptions needed to provide empirical evidence demonstrating the safety of those designs.

Figure 52 Van Ness BRT Project Area (Regional View)



Base map: Google Maps

## Potential Costs and Benefits of Not Relinquishing

Early in the planning process for Bus Rapid Transit (BRT), the San Francisco Municipal Transportation Agency considered relinquishment, but ultimately deemed the additional costs of ongoing maintenance not as cost effective as not relinquishing, despite additional staff time to work out the design exceptions. In addition, there was support for BRT on Van Ness Avenue from Caltrans leadership, including the reduction of a lane of traffic in each direction to allow for a dedicated bus lane. Caltrans will continue to have jurisdiction over the street and be financially responsible for funding its maintenance. Despite the reduction in automobile lanes, Caltrans will continue to reimburse the City the same amount for maintenance as it does currently.

As an aside, in 2014, San Francisco voters passed Proposition B, which makes more maintenance dollars available for local streets. In this funding context, and with knowledge of the effort required to achieve design exceptions from Caltrans, the city may have considered relinquishment more seriously. Moreover, unlike the other relinquishment examples in this study, Caltrans also may have had a strong reason to retain ownership of Van Ness Avenue, due to its vital role in interregional travel.

Formal work on the Van Ness BRT project began in 2008. Revenue service is expected to begin in 2018.

Figure 53 Van Ness BRT Design – Existing (Top) and Proposed (Bottom) Designs



Source: San Francisco Municipal Transportation Agency

## Key Findings

Though additional time and project delay could be introduced by pursuing design exceptions, those costs may be worth the effort in cases where the burden of ongoing maintenance costs will be high. Local project sponsors will need to provide sufficient empirical evidence to prove designs will not degrade safety if they differ from the HDM's guidelines.

Secondly, Caltrans' recent endorsement of the NACTO design guidelines<sup>89</sup> has increased flexibility for design exceptions; however not all Caltrans staff are yet familiar with these types of designs or the flexibility to allow their implementation.

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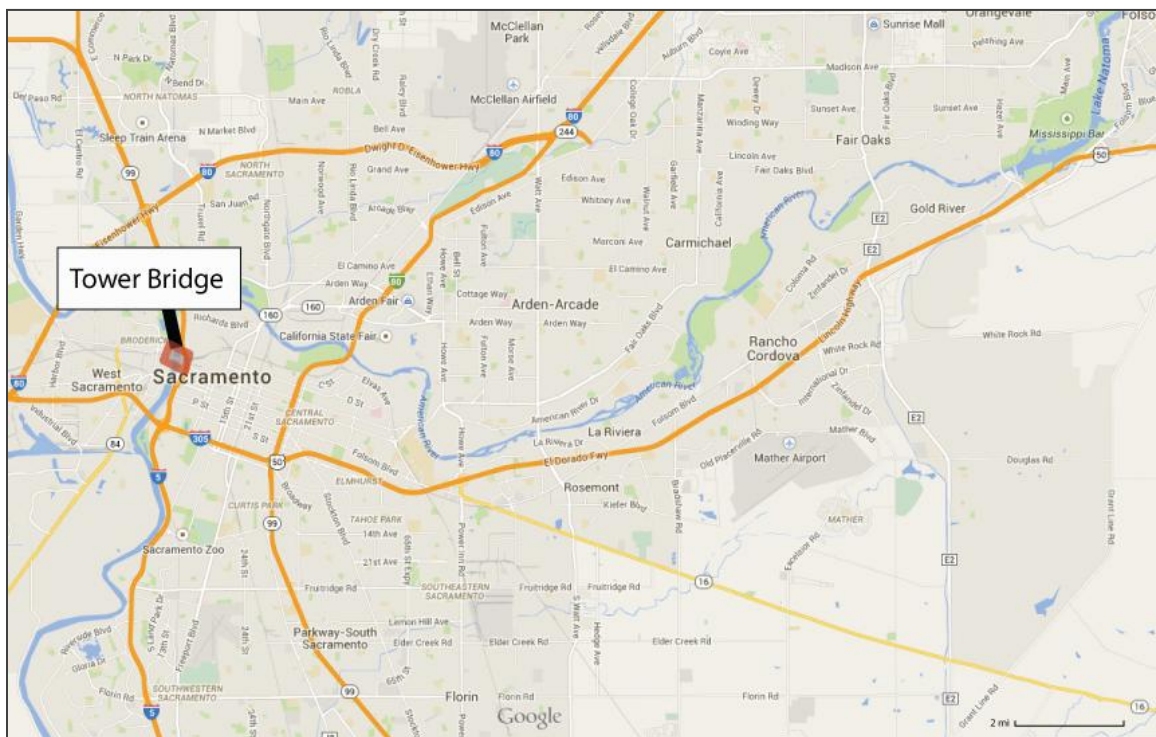
<sup>89</sup> Craggs, Timothy, Chief of the Division of Design. "Memorandum: Design Flexibility in Multimodal Design." April 10, 2014. <http://www.dot.ca.gov/Documents/2014-4-2-Flexibility-in-Design.pdf>

## CASE STUDY 8: STATE ROUTE 285 / TOWER BRIDGE IN CITIES OF SACRAMENTO AND WEST SACRAMENTO

Sacramento's Tower Bridge is an iconic four-lane vertical lift bridge that was built in 1935 and designated as State Route 275 in 1967. In 2001, the western portion of SR 275, known as Tower Bridge Gateway, was relinquished to the City of West Sacramento. The eastern portion of SR 275, known as Capitol Mall, was relinquished to the City of Sacramento in 2004. The remaining portion of SR 275 is a 737-foot long bridge that spans the waterway between Sacramento and West Sacramento.

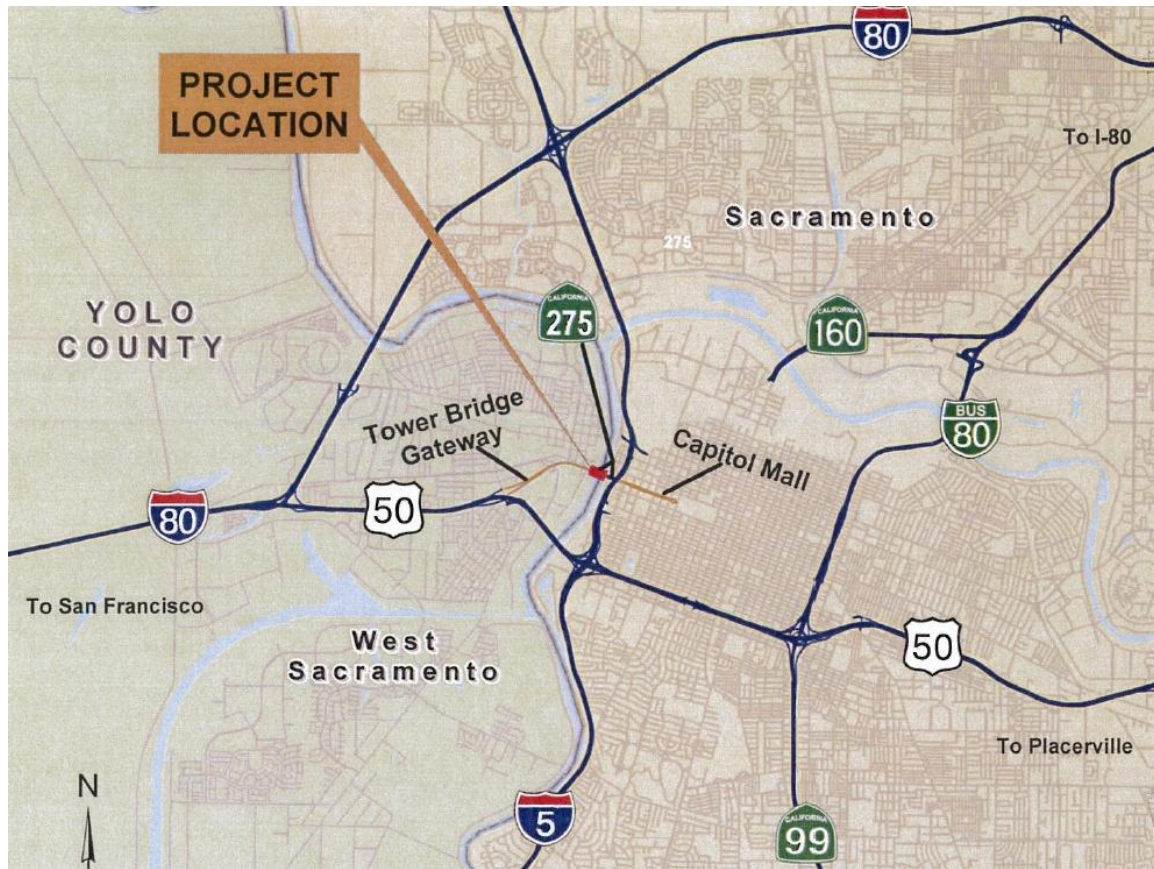
See Figure 54 for a map of the Tower Bridge in regional context, and Figure 55 for a zoomed-in map of the bridge.

Figure 54 Location of Tower Bridge (Regional View)



Base map: Google Maps

Figure 55 Location of Tower Bridge



Source: City of Sacramento Council Report on Memorandum of Understanding

## Motivations and Anticipated Benefits

The Tower Bridge is being considered for concurrent relinquishment to the two cities for a number of reasons. Firstly, since State Route 275 has been relinquished on either sides of the bridge, the bridge represents a road segment that is disconnected from the rest of the state highway system. The cities of Sacramento and West Sacramento also consider the bridge as a critical access point to their downtown and a potential element of their efforts to increase multimodal connectivity.

In addition, as a historic gateway, iconic structure, and scenic route across the Sacramento River, the Tower Bridge is often used for community events such as the Farm to Fork dinner, Amgen Tour cycling event, New Year's Eve fireworks, fundraising runs, and other events. Between 2008 and 2014, 48 different encroachment permits were approved by Caltrans. The Caltrans permit process is lengthy, restrictive, and cumbersome. It also adds time and uncertainty to the process of planning events. Encroachment permits for the Tower Bridge require letters of concurrence from both cities, and sponsorship by the city, county or a non-profit organization.<sup>90</sup>

<sup>90</sup>.City Council Report 2014-00525.

Figure 56 Events on Tower Bridge



Source: Sacramento Convention and Visitors Bureau, Flickr user Ron Nabity

## Relinquishment Status and Schedule

The Tower Bridge is currently under consideration for concurrent relinquishment in 2019, after completion of a refurbishment project. The timeline of events relating to potential relinquishment is outlined below:

1996	Tower Bridge Gateway on the western side of the Tower Bridge relinquished to the City of West Sacramento
2004	Capitol Mall on the eastern side of the Tower Bridge relinquished to the City of Sacramento
12/10/2013	Caltrans District 3 sends a letter to the cities of Sacramento and West Sacramento requesting consideration for relinquishment of the Tower Bridge.
7/22/2014	Sacramento City Council adopts Memorandum of Understanding between the State of California, City of Sacramento and City of West Sacramento contingent on independent structures assessment and agreement by the City of West Sacramento. The City of West Sacramento, however, is not willing to pursue relinquishment. Concurrent relinquishment requires both cities to agree.
2019	Caltrans expects to complete of SHOPP project to replace bridge fenders
2019	Earliest date of potential relinquishment if agreed by both cities

## Potential Relinquishment Agreement

As a bridge structure between two cities, concurrent relinquishment would be required for the Tower Bridge. Caltrans is currently undertaking a State Highway Operation and Protection Program (SHOPP) rehabilitation project to replace the bridge fenders. This project is scheduled for completion in 2019, after which time the cities could potentially take ownership of the asset.

Caltrans District 3 offered the cities of Sacramento and West Sacramento five years of operations and maintenance funding if they are willing to pursue a cooperative agreement for relinquishment before the SHOPP project is completed. According to the MOU signed by the City of Sacramento from July 22, 2014, this proposed deal would be equivalent to approximately \$2 million (\$400,000 per year). Given the good condition of the bridge, no monies have been offered for state of good repair.

In order to relinquish the asset, concurrent relinquishment agreements would need to be adopted between Caltrans and both of the Cities of Sacramento and West Sacramento. The agreements would address distribution and apportionment of funds between the two cities. The Cities would also need to agree on future contributions to ongoing operations and maintenance costs. So far, only the City of Sacramento has adopted the MOU, with contingencies. The City of West Sacramento is not willing to consider relinquishment at this stage.

## Key Findings

The Tower Bridge provides a relevant example of potential concurrent relinquishment agreements between Caltrans and more than one jurisdiction. In this case, Caltrans has offered to provide five years of operations and maintenance costs in conjunction with the relinquishment. In order to relinquish in this way, both local jurisdictions need to adopt the memorandum of understanding. If both cities support relinquishment, they would also need to agree upon the distribution of Caltrans funds as well as the contributions to ongoing operations and maintenance costs. In this case, Caltrans is unwilling to relinquish to only one city, therefore if one city is unwilling to relinquish or agree upon terms, the process cannot advance.

**Figure 57** SR 275 / Tower Bridge



Photo: Nelson\Nygaard



**State Route 82 Relinquishment Exploration Study**  
MTC, VTA, Grand Boulevard Initiative, and Caltrans

## 4 EXISTING CONDITIONS

This chapter examines the existing conditions along SR 82 in the study area, from I-880 in San Jose to SR 84 (Woodside Road) in Redwood City (see study area map in Figure 58), with the intent of providing information to local agencies considering relinquishment. Historically, SR 82 served as the main thoroughfare between each of the California missions across the state. Today, much of the high-capacity corridor function has been transferred to US 101 and I-280. SR 82 is of specific interest given that the Grand Boulevard Initiative and VTA Bus Rapid Transit studies proposed revitalization of the streetscape, which could be facilitated by transferring the corridor's authority to the cities. In particular, the Grand Boulevard Initiative Task Force surveyed its members and found interest among Santa Clara County cities to explore the relinquishment process. The existing conditions assessment includes the following components:

- An overview of **corridor characteristics**, including an assessment of the multimodal transportation facilities currently provided, traffic volumes, and collision statistics (page 4-2)
- A summary of **existing planning efforts** underway that affect El Camino Real in the study area, including city transportation and land use plans, county transportation projects, and the efforts of the corridor-wide Grand Boulevard Initiative (page 4-28)
- A **state of good repair**<sup>91</sup> **assessment** that evaluates pavement conditions by city and associated costs required to bring the roadway to a condition local agencies find acceptable for relinquishment, as well as a preliminary inventory of other assets to investigate further before pursuing relinquishment (page 4-48)

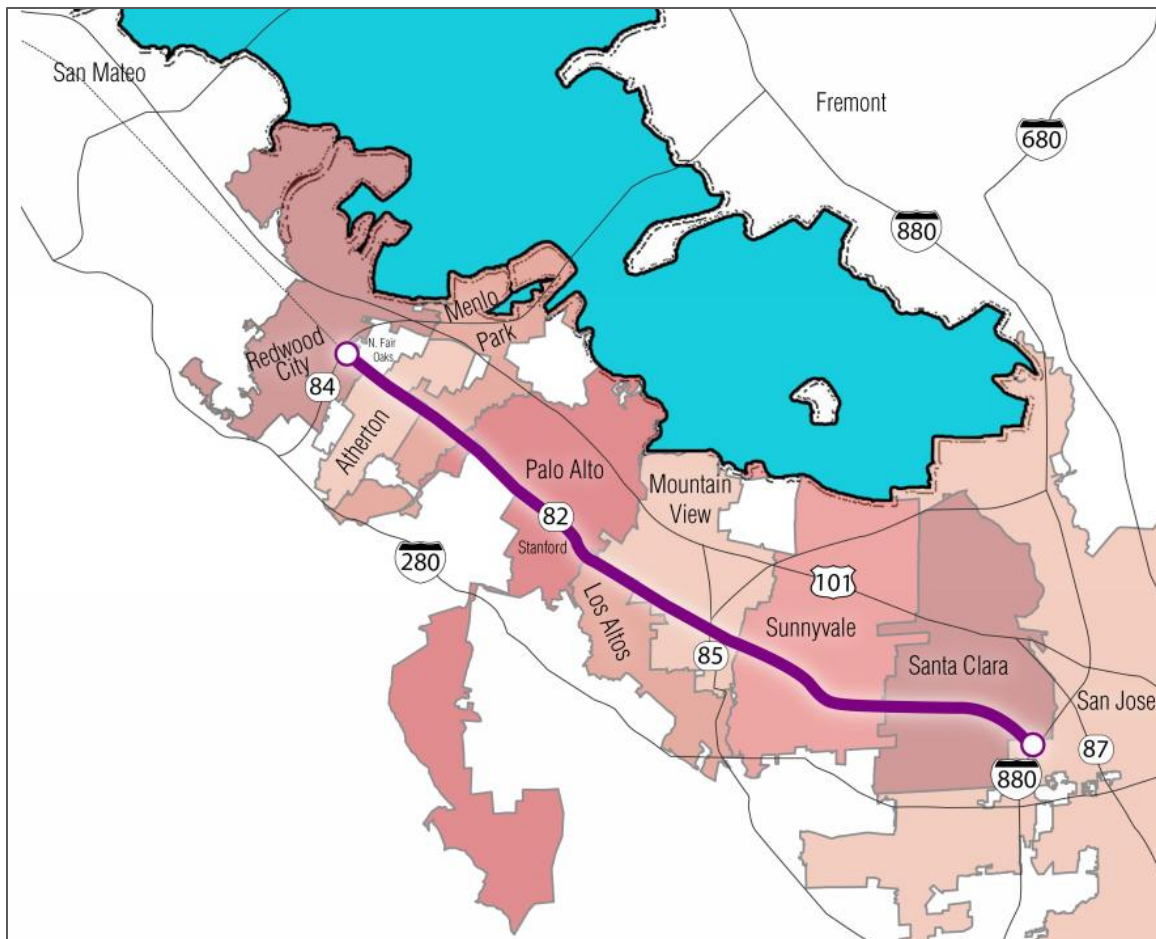
Typically, the primary focus of the state of good repair assessment is pavement condition, as pavement restoration represents the largest cost associated with upgrading the corridor for most highway relinquishments (excluding any additional streetscape improvements beyond state of good repair). This assessment also addresses the status of curb ramp ADA compliance, and identifies other key assets to evaluate, such as utilities, signals, medians, bridges, historic assets, and contamination associated with previous industrial uses or gas stations along the corridor. Where possible, given the availability of data on the current state of the various assets on the roadway, approximate costs are assigned for returning the roadway to a state of good repair by jurisdiction. The next chapter of this report will summarize these costs and provide further information on ongoing maintenance and operations costs associated with the roadway.

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<sup>91</sup> Caltrans defines roadway "state of good repair" to mean that the roadway is safe, drivable, and well-maintained. For the purpose of this study, "state of good repair" more specifically means that all components of the roadway have been maintained such that no major repairs are necessary in approximately the next five years. For instance, recently repaved roadways would qualify as good repair, but distressed pavement would not. Signals requiring replacement immediately would not qualify as good repair; signals that could last at least another five years would likely qualify as good repair. In practice, individual cities generally negotiate with Caltrans to determine what level of improvements are needed to bring the roadway to a state of good repair by their own definition.

In summary, this chapter presents an overview of the vision for SR 82 held by local and regional agencies along its route; the operational and safety characteristics of the corridor’s multimodal transportation network; and the physical condition of the corridor today compared to a state of a good repair that each city on the corridor would likely find satisfactory for taking ownership. The picture that emerges is a street with tremendous importance to each community it passes through, but one that has significant safety and livability challenges, as well as a backlog of maintenance and accessibility upgrades in many areas. In considering relinquishment of the roadway, local agencies may wish to evaluate whether their goals for the corridor, as summarized below, can be achieved effectively under state ownership of the roadway, or if the added flexibility of relinquishment outweighs the costs. This broader decision making process is outlined further in the next chapter on costs and funding.

Figure 58 Study Area Map



## CORRIDOR MULTIMODAL CHARACTERISTICS

El Camino Real is a multimodal transportation corridor that has served as a main thoroughfare since before the advent of the automobile. The current route comprises not only automobile traffic, but also significant volumes of pedestrian, bicycle, and bus traffic. The following section describes the roadway characteristics in the study area, including both automobile facilities and accommodations for multimodal transportation, such as transit, bicycle, and pedestrian facilities.

It also provides an overview of the traffic collision statistics in the corridor, by mode, summarized by city.

In the study area, SR 82 consists primarily of three lanes of travel in each direction, though it narrows to two lanes in sections, such as Menlo Park and San Jose (Appendix G includes sample cross sections of the street). SR 82’s current designated function is as an urban highway that serves to move large volumes of motor vehicles as efficiently as possible. In much of the study area, SR 82 does not include bike facilities, high-visibility pedestrian crossings, or ADA-compliant curb ramps. However, there are current efforts to allocate a portion of road space to bicycle lanes in Sunnyvale and Mountain View, and transit signal priority has been implemented through a GPS transponder system in all cities except Santa Clara. As a historic route and Priority Development Area (PDA) throughout much of the study area, SR 82 serves as a focal point for past and future retail activity, commercial uses, and housing development. For this reason, there is a tension between its designation as a state highway and its role as a commercial and residential “main street” in many of the communities it passes through.

Corridor maps for SR 82 in the study area are included in Appendix G. The maps are organized by mile marker from north to south and include pavement conditions, bus stops, bridges, jurisdictional boundaries, and limits of recently completed roadway paving projects. Sections referenced in the aerial maps represent a sample of lane, median, and parking conditions found along the corridor. Data included is based on reports and GIS maps generated by Caltrans and MTC, and direct observation.

## **Pedestrian Facilities**

Throughout the 20-mile study area, El Camino Real passes through numerous areas with high current and future concentrations of pedestrian traffic. Many of the cities along the study area corridor have pedestrian-oriented main streets that intersect El Camino Real, such as Santa Cruz Avenue in Menlo Park, University Avenue and California Street in Palo Alto, and Castro Street in Mountain View. El Camino Real also passes through two major college campuses that attract large volumes of pedestrian traffic: Stanford University, adjacent to Palo Alto, and Santa Clara University in Santa Clara.

**Figure 59**      **Narrow Sidewalks on El Camino Real in Menlo Park**



Photo: Nelson\Nygaard

These intersecting main street and college campuses are generally much better designed to accommodate pedestrians than El Camino Real itself is. On SR 82, sidewalks are provided throughout most of the study area, but they are generally narrow (8-10 feet) and pedestrian crossings are widely spaced. At signalized intersections, pedestrians often must wait for lengthy light cycles that are designed to prioritize automobile and transit movement. Crossing distances also serve as a barrier: most intersections include three through-lanes of traffic in both directions, a parking lane, and at least one turn lane. Many also include slip lanes for right-turning traffic, adding to the total crossing distance. Sidewalk extensions (bulbouts) and pedestrian refuge islands, which serve to shorten crossing distances, are rare.

Pedestrian signals are also widely spaced, and pedestrians often must cross at unsignalized intersections, which generally have marked crosswalks and “shark’s teeth” yield lines to alert drivers, but little else to increase pedestrian safety. As a result, pedestrians face the risk of a multiple-threat collision, in which one driver yields to a pedestrian, but another driver does not see the pedestrian and continues through the crosswalk. Given the relatively high speed of traffic along El Camino Real, pedestrian-vehicle crashes are likely to be more severe than along other facilities with slower traffic conditions and more pedestrian-friendly street design. Collision data is provided in the following section.

**Figure 60 Pedestrian Crossing on El Camino Real**



Source: Sherwood Design Engineers

In Atherton, pedestrian accommodations are especially limited. El Camino Real does not have sidewalks, curbs or gutters in Atherton, and pedestrians must walk along the narrow, unpaved shoulder, immediately adjacent to an automobile travel lane where the posted speed limit is 35 miles per hour. Signalized intersections are also especially widely spaced in Atherton. Though pedestrian volumes are lower in this segment than the rest of the study area, there have been two fatal crashes involving pedestrians since 2009, a far higher rate than the study area as a whole

(crash statistics are discussed in further detail below.) As a result of these safety challenges, the Town of Atherton has actively pursued pedestrian safety improvements on El Camino Real, which are discussed further in the existing planning efforts section below.

**Figure 61** El Camino Real in Atherton



Photo: NelsonNygaard

## **Bicycle Facilities**

Throughout most of the study area, no bike lanes are provided on El Camino Real. The city of Sunnyvale has recently started to provide bike lanes along some segments of El Camino Real, and several other cities, including Mountain View and Menlo Park, are considering adding bike lanes to SR 82.. Despite the lack of bicycle accommodations, El Camino Real is a popular route for cycling because it is often the most direct route available; there are few alternative parallel routes in much of the study area.

The half-mile stretch of bike lanes in Sunnyvale, shown in Figure 62, was added in 2015. These bicycle facilities replaced previously underutilized parking space along this segment, which runs from Sunnyvale-Saratoga Road/Sunnyvale Avenue to Fair Oaks Avenue/Remington Drive.

Figure 62 Bike Lanes on El Camino Real in Sunnyvale, Installed in 2015



Photo: Andrew Boone/Streetsblog San Francisco

The communities along SR 82 in the study area have extensive networks of bike lanes and paths, many of which intersect with SR 82. El Camino Real plays an important role in connecting these facilities.

Off-street (Class I) bike paths that intersect or are parallel El Camino Real in the study area include the following:

- Trail adjacent to Sand Hill Road, Palo Alto (on edge of Stanford University campus)
- Palm Drive path, Palo Alto (Stanford campus)
- Galvez Street path, Palo Alto (Stanford campus)
- Path adjacent to El Camino Real from Galvez Street to Serra Street, Palo Alto (Stanford campus)
- Stevens Creek Trail, Mountain View
- San Tomas Aquino Trail, Santa Clara

On-street (Class II) bike lanes also intersect El Camino Real at 28 cross streets, as summarized in Figure 63 and mapped in Figure 64 on the following pages.

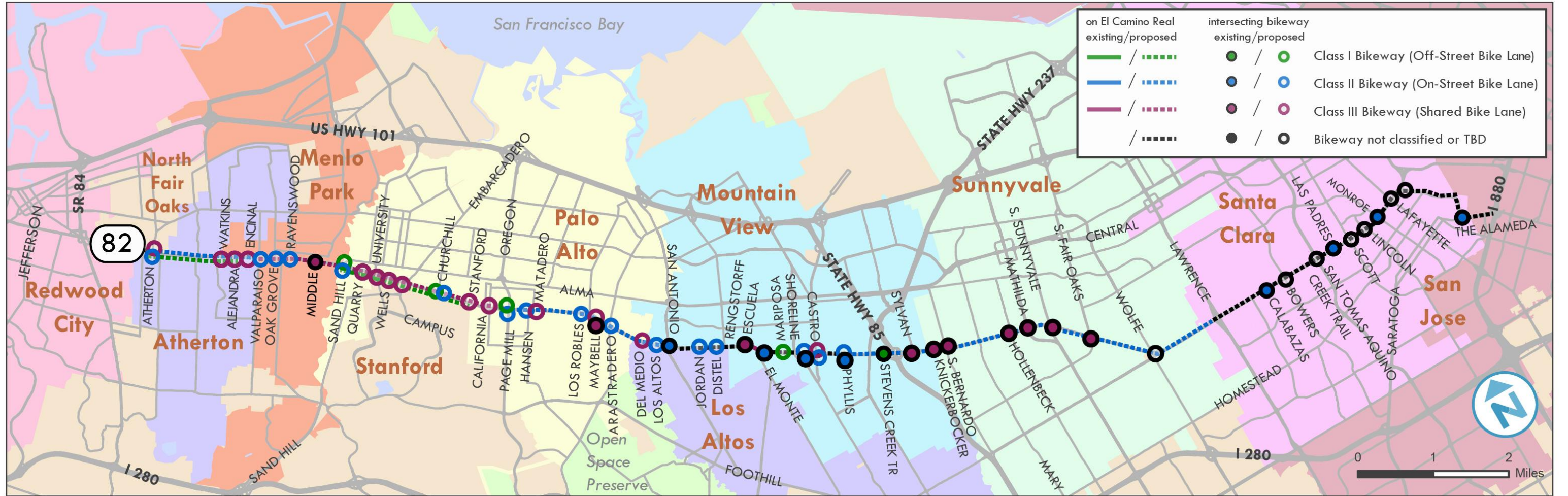
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**Figure 63 Class II Bike Lanes Intersecting SR 82 in the Study Area**

City	Cross Street(s)
Menlo Park	Valparaiso Avenue/Glenwood Avenue
	Ravenswood Avenue
Palo Alto (including adjacent Stanford campus)	Sand Hill Road/Palo Alto Avenue
	Galvez Street
	Churchill Avenue
	Serra Street/Park Boulevard
	Stanford Avenue
	Page Mill Road
	Hansen Way
	Los Robles Avenue
	West Charleston Road/Arastradero Road
Los Altos	North San Antonio Road
Mountain View	Showers Drive
	South Rengstorff Avenue
	El Monte Avenue/Escuela Avenue (with a short portion of El Camino Real)
	South Shoreline Boulevard/Miramonte Avenue
	Phyllis Avenue/Calderon Avenue
	Sylvan Avenue/The Americana
Sunnyvale	South Knickerbocker Drive
	South Bernardo Avenue
	Hollenbeck Avenue
	South Mathilda Avenue
	Sunnyvale Saratoga Road/South Sunnyvale Avenue
	Cezanne Drive
	East Remington Drive/South Fair Oaks Avenue
Santa Clara	Calabazas Boulevard
	Los Padres Boulevard
	Monroe Street



Figure 64 Bike Lanes and Paths Intersecting El Camino Real in the Study Area



## Transit

In general, a broad range of transit services is available in the study area, though service is highly variable in frequency, span, and travel time competitiveness with driving. The study area is served by three major bus routes: VTA Routes 22 and 522 and SamTrans Route ECR. SamTrans Route ECR serves El Camino Real in San Mateo County from Daly City BART to the Palo Alto Caltrain station, where it meets the two VTA El Camino Real routes (522 and 22) that continue south through Santa Clara County to San Jose. These routes both represent the highest performing routes in their respective systems. SamTrans ECR route has peak hour headways of 15 minutes or better and an average weekday ridership of between 12,000 and 13,000 passengers, which represents a third of all riders in the system. The VTA routes 522 and 22 provide even more frequent service than the SamTrans ECR route, and have an average weekday ridership of about 12,500 for the El Camino Real portion of the route (21,000 including the segment that extends to Eastridge Mall).

A single-ride fare of \$2.00 applies on these routes. Monthly pass holders on each system may transfer to the other system within two hours of tagging their monthly pass on the system for which they hold the pass. The major transit routes on El Camino Real in the study area are summarized below, including routes on the corridor and those that run parallel to or intersect it. Maps of Caltrain, SamTrans, and VTA service in the study area are shown in Figure 66 through Figure 68.

**Figure 65 Major Transit Routes Serving the Study Area**

Agency	Route	Span	Frequency (Minutes)	Description
<b>Services on El Camino Real in the study area</b>				
SamTrans	ECR	Weekdays: 4 a.m. to 2 a.m. Weekends: 5 a.m.-2 a.m.	Peak: 12-15 Weekday Midday: 15 Weekend: 20	Daly City BART to Palo Alto Caltrain via El Camino Real
VTA	22	All day and night, weekdays and weekends	Peak: 11-12 Weekday Midday: 12 Weekend: 15	Palo Alto Caltrain to Eastridge Transit Center via El Camino
	522 (limited-stops Route 22)	Weekdays: 4:30 a.m. to 11:30 p.m. Saturday: 8 a.m. to 11 p.m. Sunday: 8:30 a.m. to 7:30 p.m.	Peak: 15 Weekday Midday: 15-16 Weekend: 15-16	Palo Alto Transit Center to Eastridge Transit Center via El Camino Real
<b>Services intersecting/parallel to El Camino Real in the study area</b>				
Caltrain	Local/ Limited/ Baby Bullet	Weekday: 4:30 a.m. to 1:30 a.m. Saturday: 7 a.m. to 1:30 a.m. Sunday: 8 a.m. to 11 p.m.	Peak: 10-15 Weekday Midday: 60 Weekend: 60	San Francisco to San Jose (and Gilroy on some) via railroad parallel to El Camino
AC Transit	Transbay Route U at the Palo Alto Transit Center and via the Dumbarton Express at the Palo Alto Transit Center and on Oregon Expressway/Page Mill Road			
SamTrans	Various routes (see Figure 67 below)			
VTA	Various bus routes (see Figure 68 below)			

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Shuttles	Stanford Marguerite, Caltrain shuttles, and numerous private shuttles
Altamont Commuter Express (ACE)	Connecting at Santa Clara Caltrain station, providing service to Stockton
Capitol Corridor	Commuter rail connecting at Santa Clara Caltrain station, providing service to Sacramento via Oakland

Caltrain provides regional rail service adjacent to El Camino Real throughout much of the study area (see map in Figure 66). Frequent weekday peak-hour service is provided on Caltrain, though midday and weekend service is only provided hourly. Caltrain provides service that is comparable in travel time to driving, or faster. For instance, it is possible to travel from Menlo Park to Santa Clara in just 23 minutes on Caltrain, even while making all local stops. The same trip would take approximately 25 minutes by taking driving on US 101, or 50 minutes on El Camino Real. However, due to Caltrain’s relatively infrequent service during off-peak hours, and the lack of frequent connecting bus service, it is not competitive with driving for non-commute trips.

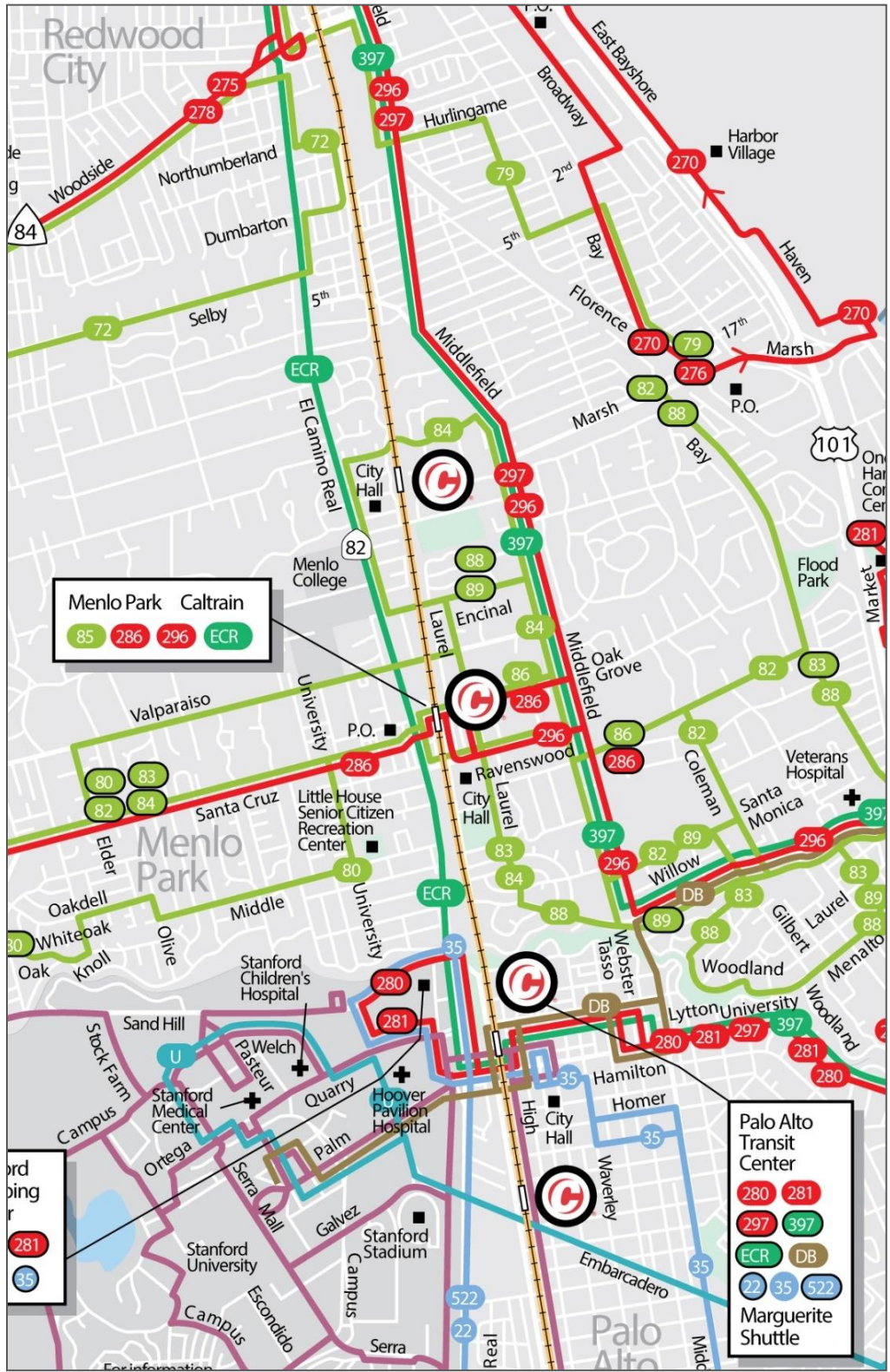
**Figure 66 Caltrain Service in the Study Area**



Source: Caltrain

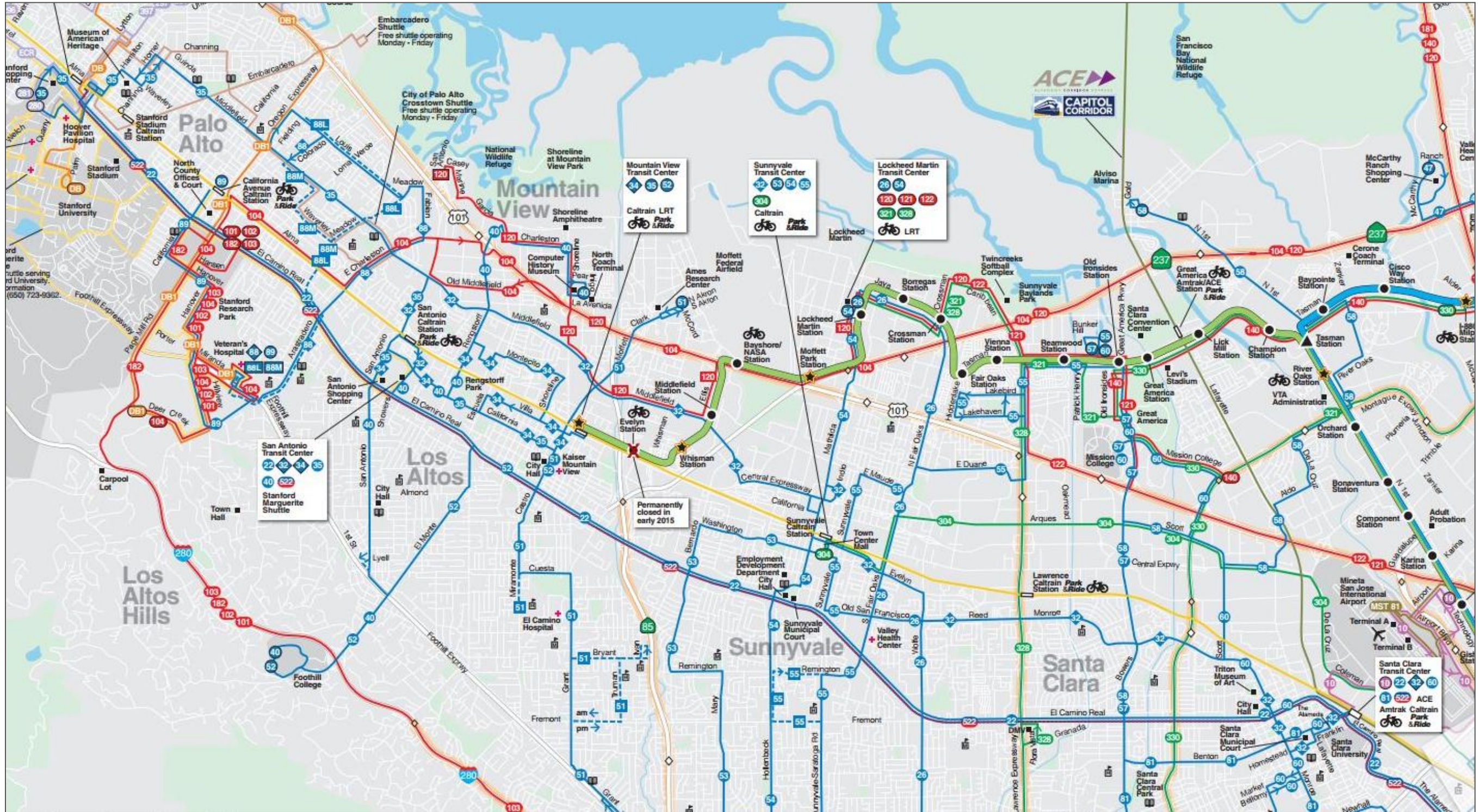
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**Figure 67 Transit Services within the Study Area—SamTrans**



Source: SamTrans

Figure 68 Transit Services within the Study Area—VTA



Source: VTA

## Crash Statistics

Improving safety for all road users is an underlying interest among the cities along the study area corridor. The following tables and maps provide a picture of the safety record of SR 82 in the study area, summarized by city, intersection, and mode. Figure 69 summarizes the number of collisions by mode for each city from 2009-2013, the most recent year for which data is available, and presents a per-mile rate of collisions for each city<sup>92</sup>. Collisions are separated into automobile-only, pedestrian-versus-automobile, bicycle-versus-automobile, and bicycle-versus-pedestrian (only three of which collisions were recorded during this five-year period). Note that 2013 data is still provided on a provisional data, and may change as it is finalized. Collisions range from non-injury minor crashes to fatalities (which are specifically indicated in the following tables and maps).

In total, 949 collisions were recorded during this period, the majority of which were automobile-only. Bike-automobile crashes were second most common, with 167 recorded, followed by pedestrian-automobile collisions, of which there were 94. Palo Alto stands out for having the largest number of bicycle collisions, and the second highest rate per mile, after Redwood City. Palo Alto also had the highest number of pedestrian collisions, though the number was roughly average on a per-mile basis compared to the other cities. On a per mile basis, Redwood City, Atherton, Menlo Park, and Palo Alto stand out for having the highest number of total collisions. This data is mapped in Figure 70, including the locations of the top 10 intersections for crashes by mode, and the locations of traffic fatalities.

The top 10 locations for crashes by mode are also summarized in Figure 71 through Figure 73 and the locations of fatalities are summarized in Figure 74. Note that additional traffic fatalities have occurred on the corridor since 2013, but complete data is not yet available after 2013.

Several collision hot-spots are evident from the data, which are listed below.

### **Bicycle collision hot spots:**

- Embarcadero Road and Churchill Avenue, Palo Alto (near the Stanford campus)
- Vista Avenue and West Charleston Road, Palo Alto
- Cezanne Drive and Fair Oaks Drive, Sunnyvale

### **Pedestrian collision hot spots:**

- Bernardo Avenue and Sylvan Avenue, Sunnyvale
- Lawrence Expressway to Alpine Avenue, Santa Clara
- Quarry Road, Medical Foundation Drive, and Encina Avenue, Palo Alto (near the Stanford campus)
- Near all of the downtown areas stations (e.g. Santa Cruz Avenue, Castro Street)

Auto-only collisions are most common at streets with very high volumes of traffic. In particular, Lawrence Expressway (Santa Clara), Page Mill Road (Palo Alto), Bernardo Avenue (Sunnyvale),

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<sup>92</sup> Note that in cases where a city occupies both the northern and southern border of SR 82, it is counted the same as other cities that occupy only one half the roadway, so this skews the per-mile counts somewhat. For instance, it may be more appropriate to consider the collision counts of Atherton and North Fair Oaks together, as they share a border along El Camino Real.

and Wolfe Road (Sunnyvale), and Mathilda Avenue (Sunnyvale) stand out for automobile-only crashes.

Atherton stands out for having the most fatal crashes during the five-year time period analyzed here, including one fatality each of a motorists, bicyclists, and pedestrians. An additional pedestrian fatality occurred in 2014, after the data collection period. This is despite Atherton having one of the shortest stretches of SR 82 of the cities in the study area.

In sum, pedestrian and bicycle safety is a major concern in this corridor; it is also clear that bicycles and bicycles are at disproportionate risk of injury compared to their volumes, when considering that automobile traffic volumes greatly outweighs these modes.

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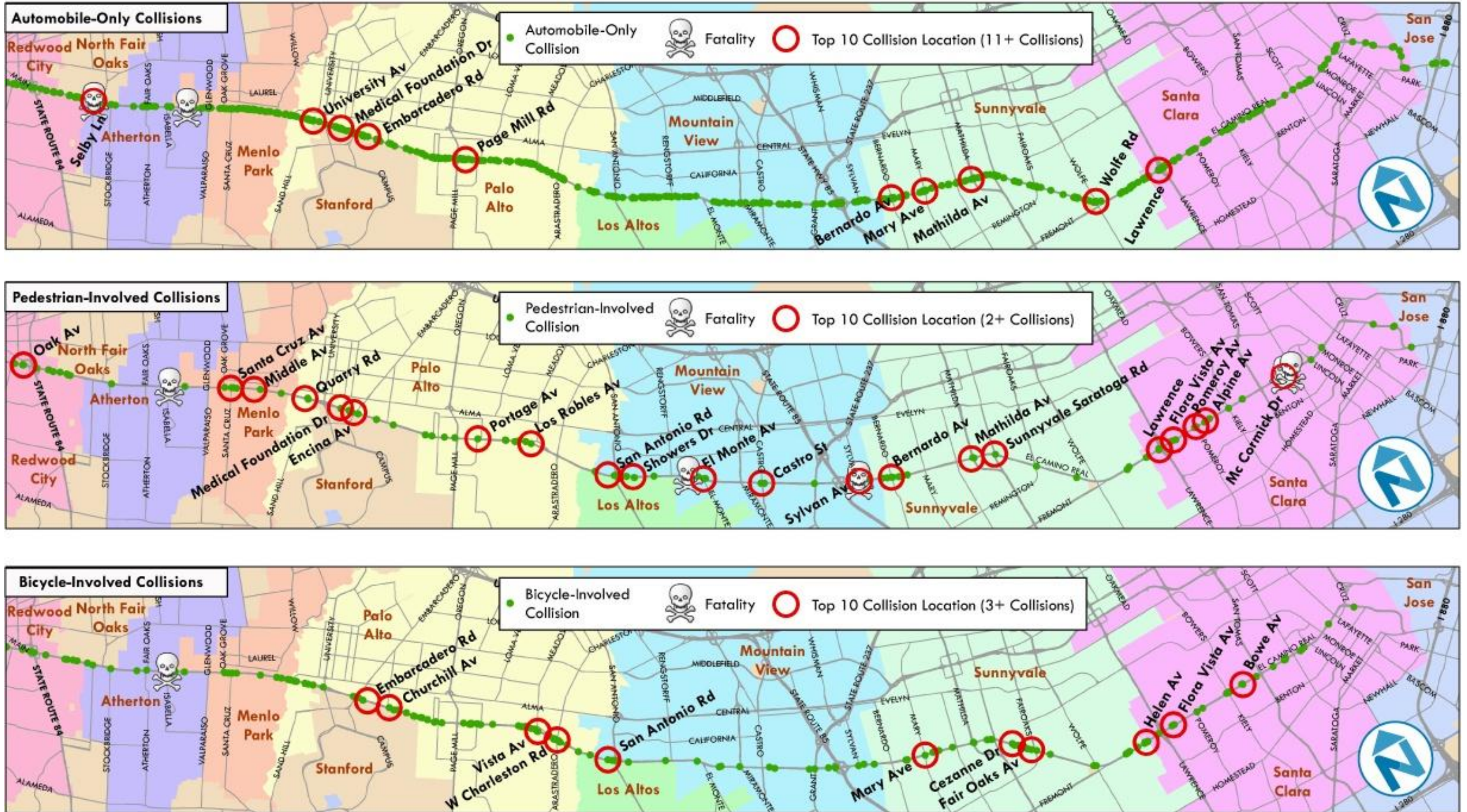
**Figure 69 Collisions by Type and City in the Study Area: 2009-2013**

City	Total Collisions - By Mode					Length of SR 82 (Miles)	Collisions Per Mile				
	Bike-Auto Collisions	Pedestrian-Auto Collisions	Bike-Pedestrian Collisions	Automobile-Only Collisions	Total		Bike-Auto Collisions	Pedestrian-Auto Collisions	Bike-Pedestrian Collisions	Automobile-Only Collisions	Total
Redwood City	9	6	0	35	50	0.7	14	9	0	54	77
Atherton	8	3	0	45	56	0.9	9	3	0	49	60
North Fair Oaks	4	3	0	9	16	0.4	10	7	0	22	38
Menlo Park	8	6	1	69	84	1.4	6	5	1	49	60
Palo Alto	58	21	0	177	256	4.7	12	4	0	37	54
Los Altos	4	6	0	40	50	1.4	3	4	0	29	36
Mountain View	16	14	0	79	109	2.6	6	5	0	30	42
Sunnyvale	30	14	1	120	165	3.7	8	4	0	32	44
Santa Clara	27	18	1	111	157	4.3	6	4	0	26	36
San Jose	0	0	0	6	6	0.3	0	0	0	18	18
<b>Total</b>	<b>167</b>	<b>94</b>	<b>3</b>	<b>691</b>	<b>949</b>	<b>20.5</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>34</b>	<b>46</b>

Data Sources: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, UC Berkeley, 2014.



Figure 70 Collisions on El Camino Real in the Study Area: 2009-2013



Data Sources: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, UC Berkeley, 2014.

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**Figure 71 Top 10 Intersections for Pedestrian-Involved Collisions in the Study Area: 2009-2013**

Intersection	City	Collisions
Oak Av	Redwood City	2
Santa Cruz Av	Menlo Park	2
Middle Av	Menlo Park	2
Quarry Rd	Palo Alto	2
Medical Foundation Dr	Palo Alto	3
Encina Av	Palo Alto	2
Portage Av	Palo Alto	2
Los Robles Av	Palo Alto	2
San Antonio Rd	Mountain View/Los Altos	3
Showers Dr	Mountain View/Los Altos	2
El Monte Av	Mountain View	2
Castro St	Mountain View	2
Sylvan Av	Mountain View	4
Bernardo Av	Sunnyvale	5
Mathilda Av	Sunnyvale	2
Sunnyvale Saratoga Rd	Sunnyvale	2
Lawrence	Santa Clara	2
Flora Vista Av	Santa Clara	2
Pomeroy Av	Santa Clara	2
Alpine Av	Santa Clara	2
McCormick Dr	Santa Clara	2

Data Sources: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, UC Berkeley, 2014.

**Figure 72 Top 10 Intersections for Bicycle-Involved Collisions in the Study Area: 2009-2013**

Intersection	City	Collisions
Embarcadero Rd	Palo Alto	6
Churchill Av	Palo Alto	3
Vista Av	Palo Alto	3
West Charleston Rd	Palo Alto	4
San Antonio Rd	Mountain View/Los Altos	3
Mary Ave	Sunnyvale	3
Cezanne Dr	Sunnyvale	4

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Intersection	City	Collisions
Fair Oaks Av	Sunnyvale	4
Helen Av	Sunnyvale	3
Bowe Av	Santa Clara	4
Flora Vista Av	Santa Clara	3

Data Sources: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, UC Berkeley, 2014.

**Figure 73 Top 10 Intersections for Automobile-Only Collisions in the Study Area: 2009-2013**

Intersection	City	Collisions
Selby Ln	Atherton/North Fair Oaks	11
University Av	Palo Alto	12
Medical Foundation Dr	Palo Alto	12
Embarcadero Rd	Palo Alto	12
Page Mill Rd	Palo Alto	19
Bernardo Av	Sunnyvale	15
Mary Ave	Sunnyvale	12
Mathilda Av	Sunnyvale	14
Wolfe Rd	Sunnyvale	15
Lawrence Expressway	Santa Clara	21

Data Sources: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, UC Berkeley, 2014.

**Figure 74 Traffic Fatalities in the Study Area by Mode: 2009-2013**

Type	Year	Intersection with SR 82	City
Automobile	2013	Selby Ln	Atherton
Bicycle	2010	Isabelle Av	Atherton
Pedestrian	2010	Watkins Av	Atherton
Automobile	2012	Stone Pine Ln	Menlo Park
Pedestrian	2010	Clark Av	Mountain View
Pedestrian	2011	The Americana/Sylvan Av	Mountain View
Pedestrian	2009	McCormick Dr	Santa Clara
Pedestrian	2009	Scott Blvd	Santa Clara

Data Sources: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, UC Berkeley, 2014.

## Automobile Traffic

SR 82 in the study area ranges from two to three through-lanes of traffic, often with on-street parking, and turn pockets at intersections. It is generally at-grade, with traffic signals where it intersects other major roads, with the exception of several grade-separated intersections where it meets state highways (I-880, SR 84/Woodside Road and SR 85), county expressways (Lawrence Expressway), and at University Avenue in Palo Alto and De La Cruz Boulevard in Santa Clara.

Daily one-way traffic volumes range from 18,100 at Benton Street in Santa Clara, to 56,000 at the junction with State Route 85 in Mountain View (in the northbound direction). Peak hour traffic volumes range from 1,650 vehicles per hour (in one direction) at Benton Street in Santa Clara, to 4,950 vehicles per hour at the SR 85 junction in Mountain View. Traffic volumes are summarized in Figure 75 through Figure 77 below.

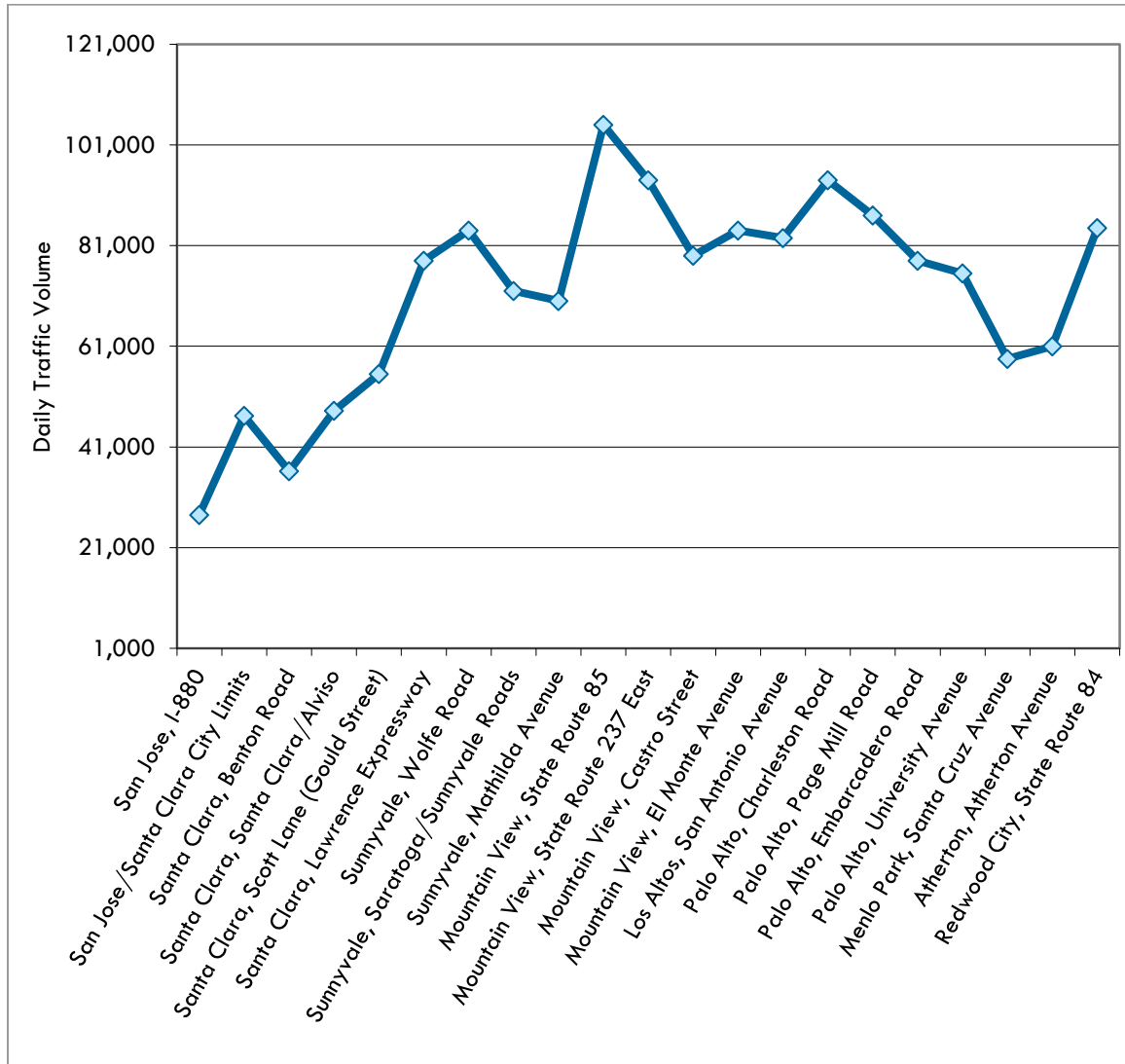
**Figure 75 Traffic Volumes on El Camino Real in the Study Area (2013)**

Intersection	S'bound AADT	N'bound AADT	Total AADT	Southbound Peak Hour	Northbound Peak Hour
Redwood City, State Route 84	47,500	37,000	84,500	4,250	3,300
Atherton, Atherton Avenue	30,500	30,500	61,000	2,750	2,750
Menlo Park, Santa Cruz Avenue	30,000	28,500	58,500	2,700	2,550
Palo Alto, University Avenue	37,500	38,000	75,500	3,350	3,400
Palo Alto, Embarcadero Road	40,500	37,500	78,000	3,600	3,350
Palo Alto, Page Mill Road	46,000	41,000	87,000	4,100	3,650
Palo Alto, Charleston Road	48,000	46,000	94,000	4,300	4,100
Los Altos, San Antonio Avenue	40,500	42,000	82,500	3,600	3,750
Mountain View, El Monte Avenue	42,000	42,000	84,000	3,750	3,750
Mountain View, Castro Street	40,500	38,500	79,000	3,600	3,450
Mountain View, State Route 237 East	49,000	45,000	94,000	4,400	4,050
Mountain View, State Route 85	56,000	49,000	105,000	4,950	4,900
Sunnyvale, Mathilda Avenue	33,000	37,000	70,000	2,900	3,250
Sunnyvale, Saratoga/Sunnyvale Rds	39,000	33,000	72,000	3,450	2,900
Sunnyvale, Wolfe Road	43,000	41,000	84,000	3,800	3,600
Santa Clara, Lawrence Expressway	37,000	41,000	78,000	3,350	3,600
Santa Clara, Scott Lane (Gould St.)	27,500	28,000	55,500	2,500	2,550
Santa Clara, Santa Clara/Alviso	24,100	24,100	48,200	2,200	2,200
Santa Clara, Benton Street	18,100	18,100	36,200	1,650	1,650
San Jose/Santa Clara City Limits	23,600	23,600	47,200	2,150	2,150
San Jose, I-880	-	27,500	27,500	-	2,500

Source: Caltrans Traffic Counts. <http://traffic-counts.dot.ca.gov/>

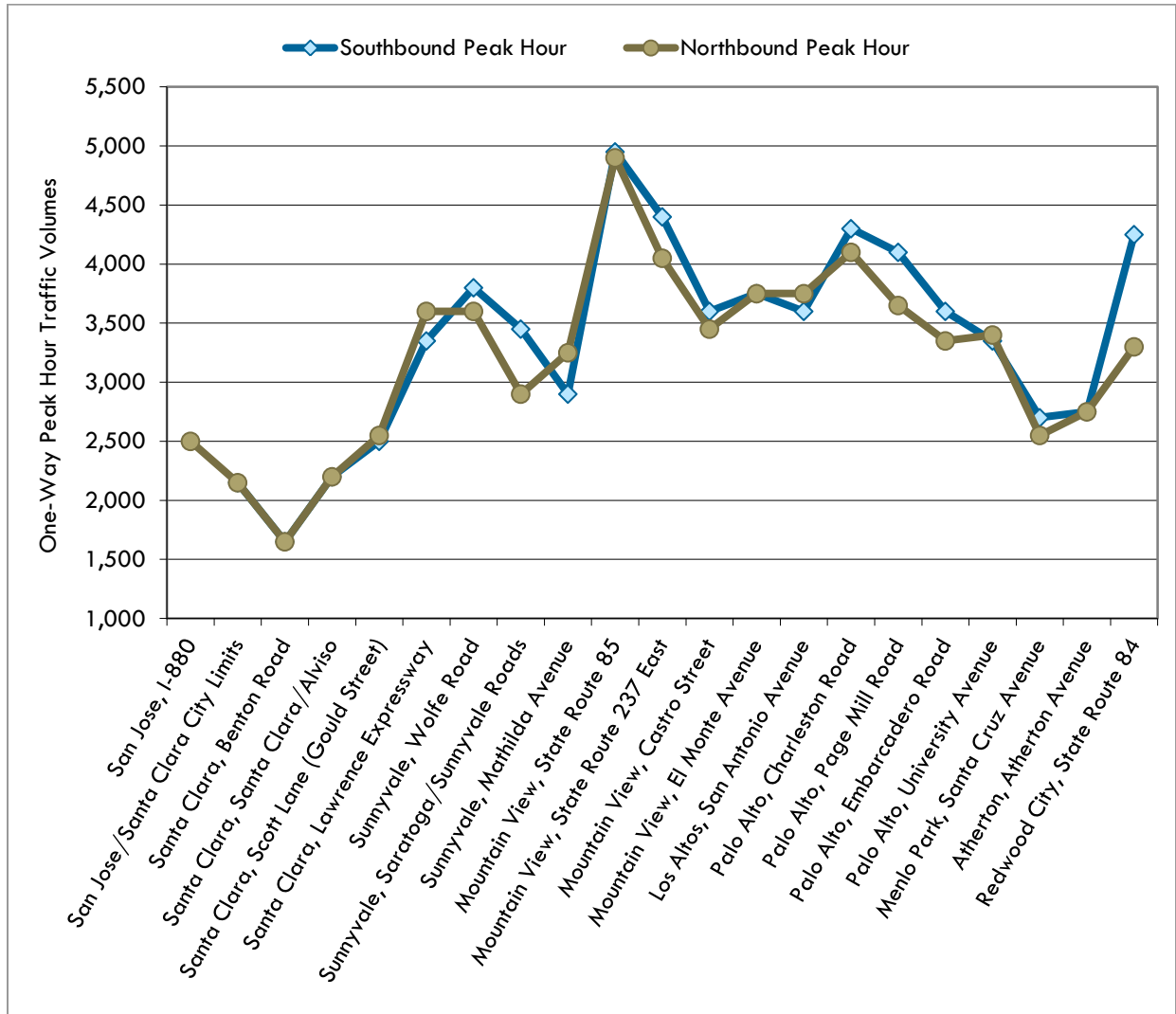
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**Figure 76 Annual Average Daily Traffic Volumes on El Camino Real in the Study Area (2013)**



Source: Caltrans Traffic Counts. <http://traffic-counts.dot.ca.gov/>

Figure 77 Average Peak Hour Traffic Volumes on El Camino Real in the Study Area (2013)



Source: Caltrans Traffic Counts. <http://traffic-counts.dot.ca.gov/>

Peak hour intersection level of service (LOS) for motor vehicle traffic is defined in Figure 78 and summarized for Santa Clara County in Figure 79 and San Mateo County in Figure 80. Note that the minimum acceptable standard for LOS at the intersections in San Mateo County is E, as defined by the county’s Congestion Management Program (CMP), and the minimum acceptable LOS in Santa Clara County is D, except at intersection included in the county’s Congestion Management Program, for which the standard is E (these intersections are marked with an “a” next to their name in Figure 79). No level of service standards are in place for other modes of transportation. Note that SB 743, enacted in 2013, eliminates automobile LOS as a measure of determining significant impacts for projects, instead evaluating projects based on the amount of vehicle miles traveled they will generate. While this could lead to the long term removal of LOS as a measurement used by CMPs, the immediately impacts on CMPs are not yet certain. SB 743 is certain to impact the evaluation of development projects in areas included in Priority Development Areas, however, which includes much of the study area.

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On the whole, El Camino Real generally meets the local standards for level of service, with several exceptions. In Santa Clara County, four of the study area intersections do not meet the standard for LOS, including Hansen Way (Palo Alto), Calderon Avenue/Phyllis Avenue (Mountain View), Mathilda Avenue (Sunnyvale), and San Tomas Expressway (Santa Clara). In San Mateo County, only Ravenswood Avenue in Menlo Park fails to meet the county’s LOS standard. In general, most other intersections in the study area exceed the standard by at least one letter grade.

**Figure 78 Intersection LOS Definitions**

LOS	Average Delay <sup>1</sup> (Seconds / Vehicle)	Description
A	< 10.1	Insignificant delay: No approach is fully used and no vehicle waits longer than one red indication (at signals).
B	10.1 – 20.0	Minimal Delay: An occasional approach is fully used and drivers begin to feel restricted.
C	20.1 – 35.0	Average/moderate, but acceptable delay. Most drivers feel restricted.
D	35.1 – 55.0	Tolerable delay. Some queuing may occur, but usually dissipates quickly.
E	55.1 – 80.0	Significant delay. Volume approaches capacity and vehicles wait through several signal cycles. Drivers at unsignalized intersections may wait in long queues.
F	>80.0	Excessive delay and congestion. Conditions are at capacity with long delay and queuing.

Notes:

1. For signalized intersections

Sources: SamTrans El Camino Real BRT Phasing Plan Existing Conditions Report, 2014; Chapters 16 and 17, Highway Capacity Manual, Transportation Research Board, 2000.

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**Figure 79 Peak Hour LOS on SR 82 in Santa Clara County (from VTA ECR BRT EIR)**

City	Intersection Location by Cross Street Name	A.M. Peak Hour		P.M. Peak Hour	
		Delay <sup>b</sup>	LOS <sup>c</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>
Palo Alto	Palm Dr <sup>a</sup>	28.2	C	27.7	C
	University Ave <sup>a</sup>	17.2	B	25.9	C
	Medical Foundation Drive	25.5	C	27.1	C
	Embarcadero Rd/Galvez St <sup>a</sup>	50.1	D	63.5	E
	Churchill Ave	18.2	B	21.2	C
	Park Bl./Serra St	15.9	B	19.7	B
	Stanford Ave	31.2	C	31.3	C
	Cambridge Ave	7.0	A	13.5	B
	California Ave	15.7	B	24.8	C
	Page Mill Rd/Oregon Expy <sup>a</sup>	73.4	E	58.5	E
	Portage Ave	30.2	C	43.2	D
	Hansen Way	<b>80.2</b>	<b>F</b>	45.7	D
	Matadero Ave/Margarita Ave	19.6	B	15.1	B
	Curtner Ave	4.1	A	3.2	A
	Ventura Ave	13.0	B	11.3	B
	Los Robles Ave	17.9	B	14.3	B
	Maybell Ave/El Camino Way	19.8	B	10.6	B
	Charleston Rd/Arastadero Rd <sup>a</sup>	37.5	D	38.3	D
	Dinahs Ct	4.9	A	7.1	A
	Los Altos Ave/Cesano Ct	21.5	C	12.3	B
Del Medio Ave	15.5	B	10.3	B	
Los Altos	San Antonio Rd <sup>a</sup>	46.9	D	59	E
	Showers Dr/Los Altos Sq	16.1	B	31.2	C
	Jordan Ave	7.6	A	7.8	A
	Ortega Ave	7.3	A	6.4	A
	Distel Dr	7.2	A	4.4	A
Mountain View <sup>d</sup>	Rengstorff Ave <sup>a</sup>	13.7	B	17.6	B
	Escuela Ave	19.5	B	15.7	B
	El Monte Ave <sup>a</sup>	22.1	C	24.1	C
	Shoreline Blvd /Miramonte Ave <sup>a</sup>	60.1	E	45.8	D
	Castro St <sup>a</sup>	27.8	C	49.3	D
	Calderon Ave/Phyllis Ave	35.4	D	<b>62.8</b>	<b>E</b>
	SR 237/Grant Rd <sup>a</sup>	59.4	E	57.5	E
The Americana / Sylvan Ave	28.8	C	30.4	C	
Sunnyvale	Bernardo Ave	35.4	D	40.2	D
	Grape Ave	7.6	A	12.2	B
	Mary Ave <sup>a</sup>	41.9	D	45.8	D
	Hollenbeck Ave	28.2	C	30.8	C
	Mathilda Ave <sup>a</sup>	<b>80.2</b>	<b>F</b>	50.4	D
Sunnyvale (Continued)	Murphy Ave	1.7	A	1.6	A
	Sunnyvale Ave/Sunnyvale Saratoga Rd	19.6	B	37.9	D



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City	Intersection Location by Cross Street Name	A.M. Peak Hour		P.M. Peak Hour	
		Delay <sup>b</sup>	LOS <sup>c</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>
	Cezanne Dr	9.7	A	13.6	B
	Fair Oaks Ave/Remington Dr <sup>a</sup>	35.1	D	48.9	D
	Maria Ln	9.4	A	13.8	B
	Wolfe Rd <sup>a</sup>	39.7	D	52	D
	Poplar Ave	17	B	14.7	B
	Henderson Ave	12.8	B	16.5	B
Santa Clara	Halford Ave	16.7	B	20.7	C
	Lawrence Exp. SB Ramp <sup>a</sup>	10.4	B	17.9	B
	Lawrence Exp. NB Ramp <sup>a</sup>	23.5	C	14.8	B
	Lawrence Sq	1.5	A	2.5	A
	Flora Vista Ave	15.5	B	14.8	B
	Nobili Ave	3.8	A	4.0	A
	Pomeroy Ave	12.5	B	16	B
	Calabazas Blvd	14.7	B	17.6	B
	Kiely Blvd/Bowers Ave <sup>a</sup>	33.1	C	38.6	D
	Bowers Ave	5.3	A	7.4	A
	San Tomas Expy <sup>a</sup>	73.7	E	<b>84.1</b>	<b>F</b>
	Los Padres Blvd	27.3	C	31.1	C
	Scott Blvd <sup>a</sup>	39.9	D	48.8	D
	Lincoln St <sup>a</sup>	21.0	C	20.0	C
	Monroe St <sup>a</sup>	27.4	C	36.4	D
	Lafayette St <sup>a</sup>	44.4	D	44.1	D
	Benton St	10.8	B	26.1	C
	Palm Dr	13.1	B	17.3	B
	Campbell Ave (Accolti Way)	12.0	B	19.1	B
	The Alameda (SR 82) <sup>a</sup>	13.6	B	17.8	B
San José	Newhall St	16.2	B	15.5	B
	I-880 (Southbound) <sup>a</sup>	21.7	C	12.4	B
	I-880 (Northbound) <sup>a</sup>	18.7	B	20.2	C
	Hedding St <sup>a</sup>	44.3	D	42.1	D
	Naglee Ave <sup>a</sup>	47.6	D	55.2	E
	Lenzen Ave	12.2	B	9.0	A
	Julian St	14.5	B	16.2	B
	Martin and Race St <sup>a</sup>	34.3	C	30.1	C

Source: *Traffic Operations Analysis Report* in Appendix H.

Notes:

<sup>a</sup> Congestion Management Plan intersections designated by VTA.

<sup>b</sup> Delay measured in seconds per vehicle.

<sup>c</sup> LOS designation pursuant to 2000 Highway Capacity Manual.

<sup>d</sup> A new signalized intersection was installed at Clark Avenue (between Escuela Avenue and Rengstorff Avenue) in Mountain View after traffic counts were collected. Therefore, it was not included in the Traffic Operations Analysis Report.

**Bold** font and **shading** indicate an LOS that is below the acceptable level of service.

Source: VTA El Camino Real BRT EIR, Chapter 4.12 Transportation and Traffic

**Figure 80 Peak Hour LOS on SR 82 in San Mateo County (2011)**

Intersection	City	AM	PM
Fair Oaks Lane	Atherton	C	C
Watkins Avenue	Atherton	D	D
Glenwood Avenue	Menlo Park	C	C
Oak Grove Avenue	Menlo Park	B	C
Santa Cruz Avenue	Menlo Park	A	B
Ravenswood Avenue	Menlo Park	D	F

Sources: SamTrans ECR BRT Phasing Plan Existing Conditions Report (2014), San Mateo County Congestion Management Program (2011).

## POPULATION AND EMPLOYMENT

A major consideration for relinquishment is ensuring that El Camino Real is a welcoming and efficient multimodal transportation corridor that supports existing and planned development. El Camino Real in the study area has a substantial concentration of residents and jobs, many of them in developments that are relatively urban and walkable in their form compared to typical freeway-oriented development. Figure 81 summarizes the population and employment within a half mile buffer of SR 82 along each city in the study area (this buffer is mapped in Figure 82). Total population figures for each study area city are also included in the table below. As indicated in the table, there are nearly 200,000 residents within a half mile of this 21.6-mile stretch of El Camino Real, and nearly 110,000 jobs. Those numbers are projected to grow in the coming decades as Plan Bay Area, the region’s long range land use and transportation plan, is implemented. The plan designates much of El Camino Real as part of a priority development area (PDA), where most population and job growth should occur (see map in Figure 83).

**Figure 81 Population and Employment Within a Half-Mile of the Study Area**

City	Miles of SR 82 in Study Area	Population (Half Mile of Study Area)	Employment (Half Mile of Study Area)	Population (Whole City)	Employment (Whole City)
Redwood City	2.3	25,076	11,698	80,872	49,845
North Fair Oaks	0.4	7,240	1,376	14,981	5,207
Atherton	0.9	2,629	987	7,159	2,253
Menlo Park	1.4	8,440	8,836	33,071	27,316
Palo Alto	4.0	23,899	33,916	66,642	91,707
Stanford	1.5	2,744	261	13,495	1,342
Los Altos	1.2	4,464	2,978	30,010	9,262
Mountain View	2.6	40,678	15,514	77,846	53,707
Sunnyvale	3.7	40,163	9,841	147,559	82,030
Santa Clara	4.2	36,604	18,774	120,245	97,267
San Jose	0.4	7,271	5,804	998,537	364,772

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City	Miles of SR 82 in Study Area	Population (Half Mile of Study Area)	Employment (Half Mile of Study Area)	Population (Whole City)	Employment (Whole City)
<b>Total</b>	<b>21.6</b>	<b>199,208</b>	<b>109,985</b>	<b>-</b>	<b>-</b>

Sources: Employment: US Census LEHD (2011). Population of cities: 2013 US Census American Community Survey (1-year data for all cities except North Fair Oaks and Stanford, for which 2009-2013 5-year average data is shown). Population in study area (half-mile buffer): 2010 US Census.

Figure 82 Study Area With Half-Mile Buffer

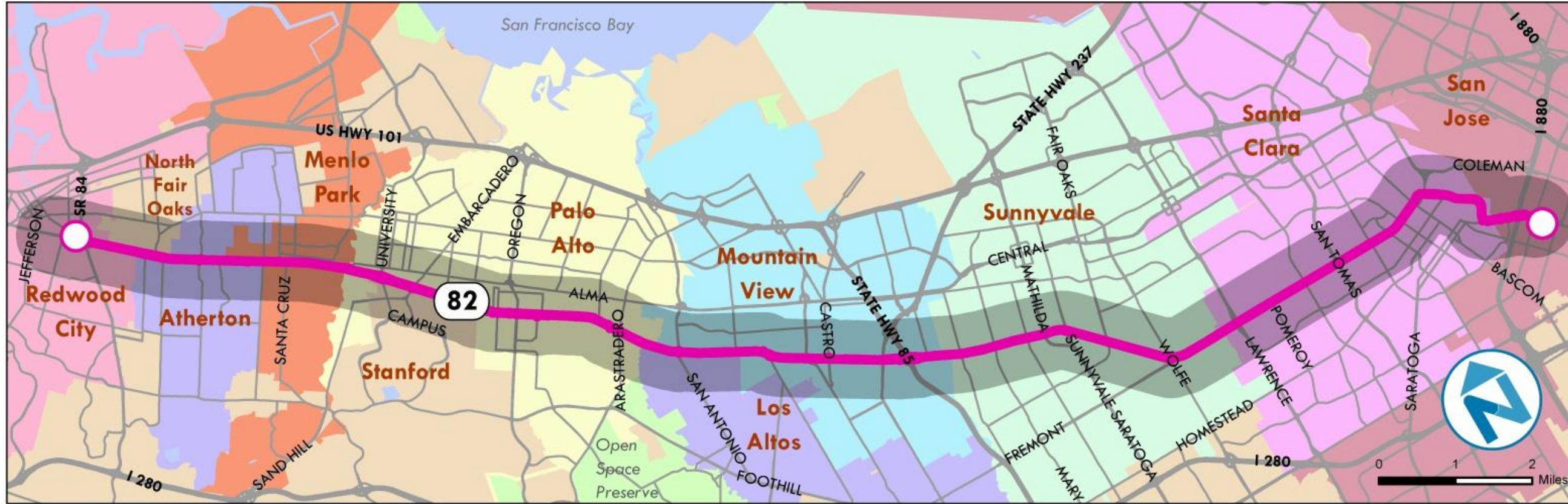


Figure 83 Priority Development Areas (PDAs)



## EXISTING PLANNING EFFORTS

Various existing planning efforts in cities and other jurisdictions along the SR 82 corridor detail community visions for the thoroughfare in terms of roadway design and future land use development. Existing plans range from General Plans that describe a high-level vision for the roadway, to streetscape plans that recommend specific corridor design alternatives. The following section briefly describes planning efforts completed or underway that touch on SR 82, outlining on a city-by-city basis the plans, visions, and priorities for El Camino Real.

### Redwood City

In Redwood City, two planning documents include specific policies and recommendations for El Camino Real, including the Downtown Precise Plan and the General Plan. While the City has not yet come out in favor of a proposed BRT alternative along the roadway, the General Plan does explicitly call out exclusive bus lanes as a palatable option to improve bus mobility on El Camino, as well as transit signal priority, and queue jump lanes. The City will also begin the preparation of a Precise Plan for El Camino Real within the coming year. Redwood City has not yet considered the issue of Caltrans relinquishment of SR 82.

#### Redwood City Downtown Precise Plan

Completed in 2011, the Redwood City Downtown Precise Plan (DTPP) sets forth a blueprint to guide private and public investment in Downtown Redwood City. Through the document, Redwood City commits to the Grand Boulevard Initiative and its goals, pledging to support the revitalization of El Camino as a “grand, multimodal, and attractive boulevard.” A conceptual design has been created for improvements along the entirety of El Camino Real through the DTPP area, which, as rendered in Figure 84, includes:

- Traffic improvements
- Formal rows of trees
- Widened sidewalks
- Pedestrian bulbouts
- Decorative pedestrian-scaled lighting
- Attractive street furniture
- New signed Class III bikeway

Figure 84 Vision for El Camino Real, Redwood City Downtown Precise Plan



Source: Redwood City Downtown Precise Plan

### **Redwood City General Plan**

The Redwood City General Plan (2010) calls for the demolition of the grade-separated intersection of El Camino Real and Woodside Road (SR 84) to help improve bicycle and pedestrian connectivity, as well as prioritizing bus mobility along the roadway via transit signal priority, bus queue jump lanes at congested intersections, and/or exclusive bus lanes. Additionally, the Plan proposes either Class II bike lanes or a Class III bike route along SR 82. As a policy, it strives to enhance the visual character of the El Camino Real Corridor via the installation of public streetscape improvements such as landscaping, coordinated street furniture and fixtures, and upgraded infrastructure.

### **San Mateo County**

A portion of SR 82 within the study area falls under San Mateo County jurisdiction, and was the subject of the North Fair Oaks Community Plan (2011).

### **San Mateo County General Plan**

San Mateo County has adopted a Complete Streets policy for its transportation system. The Transportation Policies chapter of the San Mateo County General Plan was updated in 2012 and states that it is the goal of the County to:

“Create and maintain Complete Streets that serve all categories of transportation users and goods, providing safe, efficient, comfortable, and convenient travel along all streets through an integrated, balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the General Plan.”

## **North Fair Oaks Community Plan**

The North Fair Oaks Community Plan for the portion of unincorporated San Mateo County that lies between Atherton and Redwood City to the east of El Camino Real. This plan explicitly supports the Grand Boulevard Initiative vision for El Camino Real, including:

- Reduced lane widths, where feasible
- Improved pedestrian facilities, including bulbouts and median refuges
- Designated bike lane, with curbside parking and corner bulbouts
- Potential for dedicated transit lanes for BRT and/or transit facilities
- Potential for locating street trees within parking zone planters
- High-visibility warning signs and pavement markings at pedestrian crossings
- Wider sidewalks to expand pedestrian environment and accommodate street trees, landscaping, pedestrian-scaled lighting, street furniture and enhanced transit amenities (shelters, bike racks, etc.)

Citing Caltrans jurisdiction, however, the Community Plan does not propose or require any direct changes or improvements to El Camino Real, but only supports, at a policy level, the intent and proposals of the Grand Boulevard Initiative.

## **Atherton**

The Town of Atherton initiated an effort to study a road diet along El Camino Real, reducing travel lanes from three per direction to two. The effort is on hold, however, as the Town awaits the results of the Menlo Park El Camino Corridor Study along the roadway just south of Atherton's borders (discussed in the Menlo Park section below). The Town also recently adopted its Bicycle and Pedestrian Master Plan, with specific recommendations for SR 82, which are discussed below. The Town Council has also approved investigating adding either a conventional stoplight or pedestrian-controlled stoplight (hybrid pedestrian beacon) at El Camino Real and Almendral Avenue. Caltrans is installing pedestrian crossings with beacons in two locations along El Camino Real, and the Town of Atherton is installing one in a third location.

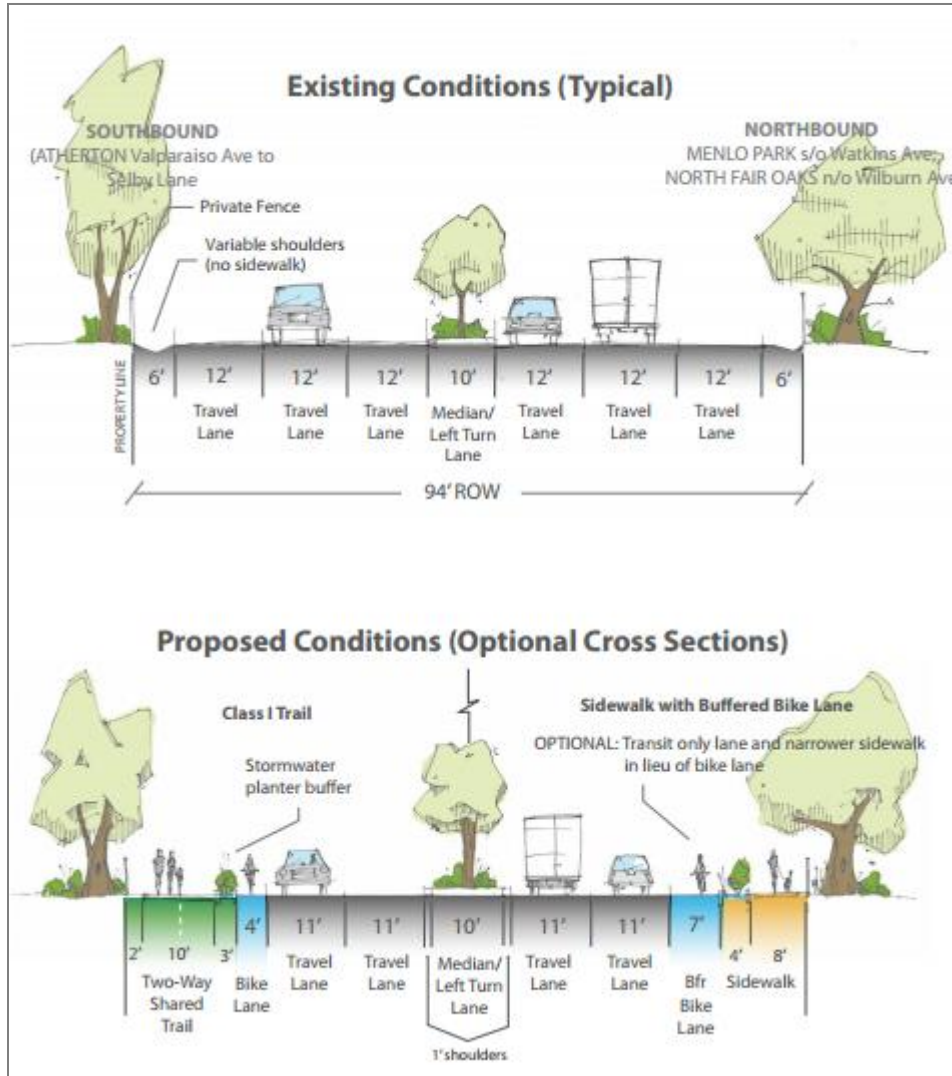
### **Town of Atherton Bicycle and Pedestrian Master Plan**

Adopted in 2014, the Town of Atherton Bicycle and Pedestrian Master Plan puts forward recommendations for improving travel safety and encouraging greater use of active, low-impact travel modes. The plan proposes a major overhaul to El Camino Real by converting the westernmost southbound travel lane to a Class I trail with landscaping and pedestrian crossing improvements, named the Grand Boulevard Greenway. The vision for the roadway includes the following:

- A potential road diet from three travel lanes per direction to two (for further study) to allow for dedicated pedestrian and bicycle facilities (a west-side Class I trail and/or buffered bike lanes with 8-foot sidewalks)
- Upgrading uncontrolled crossings with curb ramps and curb extensions, high-visibility crosswalks, center median refuge islands, and hybrid pedestrian signals or rapid flashing beacons
- Coordinating with Caltrans on reviewing optimal locations for new potential traffic signals, pedestrian hybrid signals, and other crossing improvements

Figure 85 shows the cross section of the vision included in the Plan. The document acknowledges that Caltrans owns and operates the corridor, and does not broach the topic of relinquishment.

Figure 85 El Camino Real Grand Boulevard Greenway Concept (Atherton)



Source: Atherton Bicycle and Pedestrian Master Plan

## Menlo Park

The City of Menlo Park has numerous plans, both completed and under development, that present visions and recommendations for El Camino Real, which bisects its downtown and the city as a whole. These include the Downtown Specific Plan, El Camino Real Corridor Study, Menlo Park Bicycle Plan, Menlo Park Sidewalk Master Plan, and Capital Improvement Program (CIP). In sum, current plans envision a more complete street, including a vehicular circulation system that accommodates both local and through traffic, an integrated pedestrian network of expansive sidewalks, promenades and paseos, numerous safe crossings of the roadway, a complete bicycle network, and transit supportive circulation elements. The City has not publically discussed its position on potential relinquishment. More detail is provided for each document below.



## El Camino Real & Downtown Specific Plan

The El Camino Real/Downtown Specific Plan (2012) establishes a framework for long-term private and public improvements on El Camino Real, in the Caltrain station area, and in downtown Menlo Park. The Plan identifies opportunities to improve the bicycle and pedestrian experience along SR 82 by:

- Providing continuity and consistency with coordinated streetscape elements and regular street tree planting
- Improving pedestrian crossings at key intersections
- Widening sidewalks and providing more comfortable walking zones, where possible, within development setbacks
- Providing a continuous bike route along the length of the corridor, with the potential for a dedicated bike lane in future years

The Plan ultimately led to the initiation of the El Camino Corridor Study, which will define a specific locally preferred alternative for the roadway.

Figure 86 Vision for El Camino Real (at Ravenswood)



Source: El Camino Real & Downtown Specific Plan

## El Camino Real Corridor Study

The El Camino Real Corridor Study, currently under development, has the goal of developing alternatives to allow for the addition of a bicycle lane or an additional automobile travel lane along SR 82 between Sand Hill Road and Encinal Avenue, and evaluating the potential impacts to traffic, active transportation, safety, parking and aesthetics of all alternatives. The three alternatives currently under consideration include:

1. **Continuous Three Lanes:** The first alternative involves addition of a third travel lane in each direction between Encinal Avenue and Roble Avenue, where there are currently two lanes in each direction. The additional through lane would be created by removing on-street parking and right-turn lanes, which would become shared through/right-turn

lanes. No bicycle facilities on El Camino and no pedestrian bulbouts could be accommodated under this alternative.

2. **Buffered Bike Lanes:** This alternative involves the addition of buffered bike lanes in both directions by narrowing existing vehicle lanes and eliminating on-street parking along much of the corridor. The bike lanes would be buffered from traffic by a 3-foot-wide painted section. Pedestrian bulbouts would be added to key intersections.
3. **Separated Bicycle Facility:** The third alternative involves addition of a separated cycle-track. Both of the one-way cycle-tracks would be protected from vehicle traffic with raised curbs or planters, which could also include landscaping. The facility would be created by eliminating on-street parking and right-turn lanes through the majority of the corridor. Intersections would be designed with bicycle crossings provided adjacent to crosswalks. No traditional pedestrian bulbouts could be accommodated under this alternative, but pedestrian crossing distances would be shortened with provision of the separated bicycle facility. Figure 87 shows a plan-view drawing of this alternative.

Figure 87 Separated Bicycle Alternative (at Ravenswood Ave.)



Source: El Camino Corridor Study

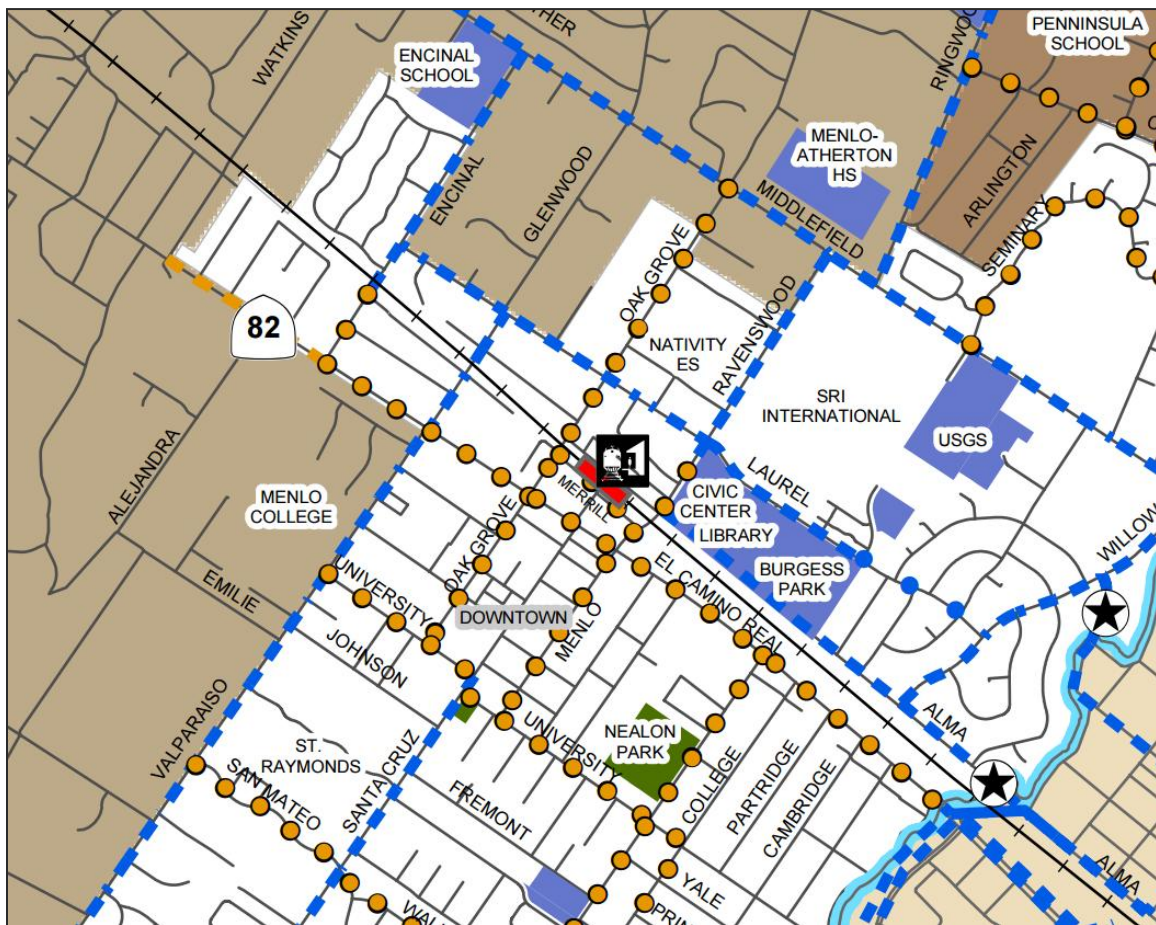
A survey conducted as a part of the planning process indicated that most residents were interested in enhanced pedestrian crossings, the addition of a bike lane, additional bicycle

parking, and additional landscaping. The City of Menlo Park will also be financing street furniture along the corridor. The least desirable changes proposed included higher travel speeds along SR 82. The study acknowledges that ultimate design and implementation of modifications to El Camino Real will need to meet Caltrans requirements and standards. During a study session on August 25, 2015, the City Council favored pilot implementation of either buffered or protected bicycle facilities.

### Menlo Park Bicycle Plan

The Menlo Park Comprehensive Bicycle Development Plan (2005) provides a blueprint for making bicycling an integral part of daily life in Menlo Park. The plan called for the inclusion of Class II bicycle lanes on El Camino Real from Watkins Avenue to Encinal Avenue (about 0.4 miles) and Class III route markings from Encinal Avenue to Palo Alto, as well as the installation of bicycle detector loops at key intersections. As of 2015, bike lanes and routing signage have not yet been installed on El Camino Real in these locations. Proposed bike lanes are shown as dashed orange lines in the map below; proposed Class III bike routes are shown as orange circles.

Figure 88 Proposed Bike Routes on El Camino Real in Menlo Park



## Menlo Park Sidewalk Master Plan

The primary focus of the Menlo Park Sidewalk Master Plan (2008) is to prioritize sidewalk installation by inventorying gaps in the City's existing walkway network and identifying opportunities and constraints to close gaps in the network. The plan calls for the closure of a sidewalk gap along the corridor (between Watkins Avenue and Spruce Avenue) and the installation of pedestrian crossings at all legs of all intersections. The sidewalk gap was closed recently when a new building was built that fronted onto that segment of El Camino Real.

## Menlo Park Five-Year Capital Improvement Plan (FY2013-18)

The 5-year Capital Improvement Program (CIP) for the City of Menlo Park is the community's plan for short and long-range development, maintenance, improvement, and acquisition of infrastructure assets to benefit the City's residents, businesses, property owners and visitors. Plans along El Camino Real include:

- Construction of a northbound right turn lane at Ravenswood
- An upgrade to the median irrigation system

## Palo Alto

The City of Palo Alto has no major planning efforts specifically covering corridor design alternatives for El Camino Real, though some existing plans, such as the Bicycle and Pedestrian Transportation Plan, make recommendations at specific intersections. In addition, the City is planning some intersection repairs and improvements at Embarcadero Road and Churchill Avenue. The City Council has formally opposed the dedicated lane alternative of the El Camino Real BRT project and instead supports the mixed-flow configuration in which buses share lanes with automobiles.<sup>93</sup> The Council raised concerns regarding traffic impacts and the loss of parking when detailing their position. The City has also not formally discussed the issue of Caltrans relinquishment.

## Bicycle & Pedestrian Transportation Plan

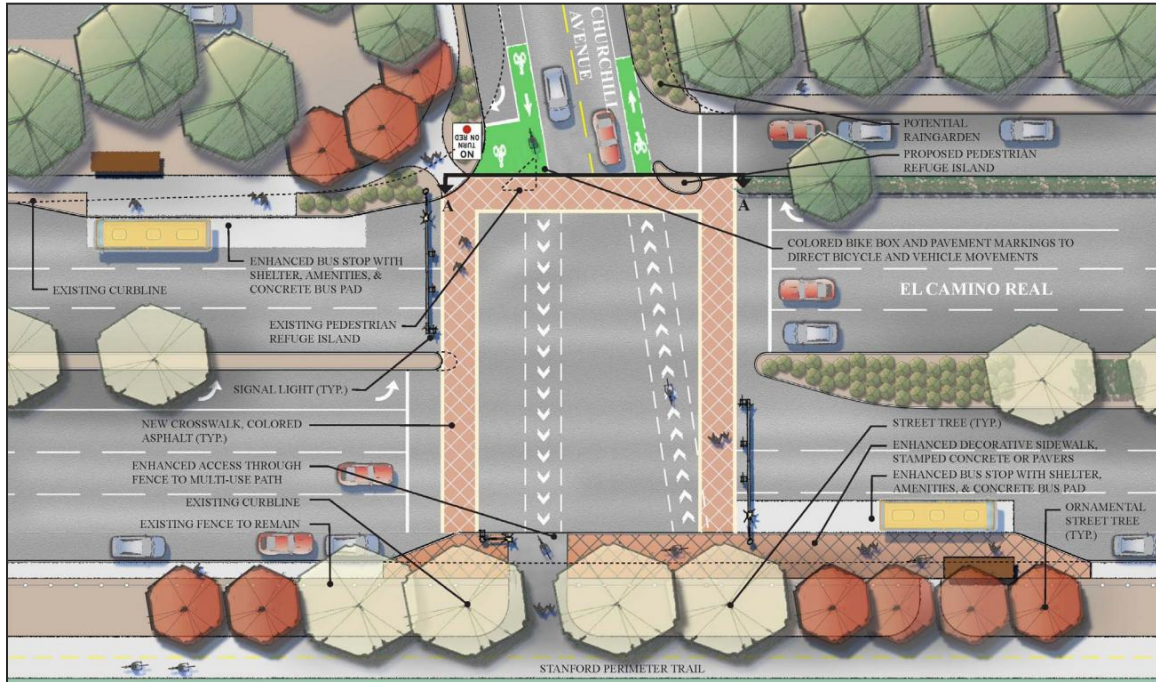
The Bicycle & Pedestrian Transportation Plan was adopted by the Palo Alto City Council in July 2012. The Plan includes a recommended Bicycle Network made up of the facilities on strategically placed streets throughout the City. No bicycle facilities are recommended along El Camino Real; however, various bicycle corridors cross SR 82, where intersection improvements are recommended. These include:

- At Churchill Avenue, the installation of high visibility crosswalks across all legs (currently only two intersection legs have crosswalks), crossbike markings connecting to the Stanford Perimeter Class I trail, and bus bulbouts with enhanced shelters as shown in Figure 89
- At Maybell Avenue, the installation of bike boxes, dashed bicycle lane striping through the intersection, and directional wayfinding
- At Matadero Avenue, plans are still being developed

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<sup>93</sup> "Palo Alto officials protest rapid-bus plan," Palo Alto Weekly. 1/12/15.  
<http://www.paloaltoonline.com/news/2015/01/10/palo-alto-officials-protest-rapid-bus-plan>

Figure 89 Recommended Improvements at El Camino Real and Churchill Avenue



Source: City of Palo Alto

## Palo Alto Comprehensive Plan Update

Also referred to as Our Palo Alto 2030, the City's update to the Comprehensive Plan recently released a draft set of goals and policies for public review. As a new policy included in the Plan, the City strives to support the regional Grand Boulevard Initiative for El Camino Real, including bus rapid transit improvements, without dedicated bus lanes, to support VTA services.

## Santa Clara County

The County of Santa Clara has jurisdiction along one significant portion of El Camino Real within the study area, where it fronts Stanford University (roughly between Quarry Road and Stanford Avenue). Of note, there is a bicycle facility along the edge of Stanford's property, outside of the right-of-way. The County's vision for the corridor has largely been a function of the aesthetics and planned environment of the University and its ongoing development and preservation efforts. In an interview, County officials stated that they are not aware of any major changes planned, but would like to operate the intersection at Page Mill Road along the roadway.

## Los Altos

In Los Altos, El Camino Real runs along the northeastern border of the city and must be crossed to access destinations in Mountain View including the San Antonio Shopping Center and Caltrain Station. The City of Los Alto is currently nearing completion on its Pedestrian Master Plan, which makes suggested improvements to El Camino Real, which is discussed below. Additionally, the Sherwood Gateway Specific Plan, covering the area around the El Camino Real and San Antonio Road intersection, includes recommended improvements to the roadway. The City Council has not considered relinquishment of the roadway, though in an interview with Department of Public

Works staff, concern was raised with regards to the City's ability to take over maintenance costs of the highly used roadway as well as additional liability associated with the asset.

### **Los Altos Pedestrian Master Plan**

The purpose of the Los Altos Pedestrian Master Plan is to serve as a planning document to promote existing pedestrian facilities and to help identify and prioritize projects to improve pedestrian safety and overall neighborhood livability, while maintaining the rural characteristics of the City. While still being finalized, the draft plan proposes the following improvements to SR 82:

- Widen sidewalks to conform with proposed BRT station improvement and enhance pedestrian environment and access
- Provide a new midblock crossing at Sherwood Avenue
- Install new pedestrian hybrid beacons, high-visibility crosswalks and advance yield bars
- Modify pedestrian timing to 3.5 feet per second

These recommended improvements are in response to collision data that shows El Camino Real is where a significant amount of collisions involving bicyclists and pedestrians occur within City limits.

### **Sherwood Gateway Specific Plan**

The Sherwood Gateway Specific Plan (2008) provides a vision for the future development and improvement to the area at the intersection of El Camino Real and San Antonio Road. Recommendations for El Camino Real include the following:

- Enhanced plantings and widening the of landscape median
- Enhanced crosswalks and crossing pavement
- A potential civic monument signifying entry to the city

The Gateway Plan would not require any specific design exceptions from Caltrans.

### **Los Altos Bicycle Transportation Plan**

The City of Los Altos adopted a Bicycle Transportation Plan in 2012. According to this Plan, there are several existing and proposed bicycle facilities that intersect El Camino Real at the City border. These facilities include existing Class II bicycle lanes along San Antonio Avenue, an existing Class III bike route along Los Altos Avenue with proposed shared lane marking, a proposed Class III bike route with shared lane markings along Distel Drive, and a proposed Class III bike route along Jordan Avenue.

### **Council Direction on the VTA BRT**

On March 10, 2015, the City of Los Altos unanimously provided feedback to the VTA that it has insufficient information to support any recommendations with dedicated lanes.

### **Mountain View**

The City of Mountain View envisions a future El Camino Real that contains improvements for all modes of travel, including wider sidewalks, a tree canopy, safe sidewalks, bicycle facilities, and transit amenities. Through both its El Camino Real Precise Plan and Bicycle Transportation Plan,

the City outlines detailed local multimodal improvements to the corridor. In April 2015, the City voted in support of the proposed dedicated transit lane for the proposed Bus Rapid Transit (BRT) project along the corridor.<sup>94</sup> The City has not officially considered the issue of relinquishment, though planning efforts acknowledge that doing so would provide the City with greater control over the right-of-way design.

### Mountain View El Camino Real Precise Plan

The Mountain View El Camino Real Precise Plan (2014) provides a roadmap for future changes and investment to El Camino Real and its adjacent properties within City limits. The overall vision includes people-friendly places, gathering spaces, key destinations and improvements promoting safety and comfort, and is contingent on Caltrans adopting the NACTO guide.

Specific roadway design recommendations of the plan include the following:

- Reduced number of driveways and curbcuts
- An improved SR 82 / SR 85 interchange
- Retaining existing medians for landscaping
- Wider sidewalks and enhanced lighting
- Curb bulbouts
- Special high-visibility, ornamental crosswalk markings such as those shown in Figure 90.
- New signalized crossings, potentially including Mariposa Avenue or Pettis Avenue; Bonita Avenue or Boranda Avenue; and Crestview Drive
- Transit signal prioritization
- Improved transit shelters
- Class II buffered bicycle lanes (east of Calderon)
- Bicycle lanes or cycle-tracks (west of Calderon)

Figure 90 Illustrative Neighborhood Corner Streetscape and Intersection Design in Mountain View



Source: El Camino Real Precise Plan

The Plan explicitly acknowledges that the corridor is under Caltrans jurisdiction and that some of the Plan's recommendations could require design exceptions. It also mentions that

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<sup>94</sup> "Could Mountain View's Endorsement Jumpstart Silicon Valley BRT?" SPUR 4/30/15.  
<http://www.spur.org/blog/2015-04-30/could-mountain-view-s-endorsement-jumpstart-silicon-valley-brt>

relinquishment is a future possibility that would provide the City with greater control over the right-of-way design. None of the above improvements are dimensioned or developed to engineering drawings.

### **Mountain View Bicycle Transportation Plan**

Originally completed in 2008, the Mountain View Bicycle Transportation Plan is currently undergoing an update and is slated for completion by early 2016. While the 2008 Plan did not include any proposed facilities along El Camino Real, the 2015 draft update to the Plan incorporates the vision of the El Camino Real Precise Plan, including Class II lanes, buffered lanes, and/or cycle-tracks to the east of Calderon Avenue, and between Escuela Avenue and El Monte Ave. The draft update also includes spot improvements at the intersection of El Camino Real and Castro Street. The City of Mountain View would have preferred Caltrans adoption of NACTO guidelines prior to the Bicycle Transportation Plan, given the current design approval process.

### **Council Direction on the VTA BRT**

In April 2015, Mountain View City Council voted in support of the dedicated lanes option associated with the VTA BRT (discussed in more detail later). As part of this project, the City of Mountain View would have 2 to 3 stations, including the Castro Street, Escuela Avenue (optional), and Showers Drive intersections.

## **Sunnyvale**

The City of Sunnyvale has expressed its vision for El Camino Real in its General Plan, Precise Plan for the corridor, and various Council decisions. The City has pedestrian and bicycle facility priorities that are contingent upon Caltrans approval, such as 10 foot sidewalks and traffic calming measures, especially at S Mathilda to Wolfe Road.

### **El Camino Real Precise Plan**

The Precise Plan for El Camino Real (2007) envisions that El Camino Real will continue to function as Sunnyvale's main commercial spine and transportation corridor. It also outlines a land use strategy to maintain and increase the vibrancy and vitality of El Camino Real as it extends through Sunnyvale. Along the roadway right-of-way, the Plan calls for additional median landscaping, city signage, more pedestrian-friendly sidewalks, well-defined crosswalks, varied setbacks, and protected mid-block crosswalks. A new study is also suggested with the aim of preparing and implementing a Master Design Program for the El Camino Real right-of-way in Sunnyvale.

### **El Camino Real Corridor Specific Plan**

The City is currently in the process of contracting out the El Camino Real Corridor Specific Plan and EIR. This plan will replace the El Camino Real Precise Plan and will incorporate principles of the Grand Boulevard Initiative (GBI) to effectively guide the substantial increased development demand that now exists within Sunnyvale, while promoting walking, biking and transit within the corridor.



## **Bicycle Master Plan**

In its 2006 Bicycle Master Plan, the City of Sunnyvale identified El Camino Real as a priority corridor for bicycle access, and called for the installation of bicycle lanes along the facility.

In 2008, the City also adopted a policy for allocation of street space, which indicates that elimination of on-street parking is a palatable option when considering options for providing multimodal transportation access. Specifically, the policy states that:

“Facilities that meet minimum appropriate safety standards for transport uses shall be considered before non-transport uses are considered.

Parking is the storage of transportation vehicles and shall not be considered a transport use. Historical precedence for street space dedicated for parking shall be a lesser consideration than providing street space for transportation uses when determining the appropriate future use of street space.”

The City also conducted the El Camino Real Space Allocation Study to assess the potential parking impacts of implementing bicycle lanes along the facility.

## **Bicycle Capital Improvement Program**

Based on the above policy directions, El Camino Real is included in Sunnyvale’s Bicycle Capital Improvement Program as a candidate for the installation of bike lanes. In 2013, staff conducted a technical analysis of options to install bicycle lanes along El Camino Real between Sunnyvale Avenue and Fair Oaks Avenue. As a result, 6-foot Class II bicycle lanes (adjacent to 14-foot travel lanes) were installed in early 2015 via the removal of on-street parking.

## **Council Direction on VTA BRT**

On February 24, 2015, Sunnyvale City Council recently expressed its preference for the mixed flow alternative in a 4-3 vote on the VTA’s future El Camino Real Bus Rapid Transit project. This alternative would include new bus stations on sidewalk bulbouts, but no dedicated bus lanes along El Camino Real within the City of Sunnyvale.<sup>95</sup>

## **Santa Clara (City)**

The City of Santa Clara has expressed a vision for El Camino Real through its General Plan, Council endorsement of BRT, and current efforts to develop a corridor specific plan. The City currently maintains most of the roadway (including sidewalks and planted medians), while Caltrans maintains the pavement and traffic signals. The City is now exploring the potential of requesting that Caltrans relinquish the entirety of the El Camino Real right-of-way.

## **Santa Clara General Plan**

The City of Santa Clara 2010-2035 General Plan (2010) envisions El Camino Real as a pedestrian-oriented corridor. It identifies the corridor as a Focus Area for transformation to a tree-lined, pedestrian- and transit-oriented corridor with a mix of residential and retail uses and where priority is given to pedestrians, bicyclists, and transit vehicles.

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<sup>95</sup> “Fast Bus Service a Tough Sell in Car-Centric Silicon Valley,” KQED. 2/26/15.  
<http://ww2.kqed.org/news/2015/02/24/fast-bus-service-is-proving-to-be-a-tough-political-sell-in-silicon-valley>

The plan explicitly calls on City staff to explore options with Caltrans to relinquish the El Camino Real right-of-way to the City of Santa Clara and also work with VTA to improve transit access, information, and frequency along El Camino Real, including the implementation of the BRT project. Specific improvements for the roadway called out in the Plan include:

- Narrower and/or reduced travel lanes
- Enhanced pedestrian facilities
- Wider sidewalks
- Street trees and planted medians
- Enhanced signage and lighting
- Transit and bicycle lanes

As a part of the General Plan modeling process, El Camino Real was modeled with two travel-lanes in either direction in anticipation of the installation of transit only lanes. Results concluded the SR 82 would continue to function at acceptable levels of service as specified within City standards.

### **Council Action on the VTA BRT**

The previous Santa Clara City Council expressed unanimous support for implementation of full BRT along El Camino Real. As a result, the city and VTA worked together on road design that promotes Complete Streets features including wide sidewalks, safe crosswalks, curbside parking, median lane BRT platforms, and bike lanes.

The newly elected Council has yet to take an official position on the BRT project, but City staff have indicated that there may be a more mixed response to BRT implementation.

### **Santa Clara El Camino Real Specific Plan**

Santa Clara was recently awarded a joint VTA/MTC grant for a Corridor Planning Study for SR 82.

### **San José**

The City of San José envisions the Alameda as a multimodal Grand Boulevard within the City. The City endorsed full BRT with dedicated lanes along the portion of The Alameda (SR 82) within this study area, as well as incorporation of BRT stops in street redesign for the other portion of The Alameda.

In 2012, San José gained ownership of the portion of The Alameda to the south of I-880 and just outside of this study area. This relinquishment enabled San José to put into effect its 2010 Plan for The Alameda as “The Beautiful Way.” Street design changes include repaving, corner bulbouts, a road diet, landscaped medians, high-visibility crosswalks and bicycle facilities. These changes are intended to enhance the multimodal performance, historic assets, and development potential of the corridor.

Only approximately 1,300 feet of El Camino Real remains under Caltrans jurisdiction, from the Santa Clara city line to I-880. In general, the City envisions the road as a more multimodal corridor with the full development of the VTA BRT option along its stretch of the roadway. The city wishes to pursue relinquishment along the remaining portion of SR 82 not already under City control.

## Envision San José 2040

The Envision San José 2040 General Plan (2011) sets forth a vision and comprehensive road map to guide the City's continued growth through the year 2040. The concept of urban villages linked by rapid transit services (such as future BRT lines) is a central element of the General Plan. Under the General Plan, The Alameda is designated as a "Grand Boulevard," where roadway design must adequately accommodate transit vehicle circulation and transit stops. Along these corridors, the City strives to prioritize bus mobility.

## Vision Zero

The City of San José is also considering adopting a policy to eliminate all traffic deaths by prioritizing traffic engineering, enforcement, and education practices targeted at the causes of serious crashes. The policy, called Vision Zero, has been adopted by cities such as San Francisco, Los Angeles, Seattle, Portland, New York, and Chicago. If adopted, the city would undertake the following actions to implement the policy<sup>96</sup>:

1. Fix the identified, highest risk locations where people are being injured on our streets by delivering on-the-ground improvements and implementing red light running cameras at crash prone intersections.
2. Ensure full and fair enforcement of traffic laws, with a focus on the most dangerous behaviors, problematic locations and at-fault drivers. Contract with the CHP and/or Sheriff to issue traffic citations in San Jose through 2020. (Source of funding: unspent funds from over 120 unfilled police officer positions).
3. Invest in education programs for road users, with a focus on schools, by lowering the speed limit to 15 mph at all schools (where allowed by state law AB321). Educational outreach to include bus drivers, crossing guards, and the dangers of jaywalking, among other topics.
4. Partner with the City of San Francisco in their effort to change state law allowing cities the autonomy to lower the speed limits where or when needed from 25 mph to 20 mph.
5. Continue with requests petitioning the California legislature to allow automated speed cameras (now legal in 15 other states).

The Vision Zero policy is currently on track to go in front of city boards for approval in spring 2015.

## Grand Boulevard Initiative

The Grand Boulevard Initiative supports work to make El Camino Real friendlier to the people who live and work along it, from Daly City to San Jose. The Grand Boulevard Initiative aims to help El Camino Real match the creativity and high quality of life that Peninsula communities are so proud of. The Vision for the El Camino Real Corridor is to achieve its full potential as a place for residents to work, live, shop and play, creating links between communities that promote walking and transit and an improved and meaningful quality of life. The Grand Boulevard Initiative member jurisdictions are creating people friendly places, through projects like safer sidewalks and crosswalks, parks and green spaces, improved transportation options, and

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<sup>96</sup> Memo from Councilmember Pierluigi Oliverio to the San Jose City Council Rules Committee regarding the Vision Zero Initiative. March 12, 2015.

reasonably-priced home and apartment development. The Initiative is working to create beautiful and accessible destinations along El Camino Real, so it can be a place people come to enjoy, rather than just an auto-oriented highway.

The Initiative is a collaboration of 19 cities (including all nine of the cities within the study area), Santa Clara and San Mateo counties, local and regional agencies, and other stakeholders intended to improve the performance, safety, and aesthetics of the El Camino Real corridor from San Jose to Daly City.

The specific guiding principles of the Grand Boulevard Initiative include:

1. Target housing and job growth in strategic areas along the corridor
2. Encourage compact mixed-use development and high-quality urban design and construction
3. Create a pedestrian-oriented environment and improve streetscapes, ensuring full access to and between public areas and private developments
4. Develop a balanced multimodal corridor to maintain and improve mobility of people and vehicles along the corridor
5. Manage Parking Assets
6. Provide vibrant public spaces and gathering places
7. Preserve and accentuate unique and desirable community character and the existing quality of life in adjacent neighborhoods
8. Improve safety and public health
9. Strengthen pedestrian and bicycle connections with the corridor
10. Pursue environmentally sustainable and economically viable development patterns
11. Preserve and accentuate unique and desirable community character and the existing quality of life in adjacent neighborhoods
12. Improve safety and public health
13. Strengthen pedestrian and bicycle connections with the corridor
14. Pursue environmentally sustainable and economically viable development patterns

The Grand Boulevard Initiative planning efforts have not taken a position on relinquishment, though the members of the Grand Boulevard Initiative Task Force have provided input for this study and are being kept apprised of its findings. Going forward, the Task Force intends to focus on the following key items<sup>97</sup>:

- Opportunities to present to local stakeholders
- Pursuing potential funding sources (such as cap and trade funding)
- Expanding GBI's social media presence
- Building a model complete streets project in South San Francisco and pursue potential funding for other model complete streets projects in Daly City, San Bruno, and San Carlos
- Explore transportation and public health coordinated planning
- Discuss various approaches to bicycle planning and implementation on El Camino Real

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<sup>97</sup> Staff report to the GBI Task Force, March 25, 2015, and comments at the March 25, 2015 meeting of the GBI Task Force in San Carlos. <http://www.grandboulevard.net/images/stories/Agendas/03.25.15%20ff%20agenda.pdf>

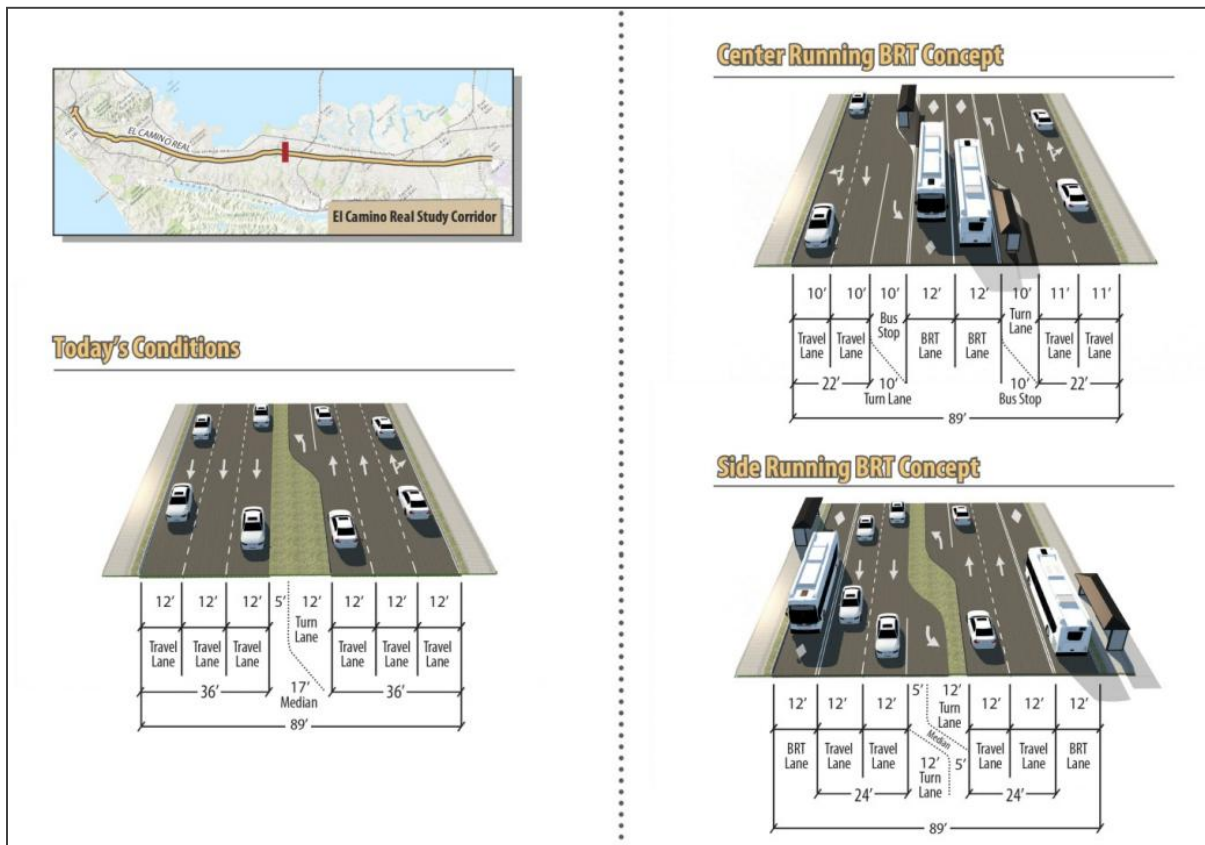
- Explore multimodal performance measures
- Continue to focus on housing and transit-oriented development on El Camino Real

## SamTrans

SamTrans is also currently evaluating potential BRT implementation along SR 82. The El Camino Real Bus Rapid Transit Phasing Study (2014) outlines various options for BRT along El Camino Real within San Mateo County. The service concepts that passed the Phase 1 initial screening and were moved into detailed development for the Phase 2 evaluation (currently underway) include:

- **Rapid Concepts:** Rapid service along the entire corridor
- **Truncated Rapid Concepts:** Rapid service that is truncated within the corridor and excludes areas of lower ridership demand
- **Hybrid Rapid Concepts:** Rapid service that is a hybrid of a typical Rapid service and Local service; with fewer stops than ECR Local but more stops than ECR Rapid
- **BRT Concept:** BRT service along the entire Corridor (concepts shown in Figure 91)

Figure 91 BRT Concepts for El Camino Real



Source: SamTrans El Camino Real Bus Rapid Transit Phasing Study (2014)

## Santa Clara Valley Transportation Authority (VTA)

VTA has implemented transit signal priority (TSP) along El Camino Real in every city except Santa Clara. The agency also conducted extensive analysis for the future redesign of El Camino Real as a bus rapid transit (BRT) corridor. VTA's proposed BRT project along SR 82 would upgrade the existing Rapid 522 bus to BRT, making the service faster, more frequent, and more reliable. The project could also make safety improvements for cyclists and pedestrians as design alternatives are developed. Two basic BRT options have been identified (see Figure 92), including:

- **Mixed Flow:** The installation of rail-like stations on curb extensions, allowing passengers to purchase fare at the station, then board quickly through any of the three vehicle doors
- **Dedicated Lanes:** The conversion of the general use lane adjacent to the median in both directions into a bus-only lane

These two options have been studied in relation to seven project alternatives featuring combinations of the two configurations, including a “no project” alternative.

Figure 92 VTA BRT Concept Plans: Mixed Flow (top) and Dedicated Lanes (bottom)



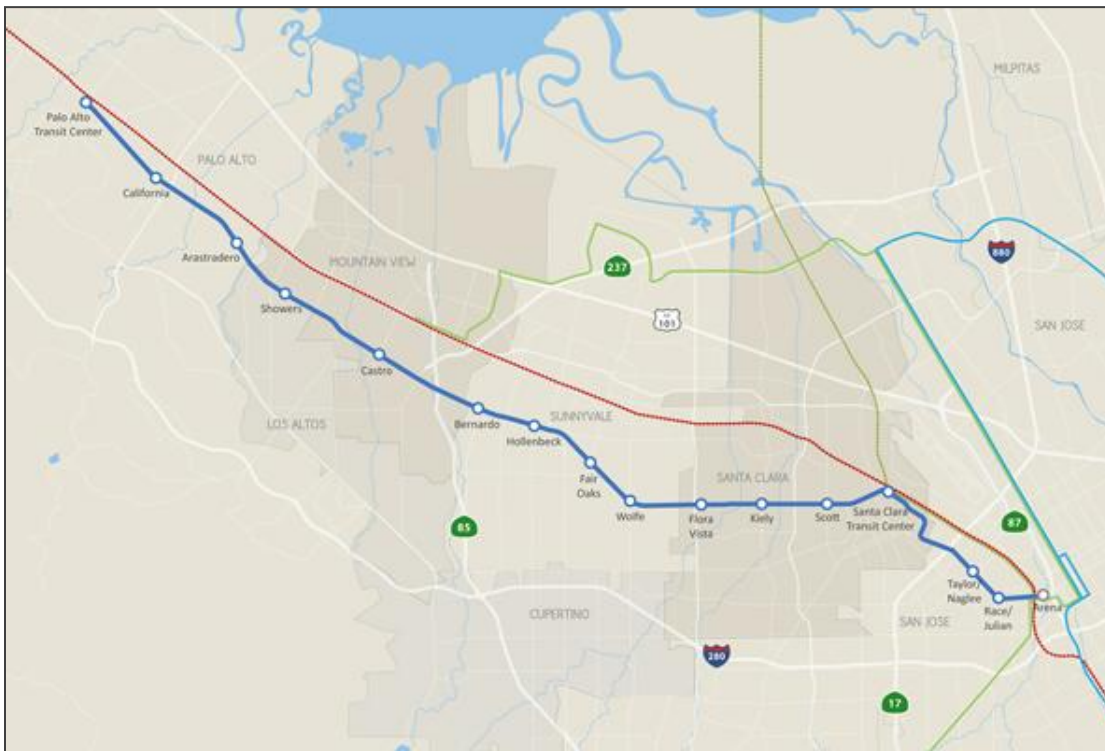
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Source: VTA

The project is currently undergoing environmental review, and the Draft Environmental Impact Report/Environmental Assessment public comment period officially closed on January 14, 2015. The project is scheduled to enter final design this year, and begin construction in 2016, with service tentatively scheduled to begin in September 2018<sup>98</sup>.

Under full BRT, street redesign would include 11-foot travel lanes, 10-foot turn lanes, 6-foot bike lanes, dedicated BRT lanes with colored pavement, new median landscaping, enhanced crosswalks, and sidewalks. The proposed alignment and stations are shown in Figure 93, and the proposed station design, featuring rail-station-like passenger amenities, is shown in Figure 94.

**Figure 93 Proposed VTA BRT Alignment and Stations**



Source: VTA

<sup>98</sup> VTA El Camino Real BRT project website. <http://www.vta.org/projects-and-programs/brt-el-camino-real-brt-project>.

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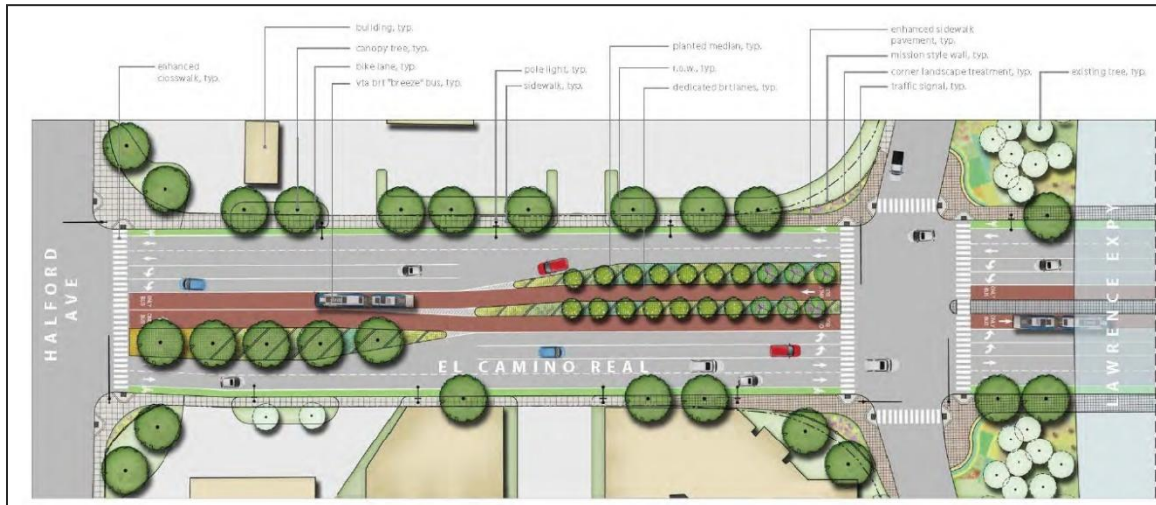
**Figure 94** VTA El Camino Real BRT Station Amenities



Source: VTA

As part of the El Camino Real BRT project, VTA started working with the City of Santa Clara on a corridor vision if BRT is implemented. Samples of this vision are included in the following figure.

**Figure 95** Sample of Proposed VTA BRT Features



Source: VTA



## STATE OF GOOD REPAIR ASSESSMENT

The cost of bringing a roadway up to a state of good repair<sup>99</sup>—as defined in a way that is mutually agreed upon by the city and Caltrans—is often the single most important point in the negotiations that lead to highway relinquishment. The following section provides an overview of the various roadway assets that local agencies will inherit when taking ownership of a roadway. Wherever possible, the state of roadway assets on SR 82 in the study area is presented below, along with the cost of bringing those assets back to a state of good repair, or up to the latest standards required by state and federal law. This includes a visual assessment of pavement quality for each city in the corridor, which is generally the largest cost in bringing a roadway up to a state of good repair during relinquishment, and a classification of the roadway pavement into good/excellent, fair, or poor (as discussed in the following pages). For items that are beyond the scope of this study, such as verifying the condition of signals or drainage pump stations, this section includes an inventory of what local agencies should have on their radar to investigate further if they do wish to pursue relinquishment. The end result is a partial inventory of costs, and an initial checklist of items to investigate further.

### Methodology

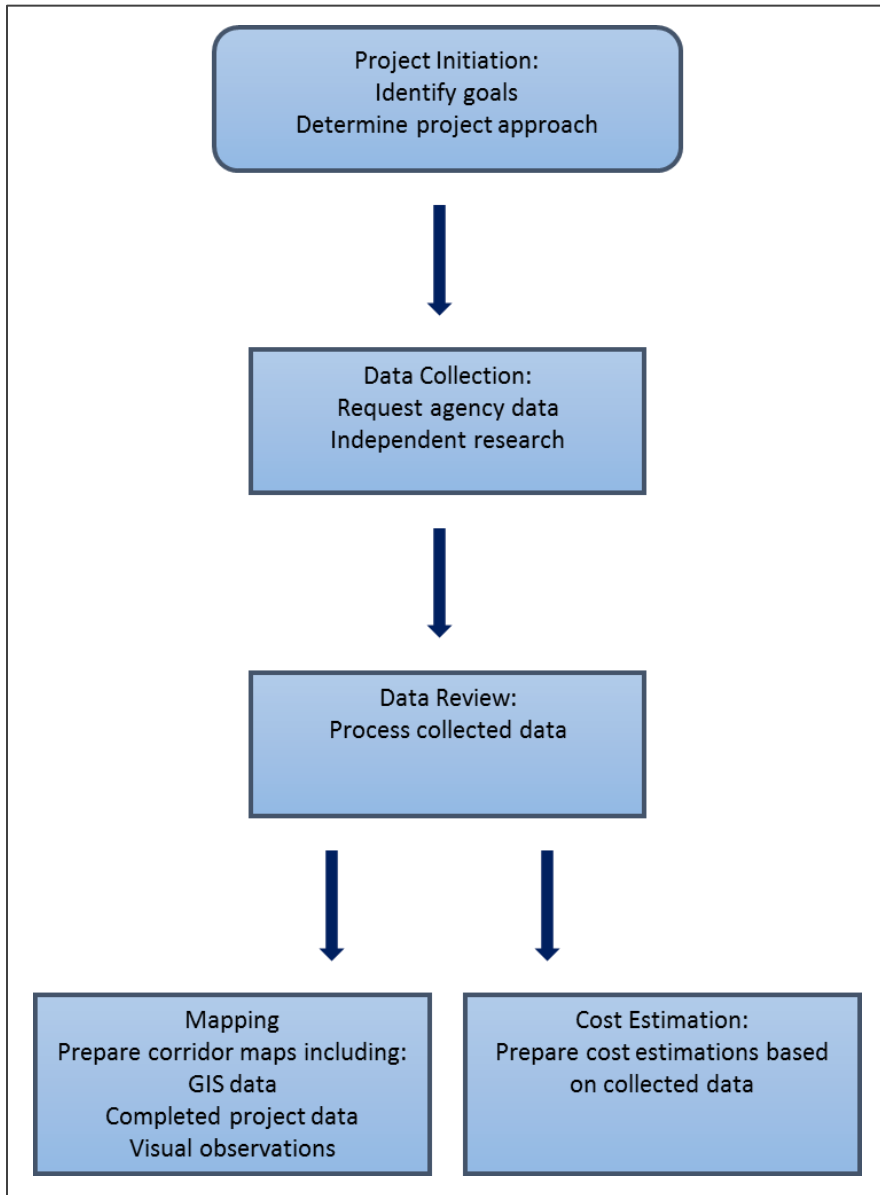
The general methodology for this assessment of state of good repair is to gather data on the state of each roadway asset whenever possible; identify typical unit costs for repair; and estimate total repair costs by jurisdiction. If data on the condition of a roadway asset is not available, an inventory of the asset is provided, such as a list of bridges and signalized intersections, without stating their state of good repair. If no information is readily available on the existence of a roadway asset without additional fieldwork, as is the case with drainage pump stations and the presence of historic assets requiring preservation, the asset is mentioned for further investigation if the local agency decides to pursue relinquishment. Wherever possible, information is presented both in summary tables and in a visual format on the maps in Appendix G. The overall process for evaluating state of good repair for this study, given available data, is summarized in Figure 96 below.

Information presented herein reflects the latest publically available data regarding paving conditions and other physical assets along the corridor. It is intended to identify issues and approximate costs associated with relinquishment of SR 82. Individual jurisdictions may have more current and relevant information that supersedes information presented in this study, and are encouraged to consider all sources of information when evaluating relinquishment.

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<sup>99</sup> Caltrans defines roadway "state of good repair" to mean that the roadway is safe, drivable, and well-maintained. For the purpose of this study, "state of good repair" more specifically means that all components of the roadway have been maintained such that no major repairs are necessary in approximately the next five years. For instance, recently repaved roadways would qualify as good repair, but distressed pavement would not. Signals requiring replacement immediately would not qualify as good repair; signals that could last at least another five years would likely qualify as good repair. In practice, individual cities generally negotiate with Caltrans to determine what level of improvements are needed to bring the roadway to a state of good repair by their own definition.

Figure 96 State of Good Repair Cost Estimate Process



## Pavement Condition

For the analysis of pavement condition along SR 82, the project team performed visual observations of pavement quality and reviewed the 2013 Caltrans State of the Pavement Report (CSPR)<sup>100</sup>, as well as available data for recently completed and soon-to-be completed paving projects. In keeping with the CSPR, this report uses lane-miles as the base unit for quantifying

<sup>100</sup> California Department of Transportation, 2013. "2013 State of the Pavement Report"  
[http://www.dot.ca.gov/hq/maint/Pavement/Pavement\\_Program/PDF/2013\\_SOP\\_FINAL-Dec\\_2013-1-24-13.pdf](http://www.dot.ca.gov/hq/maint/Pavement/Pavement_Program/PDF/2013_SOP_FINAL-Dec_2013-1-24-13.pdf)

paving conditions and costs associated with improvements<sup>101</sup>. Roadway segments were determined to be in one of the following categories: good repair (requiring maintenance only); fair condition; or poor condition. These categories reflect the CSPR methodology and do not necessarily correspond to a numerical Pavement Condition Index (PCI) value.

Figure 97 Pavement Exhibiting Signs of Possible Structural Distress on El Camino Real in Palo Alto



Photo: Nelson\Nygaard

For the purposes of this study, the following definitions apply for the condition of pavement<sup>102</sup>:

- Pavement in **good repair** is defined to be in a condition requiring preventative maintenance only. Pavement in good repair has no or few potholes or cracks, provides a smooth ride, and is considered to be in good/excellent condition. For our analysis, this category does not include pavement that was rehabilitated in the past five years, so it may be approaching the appropriate time for *preventative maintenance*. (See “State 1” in Figure 98 on the following page.)
- Pavement in **fair condition** exhibits very minor surface distress including minor cracking, slab cracking, raveling, and potholes. This pavement requires a *corrective maintenance* project in order to reach a condition of good repair. (See “State 2” in Figure 98.)

<sup>101</sup> “Lane-miles” refers to the length of a particular road segment multiplied by the number of travel lanes. For example, a one-mile segment of road with six lanes (three in each direction) would equal six lane-miles.

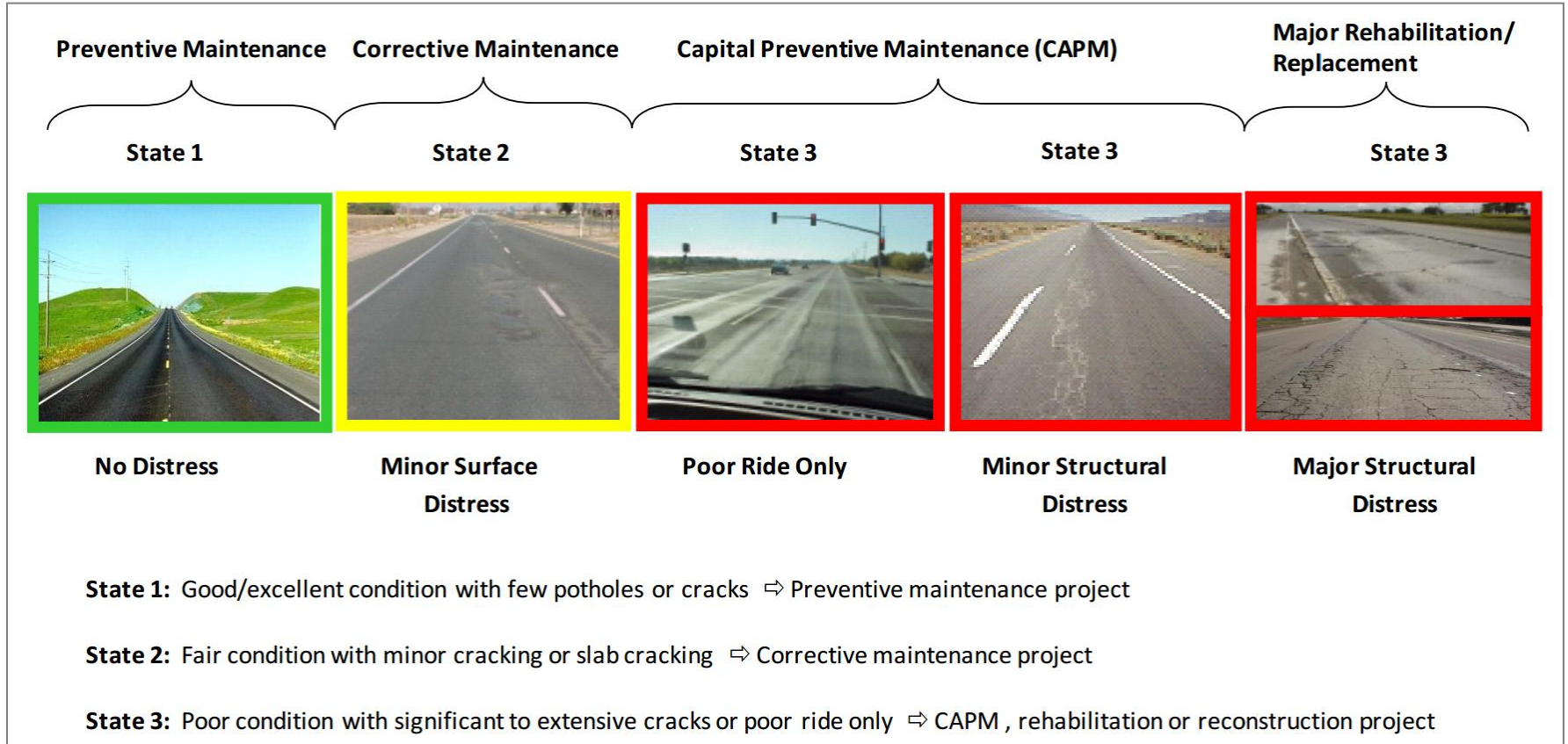
<sup>102</sup> California Department of Transportation, 2013, “2013 Pavement Condition Survey.”

- Pavement in **poor condition** exhibits major distress characterized by major cracking, raveling, potholes, and can range from poor ride quality to major structural distress. This pavement requires a capital preventative maintenance project (CAPM) or full reconstruction in order to reach a condition of good repair. (See “State 3” in Figure 98.)

Cost estimates for returning the pavement to a state of good repair (or maintaining in good repair) were generated by multiplying the number of lane-miles in each jurisdiction by the estimated costs (per 2013 CSPR) to complete each level of upgrade. Where recent paving projects have been completed since the 2013 CSPR was issued, lane-mile designations for fair and poor segments set forth in that report were adjusted to reflect current conditions and were not included in the costs estimate to bring the roadway to a state of good repair. Areas that were identified in the CSPR as “maintenance only” but that were not included in recent or soon-to-be-completed paving projects have been assigned costs associated with returning/maintaining the road section to a state of good repair, as part of corrective maintenance.

As an additional note, although distressed paving can often be identified by alligator cracking, longitudinal cracking, raveling, potholes, and rutting that are easily identified at the surface, in some conditions the deficiencies are in the subgrade section, which can indicate more serious structural distress. Surface repairs to roads with poor subgrade sections are generally short lived. Though paving will appear to be in good condition shortly after repairs, the lifespan of repaved conditions will be relatively short before surface failures reappear. Road sections in this condition typically require removal and replacement of all or a portion of the base section. Though much costlier than surface repairs, this additional effort creates a stable road section that has a longer lifespan with lower maintenance demands. In general, El Camino Real in the study area does not appear to exhibit this more serious level of structural distress, however, so it is assumed that a CAPM project would be adequate to bring it to a state of good repair. This is consistent with the Caltrans’ SHOPP Plan for the corridor, which indicates that the study area requires CAPM work, not full reconstruction.

Figure 98 Pavement Conditions Categories



Source: California Department of Transportation, 2013. "2013 State of the Pavement Report"

The costs to repair pavement in each level of “good repair” are described below:

- As would be expected, pavement in **good repair** requires a lower cost per lane-mile to remain in good repair than is required to return fair, or poor pavement to the same condition. Per the 2013 CSPR, preventative maintenance treatments performed on pavement in good repair can extend a pavement’s service life four to seven years, minimizing the need for more costly pavement rehabilitation strategies. This study assumes a cost of \$106,000 per lane-mile for preventative maintenance to a section of roadway in good repair, the average cost identified in the 2013 CSPR for the 2011/12 and 2012/13 fiscal years.
- Pavement in **fair condition** may require corrective maintenance to be returned to a condition of good repair, potentially extending the service life five to seven years. This study assumes a cost of \$309,000 per lane-mile in for repair of fair pavement, the average cost of performing a CAPM project as identified in the 2013 CSPR for the 2011/12 and 2012/13 fiscal years.
- Pavement in **poor condition** often requires removal and replacement of the structural section of roadway, rather than just the pavement surface, depending on the severity of the wear. A rehabilitated roadway can provide twenty years or more of service life with relatively low maintenance expenditures, but comes at a significant cost. The project team's analysis did not find roadway conditions that would require full replacement, which had an average cost of \$842,000 per lane-mile for rehabilitation of poor pavement, per the 2013 CSPR for the 2011/12 and 2012/13 fiscal years. Instead, for the purposes of this study, pavement in poor condition is assumed to be reparable through a CAPM project, at a cost of \$309,000 per lane-mile, consistent with the pavement renovation needs identified in Caltrans' 10-year SHOPP Plan.

The unit costs (per mile) for bringing roadways in various conditions to a state of good repair are summarized in the following table. For example, if the three northbound lanes on a stretch of road that is 2 miles long need repair, and the current pavement condition is fair (moderate wear), the cost to repair would be (3 lanes x 2 miles x \$309,000) = \$1,854,000.

**Figure 99 Cost to Repair Pavement by Pavement Condition**

Pavement Condition	Cost Per Lane-Mile	When to Replace/Repair	Expected Service Life With Repairs
Recently repaved (past 5 years)	No cost	1-20 years <sup>103</sup>	N/A
Good/excellent condition (5+ years old)	\$106,000	0-2 years	4-7 years
Fair condition	\$309,000	Needs replacement	4-7 years
Poor condition (minor structural distress)	\$309,000	Needs replacement	5-10 years
Poor condition (major structural distress)	\$842,000	Needs replacement	20 years

### **Pavement Repair Cost Methodology Notes**

In addition to the visual inspection by the project team, this study references pavement conditions and repair costs identified by Caltrans in the 2013 CSPR, GPS mapping of pavement

<sup>103</sup> The pavement replacement timeline is contingent on the type of pavement repair or replacement that was implemented most recently.

conditions provided by MTC, and maintenance and repair costs provided by participating jurisdictions. Where Caltrans projects have been completed<sup>104</sup> after the publication of the CSPR, the updated pavement is considered to be in good repair, requiring no additional repairs or maintenance at this time.

Pavement conditions and costs associated with bringing the roadway into a state of good repair are identified by lane-mile within each jurisdiction. Where jurisdictional boundaries appear to split lanes in the same direction of travel, it has been assumed the boundary will be moved to the center median upon relinquishment, leaving adjacent jurisdictions with a logical boundary and clearly defined road maintenance area.

**Figure 100** El Camino Real at Lawrence Expressway in Santa Clara, With Freshly Repaired Pavement



Source: Sherwood Design Engineers

## Pavement Assessment

Pavement conditions along the study corridor range from distressed to good/excellent. The table below identifies the number of lane-miles in each condition by jurisdiction and includes estimated costs to return to good repair.<sup>105</sup> Conditions by jurisdiction range from all newly replaced pavement in Sunnyvale, Atherton and Menlo Park, where resurfacing projects were recently completed, to mostly distressed in Palo Alto, Mountain View, and Santa Clara.

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<sup>104</sup> California Department of Transportation, Current and Past Advertised Projects  
[http://www.dot.ca.gov/hq/esc/oe/project\\_ads\\_addenda/04/](http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/04/)

<sup>105</sup> For the purposes of this assessment, lane miles are based on pavement width and not paint. Therefore a 20-foot wide curbside lane is counted as two lanes.

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Costs for bringing SR 82 pavement into a state of good repair are identified in the table and charts below, and correspond with information shown in the aerial exhibit maps. As a caveat, cities may determine in some cases that accepting pavement in good/excellent condition is acceptable as-is, even without having preventative resurfacing in the past five years. In this case, cities may subtract pavement in the good/excellent category from the cost estimates below. The total pavement repair cost is \$25 million for the study area, but this could rise to as high as \$55 million if pavement that currently has minor distress is allowed to degrade to a state of major distress.

**Figure 101 Pavement Assessment**

City	Pavement Condition	Miles	Lanes	Lane-Miles	Cost to Bring to Good Repair (per lane mile)	Cost	Total Cost by City
Redwood City	Good / Excellent	0.76	3	2.28	\$106,000	\$241,680	<b>\$491,970</b>
	Fair/Maintenance	0.27	3	0.81	\$309,000	\$250,290	
	Total	-	-	3.09	-	-	
Unincorporated San Mateo County (North Fair Oaks)	Newly Replaced	0.45	1	0.45	\$0	\$0	<b>\$90,940</b>
	Good / Excellent	0.10	1	0.10	\$106,000	\$10,600	
	Fair/Maintenance	0.26	1	0.26	\$309,000	\$80,340	
	Total			0.81			
Atherton	Newly Replaced	1.6	3	4.8	\$0	\$0	<b>\$0</b>
	Total			4.8			
Menlo Park	Newly Replaced	2.1	3.5	7.35	\$0	\$0	<b>\$108,150</b>
	Fair/Maintenance	0.1	3.5	0.35	\$309,000	\$108,150	
	Total			7.7			
Palo Alto	Good / Excellent	0.69	4	2.76	\$106,000	\$292,560	<b>\$7,411,920</b>
	Fair/Maintenance	1.18	4	4.72	\$309,000	\$1,458,480	
	Distressed	4.58	4	18.32	\$309,000	\$5,660,880	
	Total			25.8			
Unincorporated Santa Clara County (Stanford et al)	Newly Replaced	0.38	4	0.76	\$0	\$0	<b>\$1,329,640</b>
	Good / Excellent	0.25	4	1.00	\$106,000	\$106,000	
	Fair/Maintenance	0.2	4	0.8	\$309,000	\$247,200	
	Distressed	0.79	4	3.16	\$309,000	\$976,440	
	Total			5.72			
Los Altos	Good / Excellent	0.97	4	3.88	\$106,000	\$411,280	<b>\$806,800</b>
	Distressed	0.32	4	1.28	\$309,000	\$395,520	
	Total			5.16			
Mountain View	Newly Replaced	0.9	4	3.6	\$0	\$0	<b>\$5,810,880</b>

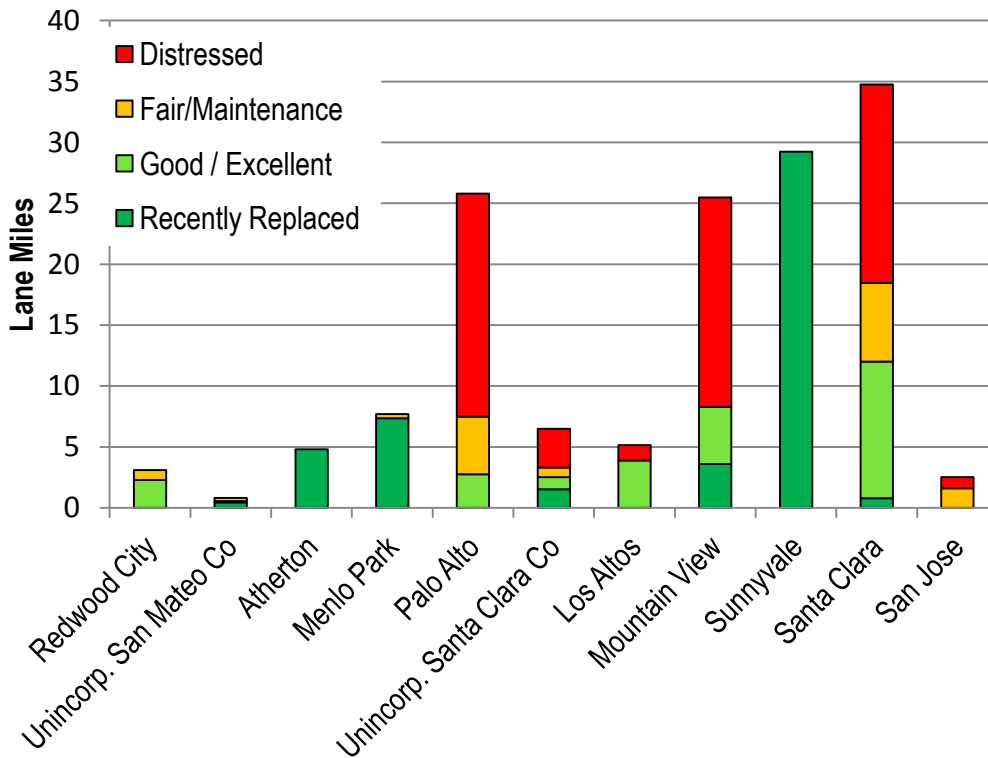


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City	Pavement Condition	Miles	Lanes	Lane-Miles	Cost to Bring to Good Repair (per lane mile)	Cost	Total Cost by City
	Good / Excellent	1.17	4	4.68	\$106,000	\$496,080	
	Distressed	4.3	4	17.2	\$309,000	\$5,314,800	
	Total			25.48			
Sunnyvale	Newly Replaced	7.31	4	29.24	\$0	\$0	<b>\$0</b>
	Total			29.24			
Santa Clara	Newly Replaced	0.2	4	0.8	\$0	\$0	<b>\$8,220,040</b>
	Good / Excellent	2.8	4	11.2	\$106,000	\$1,187,200	
	Fair/Maintenance	1.62	4	6.48	\$309,000	\$2,002,320	
	Distressed	4.07	4	16.28	\$309,000	\$5,030,520	
	Total			34.76			
San Jose	Fair/Maintenance	0.4	4	1.6	\$309,000	\$494,400	<b>\$778,680</b>
	Distressed	0.23	4	0.92	\$309,000	\$284,280	
	Total			2.52			
<b>TOTAL</b>	Good / Excellent			25.90	\$106,000	\$2,745,400	<b>\$25,049,020</b>
	Newly Replaced			47.76	\$0	\$0	
	Fair/Maintenance			15.02	\$309,000	\$4,641,180	
	Distressed			57.16	\$309,000	\$17,662,440	
	Total			145.84			

Source: Visual inspection by project team; Caltrans; MTC.

**Figure 102 Pavement Assessment by City (Lane-Miles)**



## Other Roadway Elements

In addition to the roadway itself, relinquishment would transfer additional assets to local jurisdictions. Bridges, Caltrans-managed utilities, signals, landscaping, pedestrian crossings, and sidewalks/curb cuts should be considered during relinquishment evaluation. For assets where relevant data was available, approximate costs associated with upgrading these assets have been identified below. For assets that do not have information readily available about their condition, an inventory of the assets and any available information is provided.

### Bridges

There are 11 existing bridges on SR 82 in the study area. Information presented in this section references the “Bridges on the California State Highway System” dataset from Caltrans<sup>106</sup>. The dataset includes the bridge location, year of completion, length, and intersecting street/path/creek. This information is summarized in Figure 103 below. Bridge locations are also noted on the aerial exhibit maps in Appendix G. Discrepancies may exist from current conditions as the data was compiled in 2008 and has not been updated since then, though it should be broadly correct.

<sup>106</sup> *Bridges on the California State Highway System*. California: California Department of Transportation (December 9, 2008).

Rehabilitation or repair information was not included in the dataset. Pavement conditions at the surface of the bridge may be found in the above “Pavement Assessment” section, but identification of repairs and/or maintenance needed on individual bridge structures will require further evaluation that goes beyond the scope of this study.

**Figure 103 Bridge Inventory**

City	Intersecting Street/Creek	Year Built	Length (feet)
Menlo Park/Palo Alto	San Francisquito Creek	1913	63
Palo Alto	University Ave	1940	146
Palo Alto	Matadero Creek	1930	28
Palo Alto/Los Altos	Adobe Creek	2004	32
Mountain View	Stevens Creek	1907	56
Mountain View	State Route 85	1965	242
Santa Clara	Lawrence Expressway	1970	226
Santa Clara	Calabazas Creek	1958	26
Santa Clara	Saratoga Creek	1958	56
Santa Clara	De La Cruz Blvd	1961	166
San Jose	Interstate 880	1960	201

Source: *Bridges on the California State Highway System*. California: California Department of Transportation (December 9, 2008)

### Sidewalks and Curb Ramps

The following analysis of existing curb ramp conditions references Caltrans’s 2010 Americans with Disabilities Act (ADA) Transition Plan<sup>107</sup>, which evaluates the condition of curb ramps and adjoining sidewalks within each local jurisdiction. The section below, which references this plan, lists the number of curb ramps requiring full or partial replacement to comply with current ADA standards, from this 2010 inventory. Accessibility improvements along the corridor constructed by Caltrans<sup>108</sup> or other agencies since the completion of the 2010 study have been removed from the count of curb ramps requiring replacement. In addition, Caltrans has several ADA improvement projects planned for 2015<sup>109</sup>. Due to the uncertainty of the timeline of these improvements, however, these proposed projects have not been removed from Figure 105.

<sup>107</sup> California Department of Transportation, 1 Jan. 2010. Web. 4 Mar. 2015.  
<http://64.55.112.217/secured/asset/caltrans/TransitionReport.aspx?mode=public>

<sup>108</sup> California Department of Transportation, Current and Past Advertised Projects  
[http://www.dot.ca.gov/hq/esc/oe/project\\_ads\\_addenda/04/](http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/04/)

<sup>109</sup> California Department of Transportation, 2015 Ten-Year SHOPP Plan for San Mateo and Santa Clara Counties.

Figure 104 A Newly Installed ADA-Compliant Curb Ramp (Left) and a Curb Ramp Requiring Replacement (Right) on El Camino Real in the Study Area



Source: Sherwood Design Engineers

Data acquired from the Caltrans ADA plan has not been verified by the project team, and should only be used as a guide to the scale of potential repair work required in the corresponding jurisdictions, not as a conclusive list of required upgrades. Further investigation beyond the scope of this study will be required to accurately assess and verify the current ramp conditions, as well as other necessary repairs to sidewalk infrastructure.

**Figure 105 Curb Ramps Requiring Replacement in the Study Area (Based on Caltrans ADA Assessment)**

Place	Number of Curb Ramps Requiring Replacement	Total Cost <sup>110</sup>
Redwood City	39	\$544,024
Atherton	4	\$39,919
Atherton/North Fair Oaks	1	\$12,652
North Fair Oaks	10	\$151,821
Menlo Park	37	\$531,372
<b>San Mateo County Subtotal</b>	91	\$1,279,787
Palo Alto	191	\$2,338,944
Los Altos	51	\$598,688
Mountain View/Los Altos	2	\$15,604
Mountain View	100	\$1,308,039
Sunnyvale	111	\$1,364,022
Santa Clara	158	\$1,986,805
San Jose/Santa Clara	6	\$75,910
San Jose	18	\$197,127
<b>Santa Clara County Subtotal</b>	637	\$7,885,139
<b>TOTAL</b>	728	\$9,164,926

### Signals and Signage

Caltrans is responsible for providing and maintaining most traffic signals and road signs along SR 82. In some cases, individual jurisdictions already handle the programming of traffic lights under maintenance agreements with Caltrans, but Caltrans generally reimburses these expenses. In general, signals have a long lifespan, but in the event that they did require replacement after relinquishment, the full costs would be borne by individual jurisdictions, and is therefore a key consideration for cities pursuing relinquishment. Signal rehabilitation or replacement can range from \$100,000 to \$300,000, depending on whether the signal must be fully replaced and type of signal.

Figure 107 below summarizes the number of signalized

**Figure 106 Signal on El Camino Real**



<sup>110</sup> Note: The unit cost for curb ramp replacement provided in Caltrans’s 2010 Americans with Disabilities Act (ADA) Transition Plan varies by location, depending on the specific conditions at each location.

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intersections within each city in the study area. Where signals are located at the boundary between two jurisdictions, both cities have been allocated half the intersection in the summary below.

**Figure 107 Signalized Intersections in the Study Area**

Install Year	Redwood City	Atherton	Menlo Park	Palo Alto	Los Altos	Mountain View	Sunnyvale	Santa Clara	San Jose	Total
1980				1	1		1	2		5
1981				3			2	1		6
1982							3	1		4
1983				5	3	3	1	1		13
1984				1		3	2	1		7
1985						1	1	2		4
1986							2			2
1987				2	1					3
1988					1			3		4
1989								5		5
1990				2					3	5
1991								1		1
1992								1		1
1993							1			1
1999				2	1					3
2000					1					1
2002				1						1
2008				1						1
N/A	3	3.5	6.5							
Total	3	3.5	6.5	8	7	18	3	18	13	67

Source: For San Mateo County cities, Google Streetview imagery was used to determine signal locations. For Santa Clara County cities, Caltrans signal location data was provided by VTA, including the installation date. In some cases, signals may have been upgraded more recently than shown here.

### Utilities and Stormwater Drainage

Wastewater, gas, electricity, telecommunications, telephone, water, and stormwater drainage are among the utilities found along the study area.

PG&E and local water and sewer districts own and operate the majority of these utilities, and therefore these would not become the property and responsibility of local agencies upon relinquishment. On the other hand, the presence of these facilities affects the type of design treatments and structures (including signals) that are permitted at these locations. Key utility lines that cross El Camino Real within the study area include water utility crossings in Redwood City (near 2560 El Camino Real) and Los Altos/Mountain View (near 4460 El Camino Real, Los

Altos) as well as PG&E gas transmission pipelines that cross El Camino Real at Page Mill Road and Charleston Road in Palo Alto, Escuela Avenue/El Monte Avenue and Grant Road in Mountain View, and Lawrence Expressway.

Caltrans does maintain and monitor the drainage infrastructure for the management and conveyance of stormwater runoff and run-on entering the roadway surface (though not the main sewer lines under the roadway), as well as the power and signal equipment associated with operation of traffic signals. Drainage infrastructure includes drop inlets, culverts, storm drain piping, outlet structures, sub-drainage, and pump stations. In particular, some cities have been surprised by taking ownership of pump stations after relinquishment that prove to be in poor condition, as was the case when San Jose took ownership of the portion of SR 82 south of I-880 (as discussed in Chapter 3 of this report).

After relinquishment, infrastructure maintenance currently performed by Caltrans would become the responsibility of the local jurisdiction. Maintenance of other utilities would continue to be under the responsibility of governing agencies, which would need to coordinate utility easements and encroachment requirements with local jurisdictions.

Further study beyond the copy of this analysis would be required to evaluate the state of the current stormwater and utility infrastructure owned by Caltrans, and to take inventory of repairs needed to bring the system to a state of good repair.

## **Contamination**

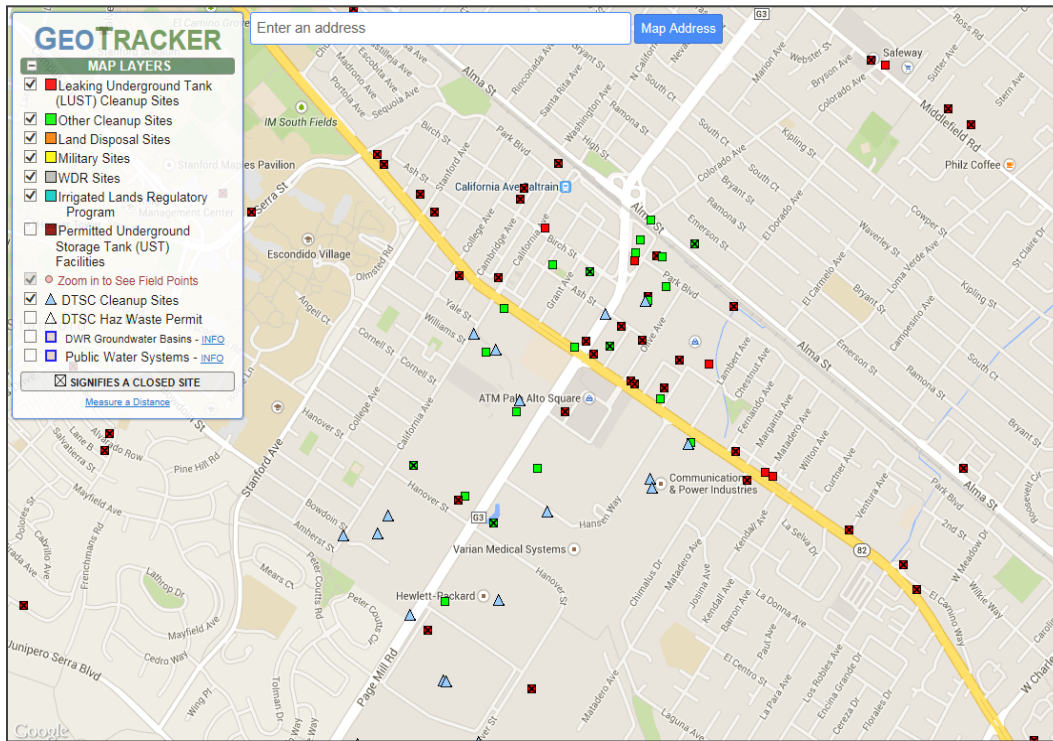
Contamination of soil and other facilities under state highways is another important consideration (beyond the scope of this study) for local agencies considering relinquishment. There are numerous active and closed Leaking Underground Storage Tank (LUST) sites throughout California including many along El Camino Real within the study area (see Figure 108 below).<sup>111</sup> These cleanup sites are often associated with gas stations and other industrial uses. Though cleanup of these sites falls under the authority of the state, and is the financial responsibility of the property owner, coordination with local jurisdictions during the remediation process may be required. There is currently no available data to approximate the potential impacts that contamination cleanup may have on local jurisdictions; however it should be considered in greater detail if relinquishment of SR 82 is formally pursued by the jurisdictions in the study area.

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<sup>111</sup> Information related to the location and status of LUST sites can be found on the State Water Resources Control Board web page ([http://www.waterboards.ca.gov/water\\_issues/programs/ust/](http://www.waterboards.ca.gov/water_issues/programs/ust/))

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Figure 108 Sample Data on Leaking Active and Closed Underground Tank and Other Cleanup Sites along SR 82 in Palo Alto



Source: <http://geotracker.waterboards.ca.gov/>

### Other Considerations

When considering potential relinquishment, local agencies should also investigate several other factors that may not be immediately evident, including the presence of any historically significant assets (such as native remains); major landscaping repairs that are necessary; and any other assets that Caltrans currently owns. It is also important to note that any improvements beyond bringing the roadway up to a state of good repair are typically the responsibility of the local agency, and will not be paid for by Caltrans, even if Caltrans agrees to contribute an amount of funding that covers the full cost of state of good repair work. Furthermore, ongoing maintenance and operations costs will be borne by the local agencies into perpetuity, and generally will not be included in any funding Caltrans provides as part of the relinquishment agreement. These costs are discussed further in the following chapter.

### Recently Completed Projects

Figure 109 summarizes recently completed projects in the study area. Cities may use this list as an indication of the types of repair work that Caltrans has done recently, as well as an indicator of potential future costs if relinquishment is pursued. Note that many of the projects extended beyond the study area, and therefore many of the total project cost amounts listed include work done beyond the study area's boundaries.



**Figure 109 Recently Completed Projects on SR 82 in the Study Area**

Cities in Study Area Included in Project <sup>112</sup>	Project Description	Completion Date	Total Cost <sup>113</sup>
Mountain View	Install traffic signal (Clark Avenue)	2014	\$1,334,000
Palo Alto	Install new corner bulb outs (Stanford Avenue)	2012	\$650,000
San Jose, Santa Clara, Los Altos, Palo Alto	Construct wheel chair ramps (various locations)*	2014	\$12,000,000
Atherton	Metal beam guard rail replacement	2011	N/A
North Fair Oaks, Atherton, Menlo Park, Redwood City	Modify traffic signals*	2012	N/A
North Fair Oaks, Atherton, Menlo Park	Pavement renovation	2013	N/A
Mountain View, Sunnyvale, Santa Clara	Pavement renovation (northbound lanes)	2014	\$2,004,181
Mountain View, Sunnyvale, Santa Clara	Pavement renovation (southbound lanes)	2012	\$1,642,885

\*-Indicates project extended beyond the study area.

Source: Caltrans

In addition to these recently completed projects, the 2014 Caltrans one-year SHOPP Plan includes a project to upgrade drainage systems, curb ramps, and pedestrian passageways in Sunnyvale at the intersections of El Camino Real with Henderson Avenue, South Wolfe Road, Maria Lane, Sunnyvale Saratoga Road/South Sunnyvale Avenue, South Mathilda Avenue, and South Bernardo Avenue, at a total cost of \$8.134 million. This project should be initiated in the near future.

Caltrans' 10-year SHOPP Plan identifies projects that are needed on the state's highway system, though it does not guarantee funding for those programs. The 2015 10-year SHOPP Plan identifies numerous projects on SR 82 in the study area, including crosswalk safety enhancements in Santa Clara, and curb ramp replacement and pavement rehabilitation throughout Santa Clara County.

## Conclusion

This chapter has identified the current roadway conditions for all modes of transportation, including the quality of existing transportation options; safety concerns; the plans that local agencies are currently undertaking to transform El Camino Real in the study area; and the costs and procedures associated with bringing SR 82 up to a state of good repair, given its current condition, including a summary of the assets local agencies would inherit if they took ownership of SR 82. In the following chapter, the ongoing maintenance and operations costs associated with SR 82 in the past five years are also analyzed, as well as potential sources of funding to pay for relinquishment and continued operations of the roadway. Taken together, this information

<sup>112</sup> Projects may include cities outside the study area as well, which are not listed here.

<sup>113</sup> May include costs for portions of the project that were outside of the study area.

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should provide a starting point for cities to evaluate whether relinquishment is a necessary and financially feasible step to achieve their goals for El Camino Real and The Alameda.

## 5 OPERATING AND MAINTENANCE COST ANALYSIS

This chapter includes a summary of the costs associated with highway relinquishment. It begins with a summary of the one-time costs associated with bringing SR 82 up to a state of good repair in the study area, which is discussed in more detail in Chapter 4. This is followed by an analysis of the ongoing operating and maintenance costs associated with SR 82 in the study area, broken out by city. Potential funding sources to pay for these expenses are discussed in Chapter 6.

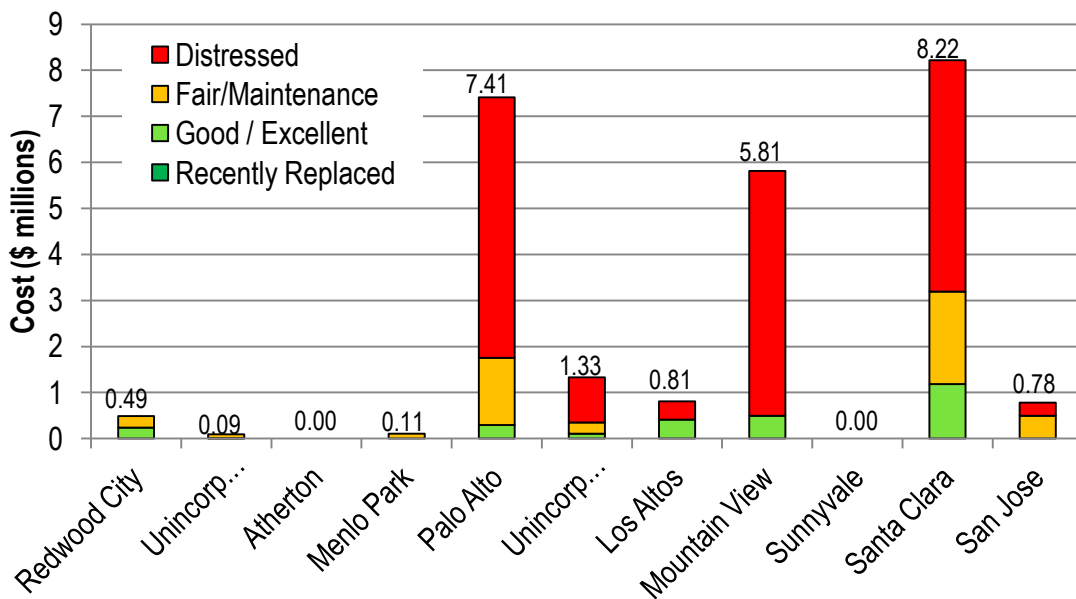
### REPAIR COSTS

One of the most significant costs to consider in highway relinquishment is the cost of bringing the roadway up to a state of good repair. For discussion of pavement assessment methodology, definitions, and other information regarding repair costs, refer to the previous chapter.

As discussed in the previous chapter, costs associated with pavement repair are likely to be in the vicinity of \$25 million for El Camino Real within the study area. In addition to pavement repair, other repair costs could include sidewalk and curb cut improvements to bring them into compliance with ADA guidelines, as well as repairs to other assets such as traffic signals, bridges, and storm infrastructure.

The results of the pavement repair cost analysis are summarized by city in Figure 110 on the following page. Further detail can be found in Figure 102 from the previous chapter.

Figure 110 Estimated Pavement Repair Cost, by City (\$2013 million)



## OPERATIONS AND MAINTENANCE COSTS

Operations and maintenance (O&M) costs are another major concern for jurisdictions considering relinquishment. These costs include all regular efforts required to keep the travelled way and related infrastructure operational. O&M includes such activities as pavement maintenance (primarily patching), re-striping, litter management, upkeep of stormwater conveyances, maintenance of bridges and signals, and landscaping/weed abatement. Additional operational costs not reflected in this report due to unavailability of data include ongoing fees for electrical and water use related to signal operation and landscaping. O&M costs do not include capital improvement projects, such as major reconstruction required to bring a poor section of road into good repair. For the sake of this study, it is assumed that jurisdictions will assume O&M responsibilities once paving has been brought into good repair. See Figure 110 above and Chapter 4 for costs associated with capital improvements.

### Methodology

The data sets available to perform the analysis of O&M costs consisted of the following:

- Caltrans maintenance/repair costs from 2004-2014
- Delegated maintenance payment invoices from the jurisdictions to Caltrans
- Limited jurisdiction records of additional O&M costs

### Assumptions

To provide a unified cost analysis, assumptions had to be made for each data set. Greater detail regarding the assumptions for each data set is provided in the following sections.

For each jurisdiction, the costs from each data set were compiled to provide an average annual O&M cost estimate for SR 82. None of the data sets were adjusted for inflation. The Caltrans maintenance costs were taken as an average across the 11 years of data. The delegated maintenance payments were taken as an average across three years of data. The city records were taken as an average across the number of years of data that were provided, and if no data was provided, the additional cost covered by cities was approximated to be 10% of the total estimated annual O&M cost for the city. Finally, the pavement maintenance cost is a cost that occurs once every 4-7 years; for the purposes of this analysis the pavement maintenance cost is presented as an annualized cost across a cycle of five years.

### Summary of O&M Costs

The resulting average annual O&M cost per jurisdiction is presented below in the following table and graph. The total for each jurisdiction represents the estimated total annual O&M cost the jurisdiction would be responsible for after relinquishment.

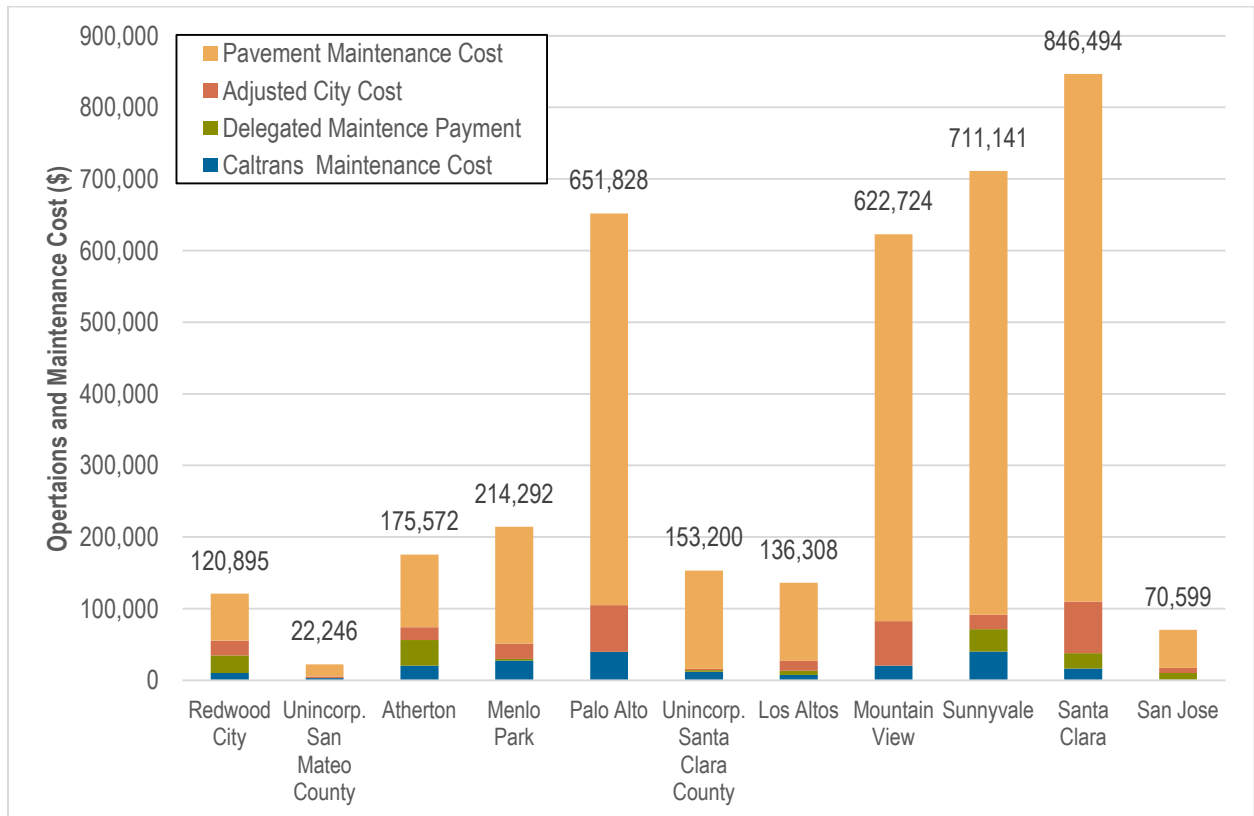
**Figure 111 Operations and Maintenance Costs by Jurisdiction**

City	Pavement Lane-Miles	Caltrans Maintenance Cost (\$)	Pavement Maintenance Cost (\$)	Delegated Maintenance Payment (\$)	Additional Reported City Cost (\$)	Additional Estimated City Cost (\$)	Total (\$)
Redwood City	3.09	9,890	65,508	24,961	20,536	0	<b>120,895</b>

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City	Pavement Lane-Miles	Caltrans Maintenance Cost (\$)	Pavement Maintenance Cost (\$)	Delegated Maintenance Payment (\$)	Additional Reported City Cost (\$)	Additional Estimated City Cost (\$)	Total (\$)
Unincorporated San Mateo County	0.81	2,850	17,172	0	0	2,225	<b>22,246</b>
Atherton	4.80	20,555	101,760	35,700	0	17,557	<b>175,572</b>
Menlo Park	7.70	27,323	163,240	2,300	0	21,429	<b>214,292</b>
Palo Alto	25.80	39,685	546,960	0	0	65,183	<b>651,828</b>
Unincorporated Santa Clara County	6.48	11,766	137,376	2,346	1,712	0	<b>153,200</b>
Los Altos	5.16	7,485	109,392	5,800	0	13,631	<b>136,308</b>
Mountain View	25.48	20,276	540,176	0	0	62,272	<b>622,724</b>
Sunnyvale	29.24	40,229	619,888	31,024	20,000	0	<b>711,141</b>
Santa Clara	34.76	16,225	736,912	21,500	71,857	0	<b>846,494</b>
San Jose	2.52	868	53,424	9,247	0	7,060	<b>70,599</b>
<b>Total</b>	<b>145.84</b>	<b>197,152</b>	<b>3,091,808</b>	<b>132,878</b>	<b>114,105</b>	<b>189,357</b>	<b>3,725,300</b>

**Figure 112 Estimated Annual Operations and Maintenance Costs by Jurisdiction**



## Caltrans Operations and Maintenance Costs

The analysis for this section was done using a data set provided to the team by Caltrans. The data set consists of yearly Caltrans maintenance costs on SR 82 from 2004-2014 and is understood to represent labor and material costs for repairs made by Caltrans maintenance crews. Costs are identified by Caltrans family activity classification as defined in the Caltrans Maintenance Manual, Volume 1. Figure 113 summarizes the maintenance activities contained within each Caltrans family. The range of costs by jurisdiction and year suggest that either the reported data is incomplete or that maintenance demands are highly variable and do not follow a trend line. If data is incomplete, it's likely that maintenance costs are under reported and actual costs absorbed by cities upon relinquishment will be higher than what is shown.

Caltrans categorized SR 82 maintenance activities and assigned costs by post-mile markers, which made it possible to allocate the costs by jurisdiction. In areas where a jurisdictional boundary parallels the roadway, costs were either evenly divided between jurisdictions or divided on 75%/25% basis in order to approximate the area of roadway, and thus proportion of cost, belonging to each jurisdiction. These ratios were chosen as a way to identify approximate maintenance costs in areas where jurisdictional boundaries are not perpendicular to SR 82. Jurisdictional boundaries used as the basis for this analysis are consistent with Caltrans GIS data available at the time this study was prepared.

**Figure 113 Caltrans Cost Classification ("Family")**

Cost Family	Description
A	Flexible Pavement (Asphalt Paving)
B	Rigid Roadbed (Concrete Paving)
C	Vegetation Control; Drainage Facilities, Fences, and Roadside Appurtenances
D	Litter, Debris, and Graffiti; Spills of Substances on Highway ROW
E	Landscaping
F	Maintenance Stormwater Management Program
H	Bridges
K	Electrical
M	Pavement Delineation (Striping)
S	Storm Damage and Other Major Damage
Y	Work for Others

The result of the Caltrans maintenance cost analysis by jurisdiction is summarized below in the following tables, as well as displayed graphically in the bar charts. The costs for all of the tables and graphs are reported in units of dollars.

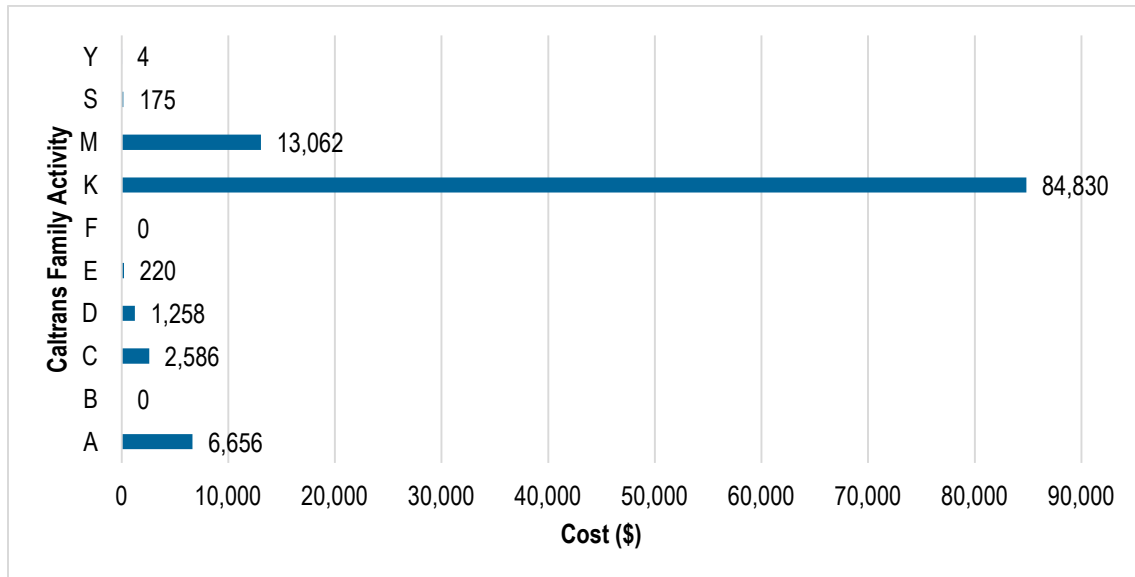
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**Redwood City**

**Figure 114 Caltrans O&M Costs for Redwood City, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	4,949	94	546	246	153	38	0	170	87	352	19	6,656	605
B (Rigid Roadbed)	0	0	0	0	0	0	0	0	0	0	0	0	0
C (Vegetation, Drainage)	137	217	105	516	558	19	124	601	153	4	150	2,586	235
D (Litter, Spills)	60	98	124	84	163	139	66	254	221	50	0	1,258	114
E (Landscaping)	62	4	0	0	38	0	0	0	0	116	0	220	20
F (Stormwater Management)	0	0	0	0	0	0	0	0	0	0	0	0	0
K (Electrical)	2,786	7,275	7,228	11,407	6,451	16,037	13,334	2,830	1,460	13,736	2,284	84,830	7,712
M (Striping)	638	534	876	2,556	597	2,726	1,717	2,283	8	31	1,097	13,062	1,187
S (Major Damage)	0	3	2	0	0	0	169	0	0	0	0	175	16
Y (Work For Others)	0	0	0	0	0	0	0	0	0	4	0	4	0
<b>Total (\$)</b>	<b>8,633</b>	<b>8,225</b>	<b>8,881</b>	<b>14,810</b>	<b>7,959</b>	<b>18,960</b>	<b>15,410</b>	<b>6,138</b>	<b>1,929</b>	<b>14,294</b>	<b>3,551</b>	<b>108,791</b>	<b>9,890</b>

**Figure 115 Total Caltrans O&M Costs by Cost Family for Redwood City, 2004-2014**

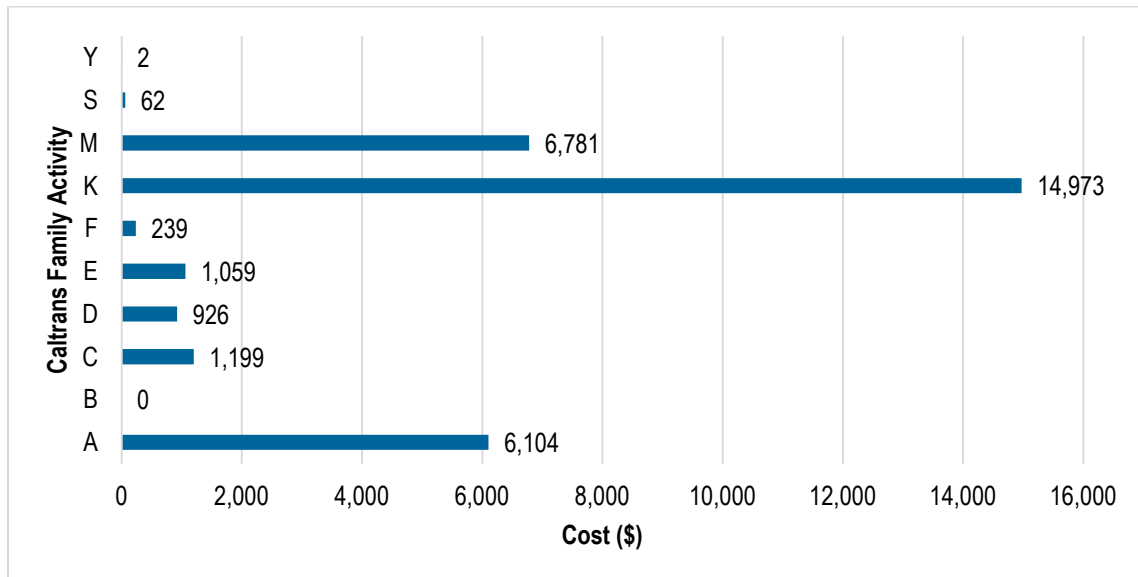


## Unincorporated San Mateo County

**Figure 116 Caltrans O&M Costs for Unincorporated San Mateo County, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	1,371	34	195	83	4,277	14	0	61	31	34	7	6,104	555
B (Rigid Roadbed)	0	0	0	0	0	0	0	0	0	0	0	0	0
C (Vegetation, Drainage)	71	112	37	129	387	8	41	214	55	45	99	1,199	109
D (Litter, Spills)	175	49	44	71	249	49	23	115	76	18	57	926	84
E (Landscaping)	34	59	409	0	516	0	0	0	0	41	0	1,059	96
F (Stormwater Management)	0	0	52	0	83	0	0	0	0	104	0	239	22
K (Electrical)	721	538	1,121	1,665	1,587	2,829	3,067	750	1,656	648	390	14,973	1,361
M (Striping)	742	379	282	368	356	979	659	2,122	382	11	500	6,781	616
S (Major Damage)	0	1	1	0	0	0	60	0	0	0	0	62	6
Y (Work For Others)	0	0	0	0	0	0	0	0	0	2	0	2	0
<b>Total (\$)</b>	<b>3,113</b>	<b>1,173</b>	<b>2,141</b>	<b>2,316</b>	<b>7,454</b>	<b>3,880</b>	<b>3,851</b>	<b>3,261</b>	<b>2,200</b>	<b>902</b>	<b>1,053</b>	<b>31,345</b>	<b>2,850</b>

**Figure 117 Total Caltrans O&M Costs by Family for Unincorporated San Mateo County, 2004-2014**





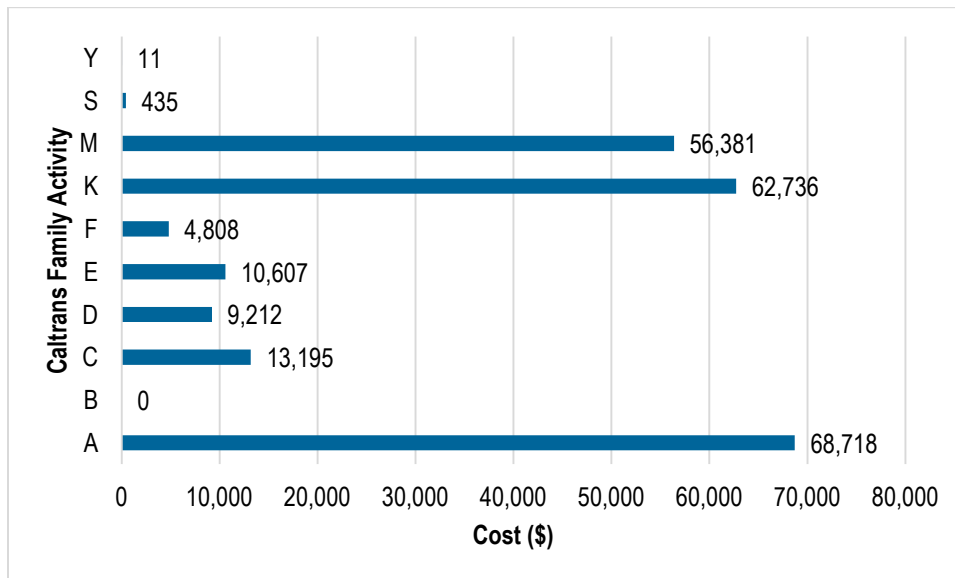
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**Atherton**

**Figure 118 Caltrans O&M Costs for Atherton, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	3,067	3,535	10,750	550	49,800	95	0	423	216	234	48	<b>68,718</b>	<b>6,247</b>
B (Rigid Roadbed)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
C (Vegetation, Drainage)	586	1,668	236	899	3,947	1,425	285	1,494	984	1,161	510	<b>13,195</b>	<b>1,200</b>
D (Litter, Spills)	1,983	483	309	728	1,888	345	284	1,266	628	835	463	<b>9,212</b>	<b>837</b>
E (Landscaping)	390	978	2,055	0	6,895	0	0	0	0	289	0	<b>10,607</b>	<b>964</b>
F (Stormwater Management)	0	0	582	0	924	0	0	0	0	3,302	0	<b>4,808</b>	<b>437</b>
K (Electrical)	2,813	4,420	4,138	5,377	6,421	2,013	5,984	11,305	8,207	6,533	5,524	<b>62,736</b>	<b>5,703</b>
M (Striping)	2,664	3,525	4,291	2,567	3,005	7,200	3,346	20,526	5,794	568	2,897	<b>56,381</b>	<b>5,126</b>
S (Major Damage)	0	8	6	0	0	0	420	0	0	0	0	<b>435</b>	<b>40</b>
Y (Work For Others)	0	0	0	0	0	0	0	0	0	11	0	<b>11</b>	<b>1</b>
<b>Total</b>	<b>11,503</b>	<b>14,617</b>	<b>22,366</b>	<b>10,120</b>	<b>72,880</b>	<b>11,078</b>	<b>10,319</b>	<b>35,013</b>	<b>15,829</b>	<b>12,933</b>	<b>9,442</b>	<b>226,101</b>	<b>20,555</b>

**Figure 119 Total Caltrans O&M Costs by Family for Atherton, 2004-2014**

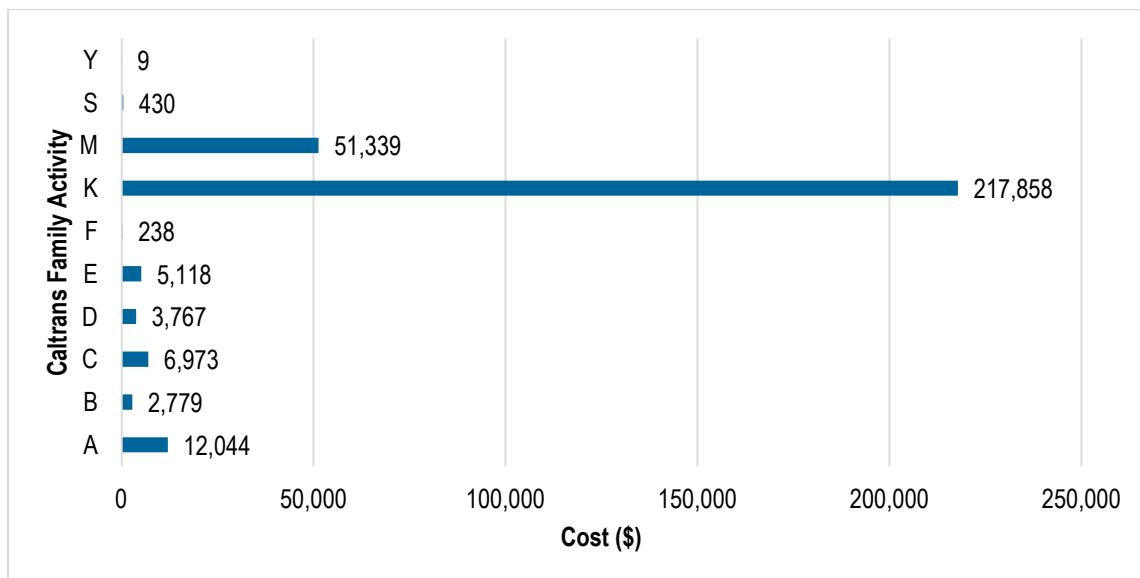


**Menlo Park**

**Figure 120 Caltrans O&M Costs for Atherton, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	870	611	5,061	1,995	2,059	416	423	220	170	181	37	12,044	1,095
B (Rigid Roadbed)	0	0	0	2,779	0	0	0	0	0	0	0	2,779	253
C (Vegetation, Drainage)	1,388	461	155	1,334	720	309	241	818	322	726	499	6,973	634
D (Litter, Spills)	372	409	373	177	376	285	656	561	387	126	44	3,767	342
E (Landscaping)	59	117	378	0	4,442	0	0	0	0	122	0	5,118	465
F (Stormwater Management)	0	0	24	0	38	0	0	0	0	176	0	238	22
K (Electrical)	31,264	15,288	9,787	12,620	16,679	22,120	24,050	21,501	17,590	34,784	12,175	217,858	19,805
M (Striping)	13,729	1,893	2,474	10,776	1,021	2,336	4,276	4,528	4,426	229	5,652	51,339	4,667
S (Major Damage)	0	6	5	0	0	91	327	0	0	0	0	430	39
Y (Work For Others)	0	0	0	0	0	0	0	0	0	9	0	9	1
<b>Total</b>	<b>47,681</b>	<b>18,785</b>	<b>18,258</b>	<b>29,682</b>	<b>25,336</b>	<b>25,557</b>	<b>29,972</b>	<b>27,628</b>	<b>22,895</b>	<b>36,353</b>	<b>18,407</b>	<b>300,556</b>	<b>27,323</b>

**Figure 121 Total Caltrans O&M Costs by Family for Menlo Park, 2004-2014**



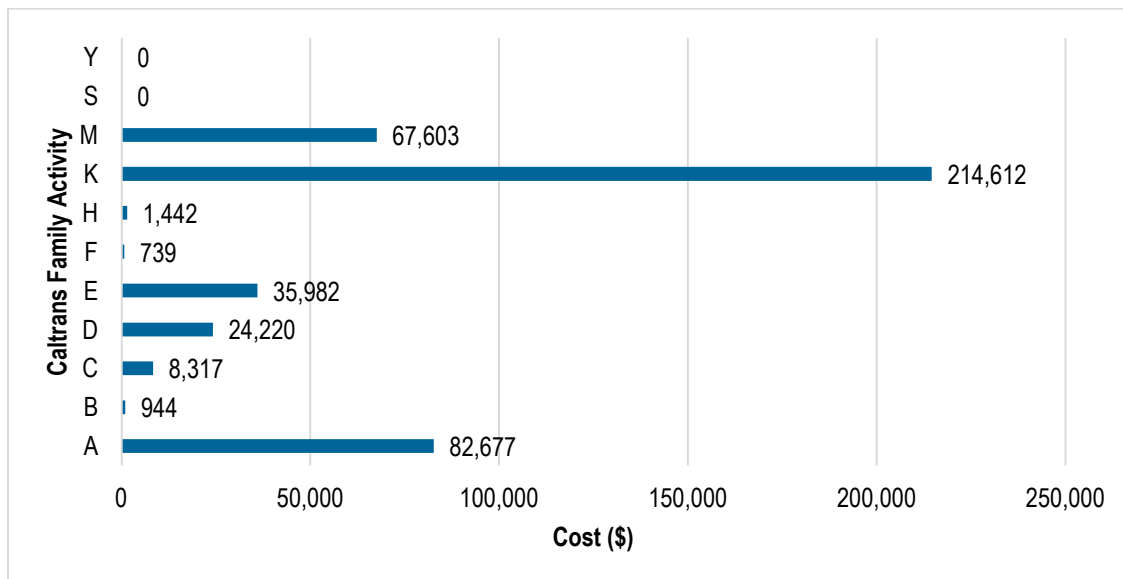
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**Palo Alto**

**Figure 122 Caltrans O&M Costs for Palo Alto, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	20,845	859	9,258	81	645	239	3,033	2,596	4,232	31,414	9,476	<b>82,677</b>	<b>7,516</b>
B (Rigid Roadbed)	0	0	797	0	0	147	0	0	0	0	0	<b>944</b>	<b>86</b>
C (Vegetation, Drainage)	361	229	139	3,911	394	240	0	543	1,353	1,147	0	<b>8,317</b>	<b>756</b>
D (Litter, Spills)	116	498	6,614	8,829	305	92	462	2,271	2,829	1,866	339	<b>24,220</b>	<b>2,202</b>
E (Landscaping)	3,965	1,166	5,815	124	5,125	5,780	2,334	3,978	2,305	5,391	0	<b>35,982</b>	<b>3,271</b>
F (Stormwater Management)	0	0	24	0	0	0	0	30	33	652	0	<b>739</b>	<b>67</b>
H (Bridges)	0	0	0	0	1,442	0	0	0	0	0	0	<b>1,442</b>	<b>131</b>
K (Electrical)	25,837	21,990	34,757	28,896	37,755	25,114	25,143	65	2,273	2,855	9,928	<b>214,612</b>	<b>19,510</b>
M (Striping)	7,739	2,627	2,282	11,404	6,687	4,251	13,769	5,129	10,516	706	2,493	<b>67,603</b>	<b>6,146</b>
S (Major Damage)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
Y (Work For Others)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
<b>Total (\$)</b>	<b>58,863</b>	<b>27,368</b>	<b>59,684</b>	<b>53,244</b>	<b>52,354</b>	<b>35,863</b>	<b>44,740</b>	<b>14,612</b>	<b>23,540</b>	<b>44,031</b>	<b>22,236</b>	<b>436,536</b>	<b>39,685</b>

**Figure 123 Total Caltrans O&M Costs by Family for Palo Alto, 2004-2014**

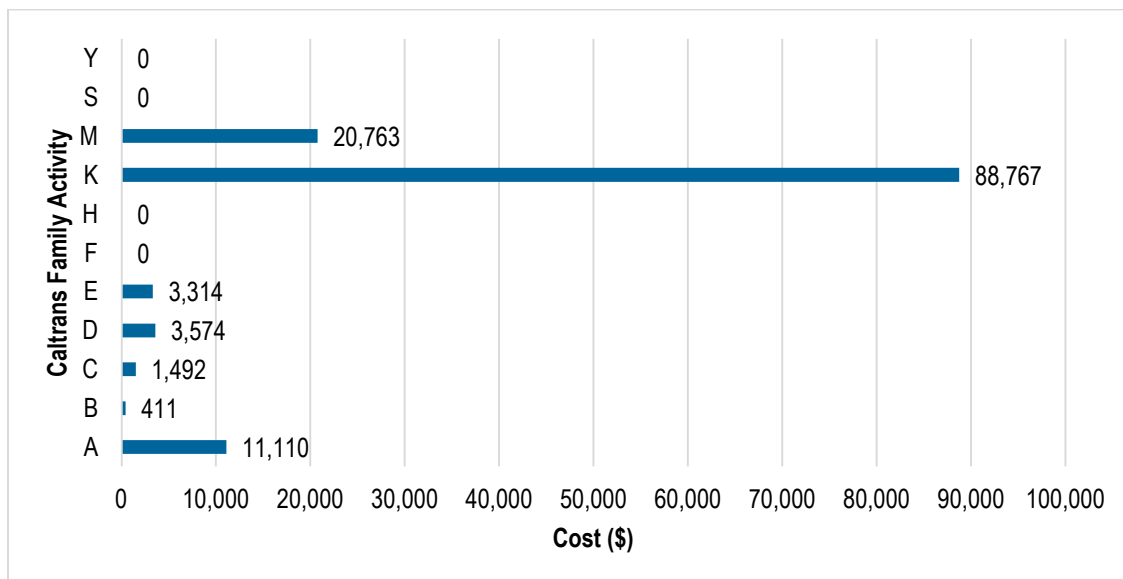


## Unincorporated Santa Clara County

**Figure 124 Caltrans O&M Costs for Unincorporated Santa Clara County, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	359	1,231	235	87	403	54	188	458	5,334	2,615	147	11,110	1,010
B (Rigid Roadbed)	0	0	411	0	0	0	0	0	0	0	0	411	37
C (Vegetation, Drainage)	361	188	99	201	35	137	113	7	3	348	0	1,492	136
D (Litter, Spills)	47	174	1,985	221	103	46	160	63	768	8	1	3,574	325
E (Landscaping)	1,008	314	1,221	0	0	0	0	0	771	0	0	3,314	301
F (Stormwater Management)	0	0	0	0	0	0	0	0	0	0	0	0	0
H (Bridges)	0	0	0	0	0	0	0	0	0	0	0	0	0
K (Electrical)	4,758	7,762	14,373	14,334	16,379	9,908	16,787	45	0	1,012	3,409	88,767	8,070
M (Striping)	273	1,365	579	4,938	2,750	1,512	4,376	922	580	226	3,244	20,763	1,888
S (Major Damage)	0	0	0	0	0	0	0	0	0	0	0	0	0
Y (Work For Others)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>6,805</b>	<b>11,034</b>	<b>18,902</b>	<b>19,782</b>	<b>19,669</b>	<b>11,657</b>	<b>21,623</b>	<b>1,495</b>	<b>7,456</b>	<b>4,209</b>	<b>6,800</b>	<b>129,431</b>	<b>11,766</b>

**Figure 125 Total Caltrans O&M Costs by Family for Unincorporated Santa Clara County, 2004-2014**



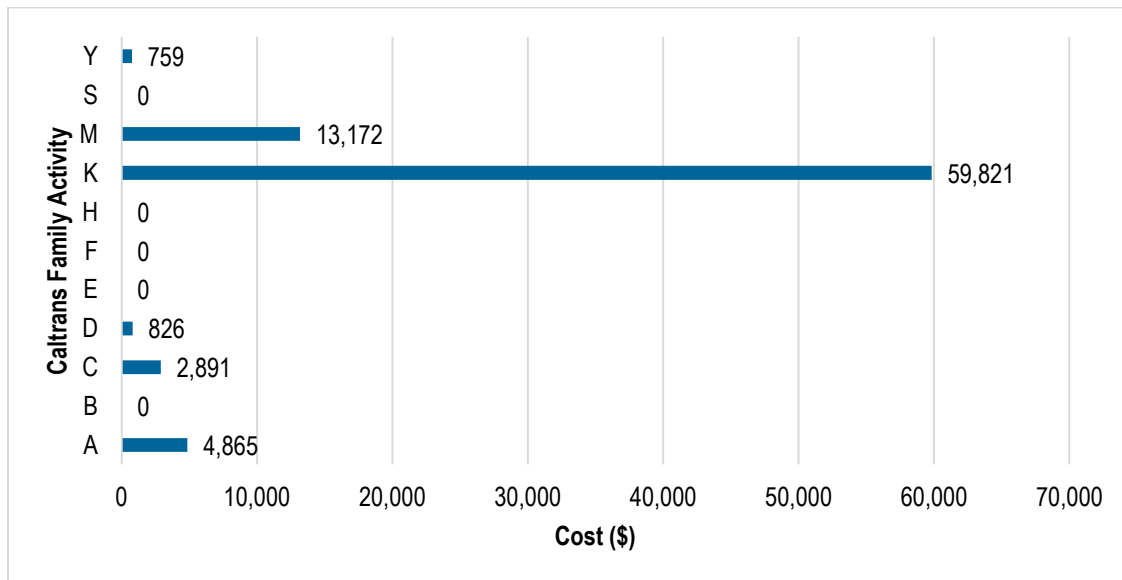
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**Los Altos**

**Figure 126 Caltrans O&M Costs for Los Altos, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	110	161	2	0	22	202	112	279	443	656	2,877	4,865	442
B (Rigid Roadbed)	0	0	0	0	0	0	0	0	0	0	0	0	0
C (Vegetation, Drainage)	0	0	0	179	31	0	0	1,401	978	302	0	2,891	263
D (Litter, Spills)	35	7	369	0	100	68	62	100	77	7	0	826	75
E (Landscaping)	0	0	0	0	0	0	0	0	0	0	0	0	0
F (Stormwater Management)	0	0	0	0	0	0	0	0	0	0	0	0	0
H (Bridges)	0	0	0	0	0	0	0	0	0	00	0	0	0
K (Electrical)	7,214	7,245	8,341	8,740	11,664	7,443	8,977	20	0	177	0	59,821	5,438
M (Striping)	198	526	790	2,503	1,240	276	5,662	829	609	56	482	13,172	1,197
S (Major Damage)	0	0	0	0	0	0	0	0	0	0	0	0	0
Y (Work For Others)	0	0	0	0	0	0	0	0	0	0	759	759	69
<b>Total</b>	<b>7,558</b>	<b>7,939</b>	<b>9,503</b>	<b>11,422</b>	<b>13,057</b>	<b>7,989</b>	<b>14,812</b>	<b>2,629</b>	<b>2,108</b>	<b>1,198</b>	<b>4,119</b>	<b>82,334</b>	<b>7,485</b>

**Figure 127 Total Caltrans O&M Costs by Family for Los Altos, 2004-2014**

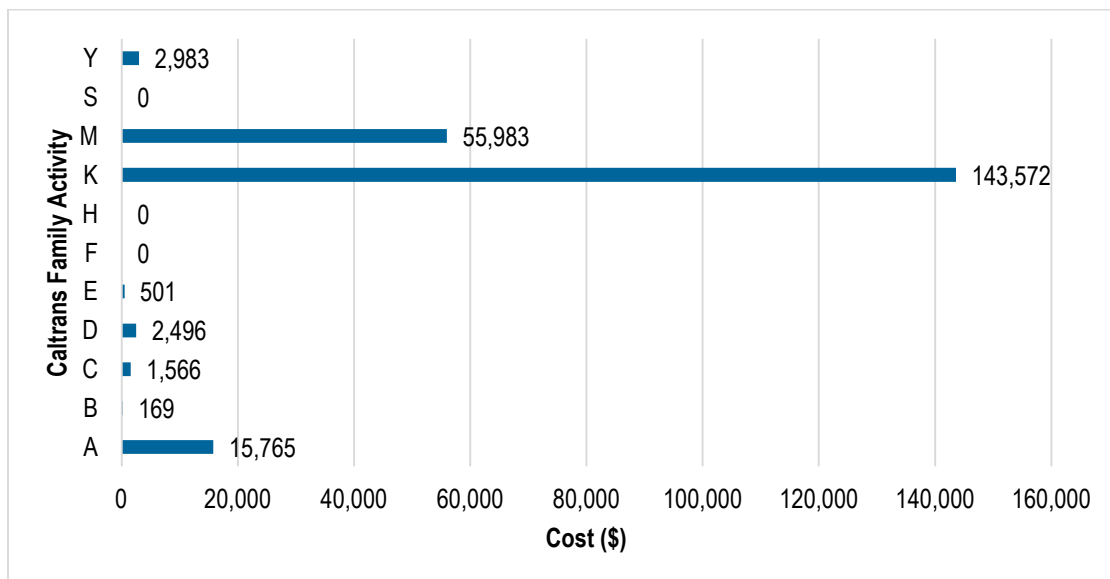


## Mountain View

**Figure 128 Caltrans O&M Costs for Mountain View, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	11,309	438	0	164	256	67	239	671	949	1,349	322	15,765	1,433
B (Rigid Roadbed)	0	0	0	169	0	0	0	0	0	0	0	169	15
C (Vegetation, Drainage)	0	0	0	529	91	0	0	484	334	129	0	1,566	142
D (Litter, Spills)	152	104	811	11	247	258	184	296	411	21	0	2,496	227
E (Landscaping)	0	0	0	0	410	0	0	0	91	0	0	501	46
F (Stormwater Management)	0	0	0	0	0	0	0	0	0	0	0	0	0
H (Bridges)	0	0	0	0	0	0	0	0	0	0	0	0	0
K (Electrical)	20,879	20,342	20,291	24,130	20,955	15,680	20,426	142	0	726	0	143,572	13,052
M (Striping)	1,865	1,566	918	8,367	3,279	4,413	17,500	12,277	4,208	165	1,426	55,983	5,089
S (Major Damage)	0	0	0	0	0	0	0	0	0	0	0	0	0
Y (Work For Others)	0	0	0	0	0	0	0	0	0	2,730	253	2,983	271
<b>Total</b>	<b>34,205</b>	<b>22,450</b>	<b>22,021</b>	<b>33,370</b>	<b>25,238</b>	<b>20,418</b>	<b>38,349</b>	<b>13,871</b>	<b>5,993</b>	<b>5,120</b>	<b>2,001</b>	<b>223,035</b>	<b>20,276</b>

**Figure 129 Total Caltrans O&M Costs by Family for Mountain View, 2004-2014**



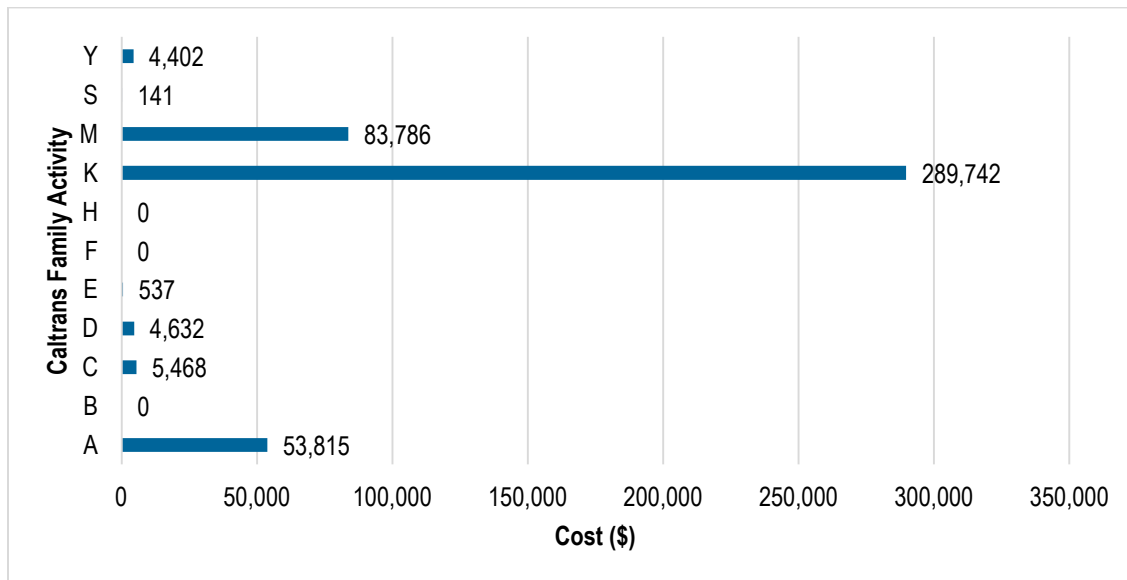
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**Sunnyvale**

**Figure 130 Caltrans O&M Costs for Sunnyvale, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	20,151	3,428	0	1,264	999	18	1,104	5,965	11,467	7,264	2,155	<b>53,815</b>	<b>4,892</b>
B (Rigid Roadbed)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
C (Vegetation, Drainage)	0	0	0	836	1,317	0	38	1,500	915	756	106	<b>5,468</b>	<b>497</b>
D (Litter, Spills)	301	575	741	806	200	767	358	373	472	26	12	<b>4,632</b>	<b>421</b>
E (Landscaping)	0	0	407	0	0	0	130	0	0	0		<b>537</b>	<b>49</b>
F (Stormwater Management)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
H (Bridges)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
K (Electrical)	39,834	31,622	38,124	32,890	36,896	46,162	62,810	609	0	796	0	<b>289,742</b>	<b>26,340</b>
M (Striping)	2,933	2,284	651	9,644	5,470	643	40,743	2,903	10,451	6,270	1,795	<b>83,786</b>	<b>7,617</b>
S (Major Damage)	0	0	0	0	0	0	0	141	0	0	0	<b>141</b>	<b>13</b>
Y (Work For Others)	0	0	0	0	0	0	0	0	0	4,402	0	<b>4,402</b>	<b>400</b>
<b>Total</b>	<b>63,218</b>	<b>37,910</b>	<b>39,923</b>	<b>45,439</b>	<b>44,883</b>	<b>47,589</b>	<b>105,183</b>	<b>11,492</b>	<b>23,304</b>	<b>19,515</b>	<b>4,068</b>	<b>442,523</b>	<b>40,229</b>

**Figure 131 Total Caltrans O&M Costs by Family for Sunnyvale, 2004-2014**



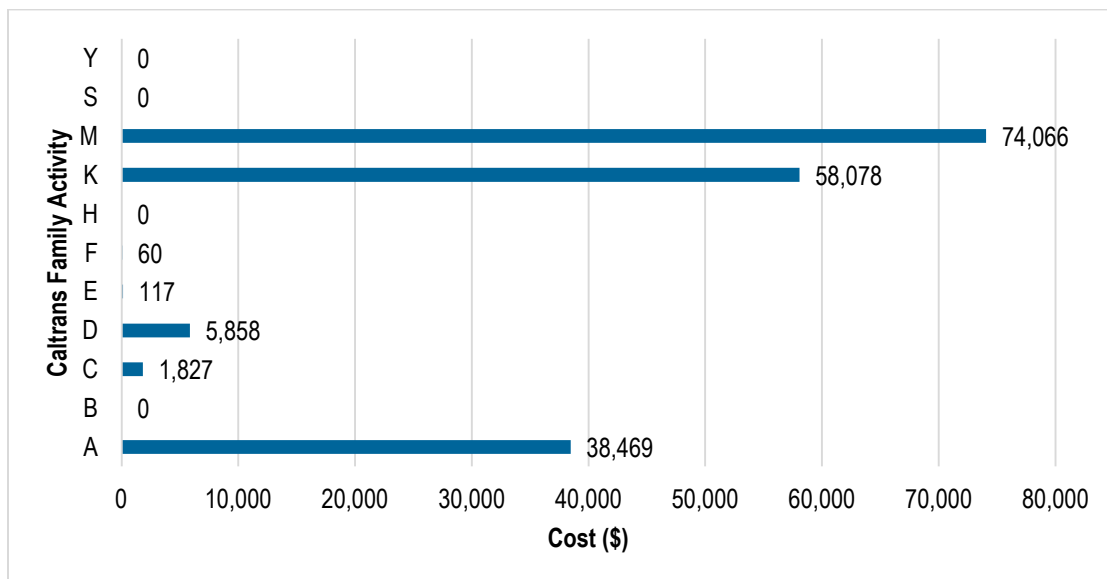
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**Santa Clara**

**Figure 132 Caltrans O&M Costs for Santa Clara, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	13,191	1,252	0	1,369	9,407	84	0	11,192	668	1,305	0	<b>38,469</b>	<b>3,497</b>
B (Rigid Roadbed)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
C (Vegetation, Drainage)	0	0	38	796	589	0	0	343	13	47	0	<b>1,827</b>	<b>166</b>
D (Litter, Spills)	344	739	548	411	1,023	715	463	749	676	138	51	<b>5,858</b>	<b>533</b>
E (Landscaping)	117	0	0	0	0	0	0	0	0	0	0	<b>117</b>	<b>11</b>
F (Stormwater Management)	0	0	0	0	60	0	0	0	0	0	0	<b>60</b>	<b>5</b>
H (Bridges)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
K (Electrical)	3,819	8,266	5,912	4,066	15,758	8,543	10,873	673	0	168	0	<b>58,078</b>	<b>5,280</b>
M (Striping)	10,317	12,400	4,188	10,677	14,022	1,996	7,924	3,830	1,596	2,908	4,209	<b>74,066</b>	<b>6,733</b>
S (Major Damage)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
Y (Work For Others)	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
<b>Total</b>	<b>27,788</b>	<b>22,657</b>	<b>10,687</b>	<b>17,320</b>	<b>40,860</b>	<b>11,339</b>	<b>19,259</b>	<b>16,787</b>	<b>2,954</b>	<b>4,565</b>	<b>4,260</b>	<b>178,475</b>	<b>16,225</b>

**Figure 133 Total Caltrans O&M Costs by Family for Santa Clara, 2004-2014**





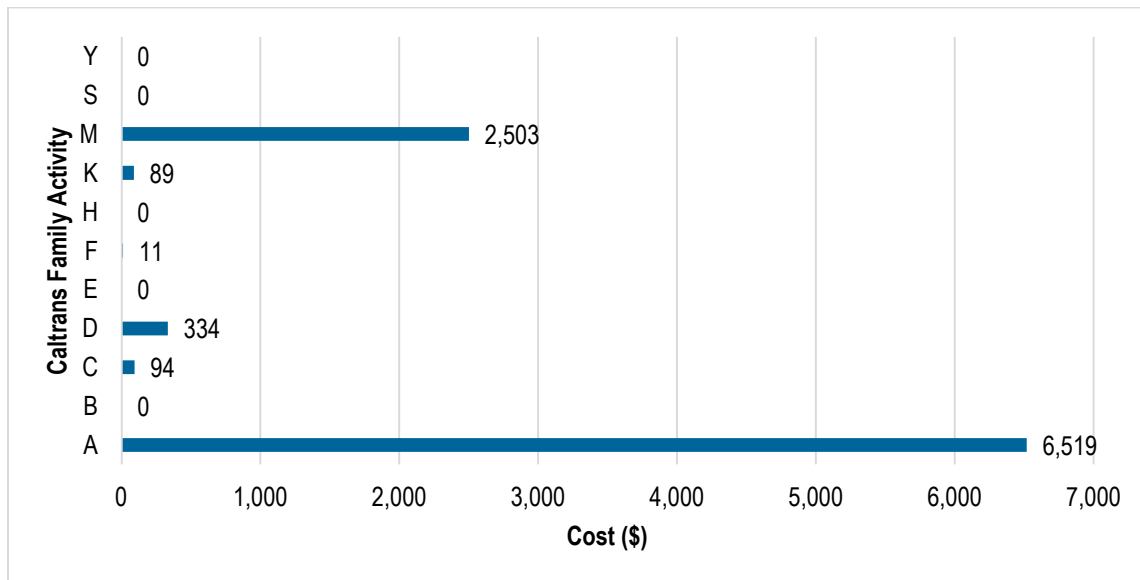
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**San Jose**

**Figure 134 Caltrans O&M Costs for San Jose, 2004-2014**

Caltrans Family	2004 (\$)	2005 (\$)	2006 (\$)	2007 (\$)	2008 (\$)	2009 (\$)	2010 (\$)	2011 (\$)	2012 (\$)	2013 (\$)	2014 (\$)	Total (\$)	Average Annual Cost (\$)
A (Flexible Pavement)	0	77	0	0	0	0	0	0	0	6,442	0	6,519	593
B (Rigid Roadbed)	0	0	0	0	0	0	0	0	0	0	0	0	0
C (Vegetation, Drainage)	0	0	0	73	13	0	0	3	1	4	0	94	9
D (Litter, Spills)	11	18	58	22	39	49	25	41	64	3	5	334	30
E (Landscaping)	0	0	0	0	0	0	0	0	0	0	0	0	0
F (Stormwater Management)	0	0	0	0	11	0	0	0	0	0	0	11	1
H (Bridges)	0	0	0	0	0	0	0	0	0	0	0	0	0
K (Electrical)	15	34	0	25	0	0	0	0	0	15	0	89	8
M (Striping)	69	859	121	173	347	22	216	132	348	21	198	2,503	228
S (Major Damage)	0	0	0	0	0	0	0	0	0	0	0	0	0
Y (Work For Others)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>94</b>	<b>987</b>	<b>178</b>	<b>293</b>	<b>410</b>	<b>70</b>	<b>241</b>	<b>176</b>	<b>413</b>	<b>6,485</b>	<b>202</b>	<b>9,550</b>	<b>868</b>

**Figure 135 Total Caltrans O&M Costs by Family for San Jose, 2004-2014**



## Costs Currently Paid for by Jurisdictions

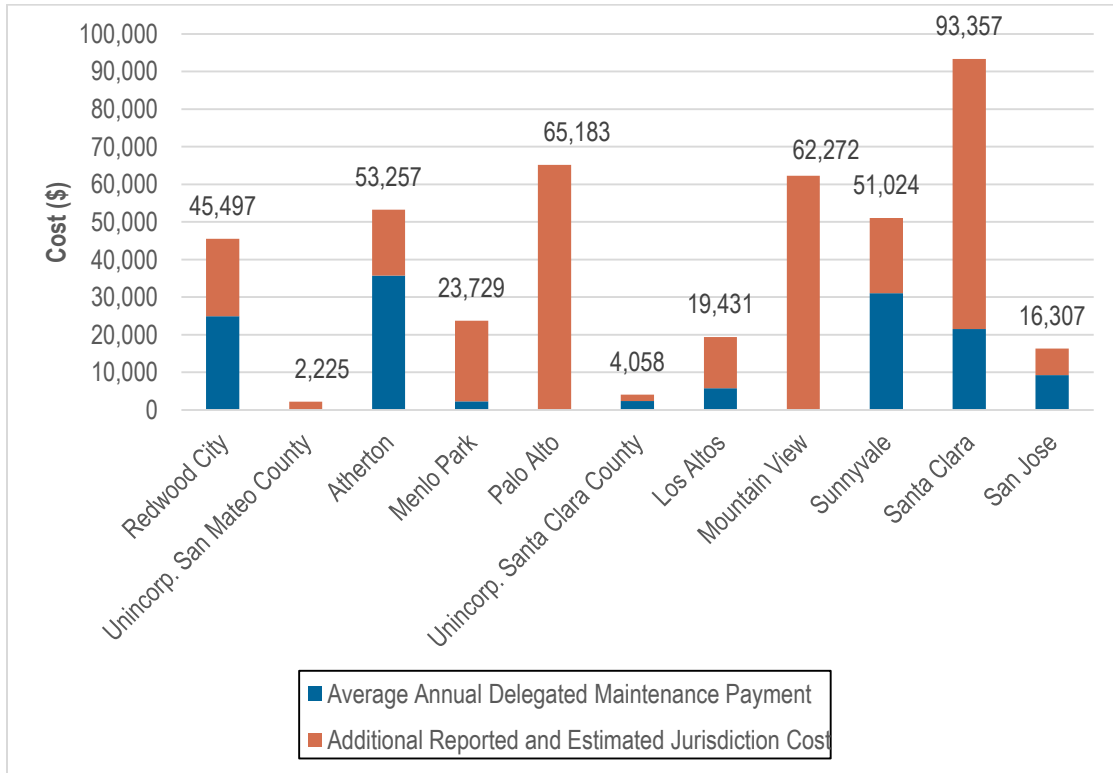
Although Caltrans is responsible for operation and maintenance of SR 82, some maintenance functions are performed by the jurisdictions through delegated maintenance agreements between Caltrans and the jurisdictions. Delegated maintenance agreements specify which maintenance activities the jurisdictions are responsible for performing, as well as the maximum authorized expenditure for each activity. Caltrans only reimburses the jurisdictions up to the authorized expenditure amount, and it is assumed that any maintenance costs that exceed that amount are covered by the jurisdictions.

The data available for this section was limited to the invoice amounts made by the jurisdictions to Caltrans for three fiscal years (2011-2012, 2012-2013, and 2013-2014). The team reached out to each jurisdiction for information on additional cost records not reflected in Caltrans data but received minimal information. If the invoice amount or additional cost data was not provided, the additional cost covered by jurisdictions was approximated to be 10% of the combined Caltrans reported costs, delegated costs, and projected paving maintenance costs. The 10% estimated was based on the approximate average ratio of the reported additional costs to the total jurisdiction costs. Figure 136 includes both costs reported by jurisdictions and estimated costs. Estimated additional costs are an approximate; actual additional maintenance costs covered by jurisdictions may be significantly different from what is shown. Under relinquishment, the jurisdictions would carry the total cost amount for all SR 82 maintenance activities within jurisdictional limits.

**Figure 136 Maintenance Costs Currently Covered by Jursidictions**

Jurisdiction	Average Annual Delegated Maintenance Payment (\$)	Additional Reported Annual Cost (\$)	Additional Estimated Annual City Cost (\$)	Total (\$)
Redwood City	24,961	20,536	0	45,497
Unincorp. San Mateo County	0	0	2,225	2,225
Atherton	35,700	0	17,557	53,257
Menlo Park	2,300	0	21,429	23,729
Palo Alto	0	0	65,183	65,183
Unincorp. Santa Clara County	2,346	1,712	0	4,058
Los Altos	5,800	0	13,631	19,431
Mountain View	0	0	62,272	62,272
Sunnyvale	31,024	20,000	0	51,024
Santa Clara	21,500	71,857	0	93,357
San Jose	9,247	0	7,060	16,307
<b>Total</b>	<b>132,878</b>	<b>114,105</b>	<b>303,462</b>	<b>436,340</b>

**Figure 137 Average Annual Jurisdiction Maintenance Costs**



## Pavement Maintenance

For pavement that is assessed to be in a state of good repair, preventive maintenance treatment provides a cost effective strategy to avoid incurring larger costs in the long term through major rehabilitation work. Preventive maintenance (typically asphalt overlays) should be performed every four to seven years and costs on average \$106,000 per lane-mile<sup>114</sup>.

To determine the cost for each jurisdiction for pavement maintenance, all the pavement in the study area was assumed to be in a state of good repair upon relinquishment. The cost per maintenance cycle is then simply the number of lane-miles in each jurisdiction multiplied by the cost per lane-mile, \$106,000/lane-mile. To find the average annual cost for each jurisdiction, a conservative estimate of five years was assumed to be the cycle length, and the total cost per cycle was then annualized over the five years. A summary of the pavement maintenance cost analysis is shown below in the following table and graph.

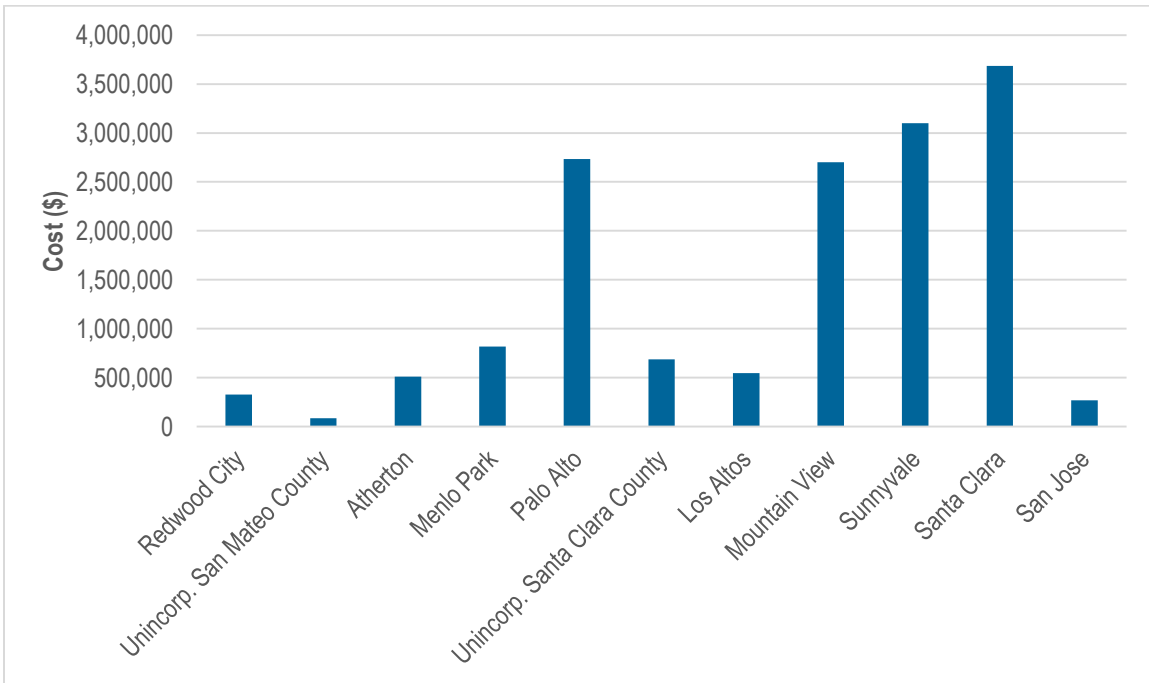
<sup>114</sup> California Department of Transportation, 2013. "2013 State of the Pavement Report."

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**Figure 138 Estimated Pavement Maintenance Cost by Jurisdiction**

City	Lane-Miles	Pavement Maintenance Cost per Cycle (\$)	Average Annual Cost (\$)
Redwood City	3.09	327,540	65,508
Unincorp. San Mateo County	0.81	85,860	17,172
Atherton	4.80	508,800	101,760
Menlo Park	7.70	816,200	163,240
Palo Alto	25.80	2,734,800	546,960
Unincorp. Santa Clara County	6.48	686,880	137,376
Los Altos	5.16	546,960	109,392
Mountain View	25.48	2,700,880	540,176
Sunnyvale	29.24	3,099,440	619,888
Santa Clara	34.76	3,684,560	736,912
San Jose	2.52	267,120	53,424
<b>Total</b>	<b>129.56</b>	<b>13,733,360</b>	<b>2,746,672</b>

**Figure 139 Pavement Maintenance Cost per Cycle**



## **Projected Future Operations and Maintenance Costs**

Using O&M costs provided by Caltrans and local jurisdictions, and an assumed Cost Escalation Rate (CER) of 3.0%, estimated 10 year costs are as reflected in Figure 140. Projected O&M costs assume the current configuration of SR 82 within the study area will remain the same. Future modifications to SR 82 such as dedicated bus lanes, reduced number of vehicular lanes, removal of landscaping, or addition of dedicated bike paths will have different maintenance requirements and associated costs. O&M costs to individual cities could potentially be reduced if VTA were to assume maintenance for future dedicated bus lanes. Reduction of vehicular lanes (road diet) could also reduce city maintenance costs provided the replacement use requires less maintenance than the existing road.

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**Figure 140 Projected Annual O&M Costs**

City	Average Annual Cost (2014) (\$)	2015 (\$)	2016 (\$)	2017 (\$)	2018 (\$)	2019 (\$)	2020 (\$)	2021 (\$)	2022 (\$)	2023 (\$)	2024 (\$)	Total 10-Year Projected Cost (\$)
Redwood City	120,895	124,522	128,258	132,105	136,068	140,151	144,355	148,686	153,146	157,741	162,473	1,427,504
Unincorp. San Mateo County	22,246	22,914	23,601	24,309	25,038	25,789	26,563	27,360	28,181	29,026	29,897	262,678
Atherton	175,572	180,839	186,264	191,852	197,608	203,536	209,642	215,931	222,409	229,081	235,954	2,073,116
Menlo Park	214,292	220,721	227,343	234,163	241,188	248,424	255,876	263,553	271,459	279,603	287,991	2,530,322
Palo Alto	651,828	671,383	691,524	712,270	733,638	755,647	778,317	801,666	825,716	850,488	876,002	7,696,651
Unincorp. Santa Clara County	153,200	157,796	162,530	167,406	172,428	177,601	182,929	188,417	194,069	199,891	205,888	1,808,956
Los Altos	136,308	140,397	144,609	148,947	153,416	158,018	162,759	167,641	172,671	177,851	183,186	1,609,493
Mountain View	622,724	641,406	660,648	680,468	700,882	721,908	743,565	765,872	788,849	812,514	836,889	7,353,002
Sunnyvale	711,141	732,476	754,450	777,083	800,396	824,408	849,140	874,614	900,852	927,878	955,714	8,397,011
Santa Clara	846,494	871,889	898,045	924,987	952,736	981,319	1,010,758	1,041,081	1,072,313	1,104,483	1,137,617	9,995,228
San Jose	70,599	72,717	74,899	77,146	79,460	81,844	84,299	86,828	89,433	92,116	94,879	833,620
<b>Total</b>	<b>3,725,300</b>	<b>3,837,059</b>	<b>3,952,171</b>	<b>4,070,736</b>	<b>4,192,858</b>	<b>4,318,644</b>	<b>4,448,203</b>	<b>4,581,649</b>	<b>4,719,099</b>	<b>4,860,672</b>	<b>5,006,492</b>	<b>43,987,582</b>

## **RELINQUISHMENT PROCESS COSTS**

Although not covered in this report and not included in the O&M cost projections, a key aspect of relinquishment related costs include staff time dedicated to pursuing relinquishment. At the city level, staff activity on relinquishment-related activities typically spans a period of at least five years, including approximately three years in the official relinquishment process. Staff involved in the relinquishment process typically includes a project manager from the public works department as well as the city attorney and other staff.

Many cities also hire specialists to help with the relinquishment process. These may include lobbyists to assist in finding a legislative sponsor for the process, and working with Caltrans to negotiate terms of the relinquishment agreement and to get relinquishment on the CTC schedule.

## **COST SUMMARY**

Estimated pavement repair costs from Chapter 4 and projected 10 year O&M costs are summarized in Figure 141 below.

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**Figure 141 One-Time Repair and 10-Year Operations and Maintenance Costs by Jurisdiction**

Category	Redwood City	Unincorp. San Mateo County	Atherton	Menlo Park	Palo Alto	Unincorp. Santa Clara County	Los Altos	Mountain View	Sunnyvale	Santa Clara	San Jose
Length (miles)	1.03	0.81	1.6	2.2	6.45	1.62	1.29	6.37	7.31	8.69	0.63
Lane-Miles	3.09	0.81	4.8	7.7	25.8	6.48	5.16	25.48	29.24	34.76	2.52
<b>Repair Cost (\$)</b>	<b>491,970</b>	<b>90,940</b>	<b>0</b>	<b>108,150</b>	<b>7,411,920</b>	<b>1,329,640</b>	<b>806,800</b>	<b>5,810,880</b>	<b>0</b>	<b>8,220,040</b>	<b>778,680</b>
Existing City Annual O&M (Delegated & Reimbursed) (\$)	45,497	2,225	53,257	23,729	65,183	4,058	19,431	62,272	51,024	93,357	16,307
Caltrans Annual O&M (\$)	9,890	2,850	20,555	27,323	39,685	11,766	7,485	20,276	40,229	16,225	868
Pavement Maintenance Annual O&M (\$)	65,508	17,172	101,760	163,240	546,960	137,376	109,392	540,176	619,888	736,912	53,424
<b>Total 10-year Projected O&amp;M (\$)</b>	<b>1,427,504</b>	<b>262,678</b>	<b>2,073,116</b>	<b>2,530,322</b>	<b>7,696,651</b>	<b>1,808,956</b>	<b>1,609,493</b>	<b>7,353,002</b>	<b>8,397,011</b>	<b>9,995,228</b>	<b>833,620</b>
<b>Total 10-year Relinquishment Costs (\$)</b>	<b>1,919,474</b>	<b>353,618</b>	<b>2,073,116</b>	<b>2,638,472</b>	<b>15,108,571</b>	<b>3,138,596</b>	<b>2,416,293</b>	<b>13,163,882</b>	<b>8,397,011</b>	<b>18,215,268</b>	<b>1,612,300</b>



## 6 POTENTIAL FUNDING SOURCES

This chapter provides an analysis of the funding and financing sources that could be available to local governments (cities and counties) to pay for the costs associated with relinquishment of SR 82. In practice, each city or county that enters into a relinquishment agreement with Caltrans will need to formulate a specific strategy for funding the costs associated with relinquishment and, if desired, redesign of the corridor. Among other considerations, local governments will need to evaluate the potential fiscal impacts of relinquishment, since some costs may need to be absorbed into existing operating or capital budgets. For other costs, local governments may be able to access grant funds, or use property-based financing (or “value capture”) tools to leverage property value appreciation and real estate development. This chapter is intended to provide local governments with an overview of the funding and financing sources available for the specific types of costs associated with relinquishment, and to explore some of the key opportunities and challenges likely to be involved in paying for those costs.

Following a review of the various types of costs that are likely to be associated with the relinquishment process, the chapter focuses on potential funding and financing sources for infrastructure improvement needs (including both capital and operations and maintenance costs). The analysis draws on several sources, including the relinquishment case studies provided in Chapter 3, a review of individual jurisdictions’ Capital Improvement Programs (CIPs),<sup>115</sup> the Grand Boulevard Initiative’s *Infrastructure Needs Assessment and Financing Strategy* report,<sup>116</sup> and additional research on specific sources.

### TYPES OF COSTS

Figure 142 summarizes the types of costs that are likely to be associated with the relinquishment process. These include:

- **One-time capital costs** associated with bringing the facilities currently owned by Caltrans into a state of good repair, including improvements to pavement, bridges, sidewalks and curb ramps, signage and signals, and storm drainage infrastructure.
- **Ongoing operations and maintenance costs** associated with roadways and other facilities for which local governments assume ownership, including street sweeping, landscape maintenance, periodic repair and preventative maintenance of pavement, curbs, gutters, stormwater drainage facilities, and other O&M activities currently performed or paid for by Caltrans.<sup>117</sup>

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<sup>115</sup> Capital Improvement Programs (CIPs) are long-range plans that list planned infrastructure improvements (typically including both capital and operations and maintenance programs), costs, funding sources, and projected schedules. Strategic Economics reviewed the CIPs of all the local government agencies included in this study (including San Jose, Santa Clara, Sunnyvale, Los Altos, Mountain View, Palo Alto, Menlo Park, Atherton, Redwood City, and San Mateo and Santa Clara counties) to determine what types of funding sources cities and counties are currently using to pay for infrastructure improvements on El Camino Real and elsewhere in their jurisdictions.

<sup>116</sup> Grand Boulevard Initiative, *Infrastructure Needs Assessment and Financing Strategy*, June 2013.  
<http://www.grandboulevard.net/projects/if.html>

<sup>117</sup> Including delegated maintenance payments from Caltrans to cities for maintenance functions that are currently performed by the cities.

- **Staffing costs** associated with pursuing relinquishment.
- **Other costs**, including increased insurance or other costs associated with accepting liability for the relinquished facilities.

**Figure 142**                      **Summary of Cost Categories Related to Relinquishment**

	Relinquishment	Street Redesign
<b>Infrastructure Costs</b>	Capital Improvements (State of Good Repair) Operations & Maintenance (O&M)	Capital Improvements
<b>Other Potential Costs</b>	Staff Time Increased Liability	N/A

In conjunction with relinquishment, local governments may also wish to consider implementing capital projects that go “above and beyond” bringing the street up to a state of good repair. For example, these could include capacity expansions to the roadway, transit facilities, or utility infrastructure to serve new development; improved transit, pedestrian, or bicycle facilities; or other complete streets improvements. These types of “redesign” projects are not directly associated with the relinquishment process, but are considered in this chapter because many cities pursue relinquishment in order to gain more flexibility in implementing streetscape or other redesign projects.

Local governments may also be able to leverage planned redesign projects in order to access a broader range of funding sources and achieve efficiencies in making street repairs. For example, as part of the relinquishment of The Alameda, the City of San Jose was able to leverage \$6.14 million worth of roadway improvements that would be provided in conjunction with upcoming bus rapid transit and high speed rail projects. In other cases, private development projects have contributed to the redesign of relinquished facilities. The potential to leverage new development and other major public infrastructure projects to help cover the costs of relinquishment is discussed in greater detail below.

The remainder of this chapter focuses specifically on potential funding sources for the infrastructure (capital and O&M) costs that are likely to be associated with the relinquishment and potential redesign of SR 82. Local governments generally pay for staffing and liability insurance with General Fund revenues; there are unlikely to be any additional sources of revenue available to cover these types of general operating costs.

## **PAYING FOR INFRASTRUCTURE: FUNDING VERSUS FINANCING**

The term “funding” refers to a revenue stream that generates money to pay for an improvement. Some types of infrastructure generate revenue directly by charging fees for use. Revenue-generating infrastructure include utilities, toll roads, transit systems, and (often, though not always) public parking facilities. In contrast, non-revenue generating infrastructure includes parks and open space, streets, and streetscape improvements like sidewalks, crosswalks, trees, lighting, benches, and bike lanes. Because there is no charge to use these facilities, and because the benefits are widely spread, this type of infrastructure rarely generates any direct revenues to pay for construction, operations, or maintenance. However, while these types of improvements do not directly generate revenues, they have the potential to create value by opening up new development opportunities, driving property value appreciation, and attracting new residents, workers, shoppers, and other users. (The potential to generate revenues from

new development to pay for infrastructure costs is discussed in more detail below, under “Property-Based Funding & Financing Tools.”)

“Financing” refers to the mechanisms used to manipulate available revenue streams, so that agencies are able to provide infrastructure immediately, before revenue equal to the full cost of that infrastructure is available. In general, there are two basic ways that local governments can approach financing infrastructure: debt financing and “pay-as-you-go” financing. Debt financing involves borrowing from future revenues by issuing bonds that are paid back over time through taxes or fee payments. In contrast, a pay-as-you-go approach allows for improvements to be made only once a sufficient amount of revenue is collected to fund the improvement. Either approach requires the local government to identify a funding source that generates money to pay for the improvement (or to pay down the bond used to finance the improvement).

The pay-as-you-go approach is typically less risky, but will take longer to implement if it is necessary to wait to “save up” for the entire cost of the improvement. In contrast, the debt financing approach involves a higher level of risk, but allows for the infrastructure improvement to be made sooner. In general, public agencies are most likely to use debt financing to pay for large-scale capital projects, whereas smaller-scale capital improvements and ongoing operations and maintenance are usually financed on a pay-as-you-go basis. It is also important to note that in practice, most infrastructure improvements are paid for using a combination of several funding and financing sources.

## POTENTIAL FUNDING AND FINANCING SOURCES

As discussed in Chapter 3, cities have generally paid for relinquishment using a combination of different funding and financing sources. In the case of SR 82, potential sources for could include some combination of the following:

- **Caltrans contributions**, which must be negotiated on a case-by-case basis.
- **General Fund revenues**, including revenues from property tax, sales tax, and other jurisdiction-wide tax revenues.
- **Taxes and fees for local streets and roads**, which are collected at the state or county level and distributed to local governments for roadway projects.
- **Property-based funding and financing tools**, including direct developer contributions as well as fees, assessments, and special taxes that leverage property value appreciation and real estate development that occurs within a specific area to pay for local infrastructure improvements (these are often known as “value capture” tools).

### ***Paying for the Operations and Maintenance of SR 82: Santa Clara Case Study***

Most cities that have gone through a relinquishment process have absorbed ongoing operations and maintenance costs for the relinquished facilities into their general operating budgets. In order to understand how relinquishment of SR 82 might affect city budgets, Strategic Economics assessed the potential impact on the City of Santa Clara’s street maintenance budget.

As discussed in Chapter 5, the estimated average annual cost for operating and maintaining SR 82 in Santa Clara is \$429,500. This estimate includes direct costs currently incurred by Caltrans, delegated maintenance payments to the city, and assumptions about the cost of preventative pavement maintenance. In comparison, the Santa Clara Public Works Department’s annual budget for street and storm drainage maintenance in FY 2014-15 was \$15.6 million.\* Assuming that the City would continue to spend \$429,500 per year on operations and maintenance of the relinquished facility, this would amount to 2.7 percent of the City’s annual street and storm drainage maintenance budget.

\*Includes street and traffic maintenance, storm drain, parkways and boulevards (landscaping), street sweeping, etc. Excludes expenditures for Downtown Parking District, Convention Center Maintenance District, and Garbage Collection and Disposal functions.

Sources: O&M cost estimates by Sherwood Engineering, 2015; City of Santa Clara, 2014-15 Annual Budget; Strategic Economics, 2015.

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- **Competitive grants**, obtained from state or regional agencies.
- **Project related funds**, such as design and construction of BRT facilities and operations and maintenance of dedicated lanes.
- **Utility user fees and rates**, or charges for utilizing storm drainage facilities or other publicly owned infrastructure.

The range of potential uses for each of the funding sources is summarized in Figure 143, and described in greater detail below. As discussed in Chapter 3, most cities that have gone through the relinquishment process have absorbed ongoing operations and maintenance costs for the relinquished facilities into their general operating budgets. Typically this kind of roadway and storm drainage maintenance is provided by Public Works Departments, and funded by some combination of General Fund revenues, taxes and fees for streets and local roads, and (for storm drainage maintenance) user fees and rates. In some cases, there may also be revenues available for operations and maintenance from property-based tools.

A wider variety of potential sources are available for capital improvements, including state of good repair improvements and more extensive roadway redesign improvements. The means by which capital improvements costs will be funded will depend on a number of factors, including the timing and scale of cost of specific improvements and the extent to which they are related to new development projects. For instance, capital projects that are required to increase capacity to serve new development can often be funded in part by property-based tools (such as development impact fees, direct developer contributions, or Community Facilities Districts); however the cost to repair existing deficiencies in the system or improve service within a broader network may require other types of funding sources.

**Figure 143 Summary of Potential Funding Sources and Uses for SR 82**

Funding Source	Relinquishment		Street Redesign
	State of Good Repair	Operations & Maintenance	
Negotiated Caltrans Contributions	X	X	
General Fund Revenues	X	X	X
Taxes and Fees for Local Streets and Roads	X	X	X
<b>Property-Based Funding &amp; Financing Tools</b>			
Mello-Roos Community Facilities District (CFD)	X	X	X
Enhanced Infrastructure Financing District (EIFD)			X
Special Benefit Assessment District	X	X	X
Parcel Tax	X	X	X
Development Impact Fee			X
Direct Developer Contributions	X		X
Competitive Grants	X		X
Project Related Funds e.g. BRT	X	X	X
User Fees and Rates (Storm Drainage Utilities)	X	X	X

Note that actual funding availability will vary depending on the specific details of each project. See detailed discussion of individual tools below.

## Leveraging Roadway Redesign to Pay for Relinquishment

Local governments may be able to access a broader range of funding sources and create efficiencies by leveraging roadway redesign projects to help cover state of good repair costs. For example, many cities are already planning for new bicycle infrastructure, pedestrian safety enhancements, and intersection improvements on El Camino Real as part of specific plans, citywide pedestrian and bicycle master plans, or other existing plans (see review of existing planning efforts in Chapter 4). As discussed in greater detail below, these types of redesign projects may be eligible for competitive grant funds that are not typically available for repaving or repair. To the extent that these projects serve new development, jurisdictions may also be able to use development impact fees or other property-based funding sources to pay for a portion of the improvement.

Cities in Santa Clara County may be able to leverage the VTA's proposed El Camino Real BRT project.<sup>118</sup> The VTA and individual cities are considering various BRT configurations, each including some combination of mixed-flow and dedicated lanes. For cities that select the dedicated lane option, VTA will repave the dedicated lane segments, install bicycle lanes, and make other streetscape and safety improvements. VTA will also maintain the dedicated lanes with periodic pavement maintenance and repainting. (Maintenance outside the dedicated lane would continue to be completed by Caltrans, or by the local jurisdiction if the roadway were relinquished). The BRT project will also install new signal software for the latest traffic signal prioritization (TSP) standards and new pedestrian signals in some locations. Funding for the BRT project is expected to come from Santa Clara County's Measure A, a half-cent sales tax dedicated to public transit construction, and the federal Small Starts program.

The following sections provide additional detail on the potential uses and limitations of each of the funding sources listed in Figure 143.

## Negotiated Caltrans Contributions

Caltrans does not have a dedicated source of funding for relinquishment. However, the agency has contributed funds to bring relinquished facilities up to a state of good repair on a case-by-case basis, under relinquishment agreements negotiated with individual jurisdictions. As discussed in Chapter 3, past Caltrans contributions have varied significantly depending on the length of roadway relinquished, the level of improvements needed, the availability of other state transportation funds, and other details of the negotiated agreement. In one case (the Tower Bridge in Sacramento), Caltrans is offering the cities of Sacramento and West Sacramento five years of operations and maintenance funding (\$400,000 per year) if the cities are willing to pursue relinquishment early, before the completion of a scheduled bridge rehabilitation project. However, in general, Caltrans has rarely contributed funding for ongoing operations and maintenance.

## Potential Uses for SR 82

Local governments will need to work with Caltrans to negotiate any payments or in-kind contributions (such as repaving) as part of a relinquishment agreement. Based on the case study examples, Caltrans appears most likely to contribute funding to improvements needed to bring the roadway up to a state of good repair.

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<sup>118</sup> Samtrans is also studying BRT on El Camino Real in San Mateo County. However, the agency does not anticipate that any BRT project will involve major capital improvements, at least in the next five years.

## General Fund Revenues

General Fund revenues include sales, property, utility user, transient occupancy (hotel), business license, and other jurisdiction-wide tax revenues. Local governments have significant discretion over how they allocate their General Fund revenues.<sup>119</sup> Cities and counties primarily use their General Fund tax revenues to pay for ongoing departmental operations, typically including ongoing street maintenance performed by the Public Works Department. However, most local governments also budget some portion of General Fund revenues to fund capital improvements.

### Potential Uses for SR 82

There are no restrictions on the types of operating expenses or capital projects that can be funded with General Fund revenues. As discussed in Chapter 2, most cities that have gone through the relinquishment process have absorbed ongoing operations and maintenance costs for the facility into their general operating budgets, which are primarily funded by the General Fund. Individual jurisdictions may also choose to allocate a portion of General Fund revenues to state of good repair improvements or street redesign following relinquishment.

## Taxes and Fees for Local Streets and Roads

Much of local governments' funding for the ongoing maintenance and repair of street, sidewalk, curb, gutter, and traffic signal infrastructure comes from transportation taxes and fees collected by the state and individual counties, and allocated to local governments based on formulas that incorporate factors such as local population and roadway miles. Each local government in turn allocates funds to specific projects within their jurisdictions. Figure 144 summarizes key features of these taxes and fees, which include the state fuel excise tax (gas tax) as well as voter-approved, countywide sales tax measures and vehicle registration fees.

### Potential Uses for SR 82

Local governments have significant flexibility in how they allocate taxes and fees for local streets and roads to projects within their jurisdictions, so long as funds are used on the types of projects permitted under each respective program. As shown in Figure 144, each program has slightly different project criteria, but in general these programs may be used to address existing deficiencies (such as state of good repair improvements) and conduct ongoing operations and maintenance of roadway and roadway-related storm drainage infrastructure. In some cases, local governments may also be able to utilize revenues from these programs to pay for redesign projects such as bike or pedestrian improvements, so long as those improvements are related to roadway safety and/or traffic congestion mitigation.

Note that in San Mateo County, the sales tax and vehicle registration fee revenues (2004 Measure A and 2010 Measure M) are allocated to local governments based in part on number of road miles owned and maintained by each jurisdiction. If Caltrans relinquished a segment of SR 82 to a city or county in San Mateo County, that city or county's share of funds would increase by a marginal amount.

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<sup>119</sup> However, state law limits local governments' ability to increase property tax, sales tax, and other tax rates.

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**Figure 144 Taxes and Fees for Local Streets and Roads**

Program <sup>(a)</sup>	Administering Agencies <sup>(b)</sup>	Basis of Allocation to Cities	Permitted Uses (Types of Projects)	Relinquishment		Street Redesign
				State of Good Repair	O&M	
<b>Statewide<sup>(c)</sup></b>						
State Fuel Excise Tax (Gas Tax)	State Board of Equalization Cities & Counties	Fixed amount per year, plus a share based on registered vehicles, population, and assessed value	Research, planning, construction, improvement, maintenance, operations of public streets, highways, transit guideways, and related storm drainage facilities.	X	X	X
<b>San Mateo County</b>						
2004 Measure A (Half-Cent Sales Tax) Local Street and Transportation Program	SMCTA Cities & Counties	50% on population and 50% on road miles owned and maintained by jurisdiction; adjusted annually	Paving streets and sidewalks; repairing potholes; promoting or operating alternative modes of transportation; developing and implementing traffic operations and safety projects including signal coordination, bike/pedestrian safety projects, eliminating hazardous conditions.	X	X	X
2010 Measure M (\$10 Vehicle Registration Fee) Local Streets and Roads Program	C/CAG Cities & Counties	50% population and 50% road miles for each jurisdiction, (\$75,000 minimum per jurisdiction)	Road resurfacing, reconstruction, and operations (e.g., restriping, signal timing/coordination, signage); replacement and/or upgrading of traffic signals; deployment of local intelligent transportation systems; stormwater pollution prevention, including street sweeping, roadway storm inlet clearing.	X	X	X
<b>Santa Clara County<sup>(d)</sup></b>						
2010 Measure B (\$10 Vehicle Registration Fee) Local Road Improvement and Repair Program	VTA Cities & Counties	City population and County of Santa Clara road and expressway lane mileage	Pavement rehabilitation and reconstruction; traffic control signals; traveler information and safety devices; curb and gutter rehabilitation; roadway safety improvements; auto-related environmental mitigation including roadway sweeping and litter control.	X	X	X

(a) In addition to local streets and roads programs shown here, each of the funding sources listed below also provides funding for competitive grants and other transportation programs that are managed separately by state and regional agencies.

(b) The programs shown in this table are distributed to cities and counties by state or regional agencies including the State Board of Equalization, the San Mateo County Transportation Agency (SMCTA), the San Mateo City/County Association of Governments (C/CAG), and the Santa Clara Valley Transportation Agency (VTA). Individual cities and counties then have significant discretion in allocating the funds to specific projects.

(c) In addition to the gas tax, the state also charges a quarter-cent general sales tax that goes to fund transportation improvements. This tax is authorized under the 1971 Transportation Development Act. However, in large counties (including San Mateo County and Santa Clara County), all of the funding from the Transportation Development Act sales tax must be used to fund mass transit improvements.

(d) Santa Clara County also has two half-cent sales tax measures in place: Measure A (passed in 2000) and Measure B (2010). Both sales tax measures provide funding for specific public transit projects (including BART to Silicon Valley); neither includes local funding for local street maintenance.

Sources: CaliforniaCityFinance.com, "Shared Revenue Estimates: State Revenue Allocations to Cities and Counties; Highway User Tax – Estimates for 2015-16, 2014-15," updated February 25, 2015; San Mateo County Transportation Authority, "2004 Transportation Expenditure Plan," C/CAG, "Measure M Implementation Plan," Amended May 10, 2012; VTA, "\$10 Vehicle Registration Fee," <http://www.vta.org/about-us/10-vehicle-registration-fee>, accessed April 24, 2015; Strategic Economics, 2015.

## Property-Based Funding and Financing Tools

California state law authorizes cities and counties to use a number of tools that leverage real estate development and increases in property values within a geographic area in order to fund local infrastructure improvements. These tools are sometimes called “value capture” mechanisms, because they are designed to capture a share of the increased value that is expected to result from the provision of new infrastructure. Some rely on new development in order to generate revenues, while others generate revenues from taxes or assessments on existing properties as well as from new development. However, there are significant legal and practical restrictions on the use of these tools. For example, some tools, such as Special Assessment Districts or Community Facilities Districts, require approval by property owners or registered voters.

To the extent that relinquishment reduces the duration and complexity of the development approval process, it could play a role in enabling more development on the corridor and create opportunities for local governments to capture additional revenues through property-based financing tools. (As discussed in Chapter 2, development projects that involve altering driveways, planting or trimming vegetation, excavating or installing utilities, or even installing mail boxes can trigger the Caltrans permit process, resulting in significant project delays.) However, it should be noted that the permitting process is only one of the many factors that affect the feasibility of development along SR 82. The availability of developable parcels, current rents and sales prices, construction costs, and allowed heights, densities, and parking ratios may have a greater impact on development feasibility than the length or complexity of the permitting process.<sup>120</sup>

Key features of the available tools, including opportunities and challenges for using the tools to fund the costs associated with relinquishment, are described below and summarized in Figure 145.

### Mello-Roos Community Facilities Districts

Mello-Roos Community Facilities Districts (CFDs) are a type of special taxing district formed when registered voters or property owners within a geographic area agree to impose a new tax on property. CFDs are relatively flexible, and the special tax rates may be set on any reasonable basis determined by the local legislative body (e.g., on the basis of building area, parcel size, or linear feet of parcel frontage), except that the tax cannot be *ad valorem* (based on property value). CFD boundaries can be drawn to include non-contiguous parcels, and different special tax rates can be set for different parcels within the CFD based on land use or property type, densities, or other material factors. The resulting revenues can be saved in a fund for use on a pay-as-you-go basis or used to issue bonds, and may be used to pay a wide range of infrastructure improvements as well as maintenance and lighting of parks, parkways, streets, roads, and open space, and other specified services.

A CFD requires approval by two-thirds of property owners (weighted by property area) so long as there are no more than 12 registered voters living within the proposed boundary. If there are more than 12 registered voters living within the district, the formation of a CFD requires two-thirds voter approval. Because of the voter approval requirement, CFDs are most commonly formed in undeveloped areas where the district encompasses a single property owner or a small number of property owners who intend to develop the property and/or subdivide the land for sale. (One provision of the Mello-Roos Community Facilities District Act is that the fees can be proportionally subdivided with the land and passed on to the

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<sup>120</sup> For a detailed discussion of the barriers to new development and potential strategies for facilitating investment on the SR 82 corridor, see Grand Boulevard Initiative, “Removing Barriers to Implementation: Economic & Housing Opportunities (ECHO) Phase II,” February 2014. <http://www.grandboulevard.net/projects/echo/phase2.html>



future owners.) There are only a few recent examples of voters or property owners in developed urban areas forming a CFD to fund streetscape or transit improvements.<sup>121</sup>

### **Potential Uses for SR 82**

As discussed above, CFDs can be used to help fund a wide range of capital projects and some specific types of operations and maintenance. However, in order to establish a CFD along SR 82, a city would need to convince two-thirds of property owners or registered voters to approve the CFD special tax. Voters and property owners may be more likely to approve a CFD if the special tax were slated to pay for a major roadway redesign, or other improvements above and beyond a state of good repair. There may also be legal restrictions on the use of CFDs to cover operations and maintenance services that were previously provided by the state or local jurisdiction.<sup>122</sup> These considerations suggest that a CFD along SR 82 would most likely encompass a small number of property owners that are planning to redevelop their properties, and would pay for new streetscape improvements, capacity expansions, or other capital projects that would directly benefit those properties.

### **Enhanced Infrastructure Financing Districts**

Enhanced Infrastructure Financing Districts (EIFDs) are a new tool that was created by the state legislature in 2014.<sup>123</sup> EIFDs divert a share of new property tax revenues (the “increment”) to pay for the construction of infrastructure and public facility improvements. EIFDs may also harness a share of a city’s vehicle license fee revenues, and may be combined with other tools such as CFDs and special benefit assessment districts. The revenues may be used to fund the construction of infrastructure and public facility improvements on a pay-as-you-go basis, or to issue bonds to finance those improvements. EIFDs do not require voter approval for formation. However, the jurisdiction sponsoring the EIFD must receive approval from all affected taxing entities (for example, a city that wished to divert property tax increment from a county would need to seek that county’s approval) and 55 percent approval by property owners or voters is required to issue bonds.<sup>124</sup>

### **Potential Uses for SR 82**

According to the enabling legislation, EIFDs may be used to finance capital improvements that provide a significant benefit to the district or the surrounding community, including highways, interchanges, ramps and bridges, arterial streets, transit facilities, and drainage facilities. EIFDs may not be used to fund routine maintenance, repair, or ongoing operations. This suggests that EIFDs could be used to pay for street redesign projects, but not state-of-good-repair improvements. Since EIFDs involve capturing revenues from the existing property tax rate, they are likely to be most appropriate in segments of the corridor where jurisdictions foresee significant new development that will result in substantial increases to tax revenues. Otherwise, an EIFD could result in diverting revenues that would otherwise flow to the General Fund.

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<sup>121</sup> For example, the Mint Plaza CFD in San Francisco, used to fund streetscape and open space improvements in a small area slated for redevelopment, and a CFD in Downtown Los Angeles that will be used to fund the development of a streetcar.

<sup>122</sup> Section 53313(g) of the Mello-Roos Community Facilities Act states “A community facilities district tax approved by vote of the landowners of the district may only finance the services authorized in this section to the extent that they are in addition to those provided in the territory of the district before the district was created. The additional services shall not supplant services already available within that territory when the district was created.”

<sup>123</sup> Prior to the creation of EIFDs, cities and counties were authorized to create Infrastructure Financing Districts (IFDs). While the IFD tool is still available under California law, the EIFD tool represents a significant improvement over the original IFD tool.

<sup>124</sup> Issuing EIFD bonds requires approval by 55 percent of property owners (weighted by property area) so long as there are no more than 12 registered voters living within the EIFD boundary. If there are more than 12 registered voters living within the district, bond issuance requires two-thirds voter approval.

## Special Benefit Assessment Districts

Special Benefit Assessment Districts are designated districts where property owners agree to pay an additional assessment in order to fund specific improvements or services.<sup>125</sup> California law defines a number of different types of assessment districts (e.g., Lighting and Landscaping Districts, Parking Districts, Property and Business Improvement Districts), most of which can issue tax-exempt bonds. Assessment districts are established by a vote of the property owners and require support from owners of a simple majority (50 percent plus one) of assessed property value in the district. Under Proposition 218, a constitutional amendment passed by California voters in 1996, the amount that each property owner pays must be directly proportional to the “special benefit” the property will receive from the proposed improvement. The assessment district may not be used to pay for the portion of an improvement that accrues to the community at large (known as the “general benefit”). In practice, the requirements of Proposition 218 severely limit the amount and types of revenue that can be generated through assessment districts in California, because they make it more difficult to tax adjacent property owners for improvements that also benefit the general public.

### Potential Uses for SR 82

In theory, a special benefit assessment district could be used to fund state of good repair improvements, operations and maintenance, and/or redesign of a roadway. However, the fact that SR 82 serves as a main thoroughfare with significant regional traffic may limit the ability to use this tool to fund major road improvements. Because adjacent property owners may only be taxed to the extent they derive a “special benefit” from the improvement, in practice, these districts may be best suited to infrastructure improvements and services that are smaller in scale and that provide a special benefit to a specific set of property owners along the corridor, such as lighting, landscaping, and sidewalk improvements.

## Parcel Taxes

A parcel tax is a special property tax that is imposed within a city, county, school district, or special district. The tax must be approved by two-thirds of voters, and must be based on characteristics of the parcel rather than on the value of the parcel being taxed. For example, parcel taxes may be charged on a flat, per-parcel basis, or based on parcel size. Parcel tax revenues may be used to fund government programs or services that provide a general benefit to residents of the jurisdiction, such as education, public parks, fire, or public safety. Most parcel taxes in California are used to fund school improvements. However, some cities have parcel taxes in place to pay for infrastructure maintenance and repair.

### Potential Uses for SR 82

Parcel taxes are most typically used to fund services throughout a jurisdiction, and require two-thirds approval by all voters in that jurisdiction.<sup>126</sup> A city or county that imposed a parcel tax to cover maintenance and repair of roadways and storm drainage facilities could potentially allocate some of the revenues to pay for maintenance or improvements on SR 82. For example, the City of Atherton has a parcel tax (Measure S Special Parcel Tax, passed by voters in 2009) that provides funding for street repair and maintenance, drainage facility repair and maintenance, and police services. Atherton’s 2014-15 Capital Improvement Program includes an El Camino Real Traffic and Safety Study funded with \$100,000 from the Measure S Parcel Tax.

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<sup>125</sup> California law defines a number of different types of assessment districts. Some of the most common include Lighting and Landscaping Districts, Business Improvement Districts (BIDs), and Property and Business Improvement Districts (PBIDs).

<sup>126</sup> In contrast, Mello-Roos CFDs – which effectively are parcel taxes charged within a local district rather than jurisdiction-wide – are typically used to fund improvements that serve a specific area or development project, rather than the community as a whole.

## Development Impact Fees

Development impact fees are a one-time charge to new development imposed under the California Mitigation Fee Act. These fees are intended to defray all or part of the cost of public facilities resulting from new development, and cannot be used to address existing infrastructure deficiencies or to pay for ongoing operations and maintenance of infrastructure. This means that for improvements that benefit existing uses as well as new development, impact fees can only be used to pay for the portion of the improvement that is directly related to the new development; another source of funds must be found to cover the remainder of the costs. Impact fees must be adopted based on a study that finds a “nexus” (or reasonable relationship) between the development paying the fee, the size of the fee, and the use of fee revenues.

## Potential Uses for SR 82

In places along SR 82 where new development is occurring, development impact fees may be used to pay for capital improvements that are required to mitigate the impact of new development. In general, these types of improvements are expected to fall into the “redesign” category, since impact fees may not be used to address existing deficiencies (i.e., to bring an existing roadway into a state of good repair). Most of the local governments along the SR 82 corridor already have some development impact fees in place. The majority of these fees are intended to mitigate transportation-related impacts, but a few cities also have impact fees that pay for storm drainage or other capacity expansions to basic infrastructure systems. Cities including Palo Alto, Menlo Park, and Santa Clara are already using transportation impact fees to pay for intersection improvements on SR 82 that are required to mitigate the impacts of new development.

## Direct Developer Contributions

In some cases, cities and counties may be able to negotiate directly with developers in order to obtain desired improvements in exchange for development rights. Depending on the jurisdiction and the project, developer contributions may be negotiated as part of a development agreement (a structured bilateral negotiation authorized under state law), or required as part of the conditions of approval for a project. The extent to which a new development project contributes to the provision of infrastructure or other public improvements depends on the results of the negotiation, and is affected by the projected profitability of the development project (which in turn depends on construction costs, market prices, lot size and

### *San Antonio Center in Mountain View*

San Antonio Center in Mountain View is an example of a large-scale development project that is contributing to the cost of infrastructure improvements. The project involves the redevelopment of an aging big box shopping center at El Camino Real and San Antonio Road with new residential units, office space, a hotel, theater, and restaurants and retail. Phase I was completed in early 2014, and included 144,000 square feet of retail and 330 multi-family residential units. Phase II was approved in December 2014, and is slated to include 400,000 square feet of office space, a 167-room hotel, an 8-screen cinema, and 80,000 additional square feet of restaurants and retail.

Under the conditions of approval for the project, the developer (Merlone Geier Partners) provided significant infrastructure improvements as part of Phase I, including a park and sidewalk and streetscape improvements on El Camino Real and San Antonio Road. As part of Phase II, the developer agreed to make improvements to the intersection of El Camino Real and San Antonio Road; redesign and reconstruct San Antonio Road between El Camino Real and California Street to include new median, landscaping, bicycle lanes, improved pedestrian connections, and new lane configurations; and make additional improvements to California Street.



Streetscape improvements on El Camino Real, provided in Phase I of the San Antonio Center project.

Image source: Strategic Economics, 2013.

configuration, parking requirements, etc.). A negotiated development contribution may take the form of an in-kind improvement built and paid for directly by the developer, or a financial contribution to a project that the city or county is constructing.

### **Potential Uses for SR 82**

Many of the local governments along the SR 82 corridor are already negotiating with developers for sidewalk, streetscape, and intersection improvements along the corridor (for example, see the San Antonio Center project profiled above). While these projects largely involve street redesign, in some cases they may also address costs associated with relinquishment – for example, a developer may be required to repave a section of a street, add a new curb cut, or replace a traffic signal as part of a development agreement or as a condition of approval.

One challenge with using developer contributions (or, for that matter, other types of property-based financing tools) to pay for the costs associated with relinquishment is the scale of likely development opportunities compared to the scale of needed improvements. While there have been some previous examples of developers either initiating or contributing significant funds to the relinquishment process, these examples typically involve very large scale development projects that would receive significant, direct benefits from relinquishment. For example, the relinquishment process for Jackson Road (SR 16) in Sacramento was funded in part by a private developer. However, the Jackson Road area is currently undeveloped and slated to receive tens of thousands of new residential units as well as commercial, industrial, and public land uses.<sup>127</sup> In contrast, previous research has shown that there are few large-scale development opportunity sites along El Camino Real. The vast majority of underutilized or vacant parcels are small, and many are shallow, oddly shaped, or otherwise difficult to develop.<sup>128</sup> While some larger parcels may redevelop over time and contribute significantly to the rehabilitation or redesign of the corridor, for the most part development is expected to be incremental and the scale of developer contributions are likely to be marginal.

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<sup>127</sup> Caltrans, “Transportation Corridor Concept Report: State Route 16,” 2012. [http://dot.ca.gov/hq/tpp/corridor-mobility/documents/d\\_3\\_docs/SR16\\_TCCR\\_FINAL.pdf](http://dot.ca.gov/hq/tpp/corridor-mobility/documents/d_3_docs/SR16_TCCR_FINAL.pdf)

<sup>128</sup> Strategic Economics, FTS, and Urban Explorer, “Economic & Housing Opportunities Assessment – Phase I,” prepared for the Grand Boulevard Initiative, 2010. <http://www.grandboulevard.net/projects/echo.html>; Strategic Economics, FTS, and Van Meter Williams Pollack, “Economic & Housing Opportunities Assessment – Phase II,” prepared for the Grand Boulevard Initiative, 2014. <http://www.grandboulevard.net/projects/echo/phase2.html>

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**Figure 145 Property -Based Financing Tools**

Tool	Revenue Source	Typical Geographic Scale	Major Implementation Requirements	Permitted Uses (Types of Projects)	Relinquishment State of		Street Redesign
					Good Repair	O&M	
Mello-Roos Community Facilities District (CFD)	Special tax on property	District	2/3 approval by property owners or registered voters in district*	Flexible; typically pays for construction and maintenance of streets, water, sewer/drainage, parks, as well as electrical infrastructure, schools, and police services.	X	X	X
Enhanced Infrastructure Financing District (EIFD)	Increases in revenues from existing property tax rate	District	Approval by all affected taxing entities; Voter approval is not required for establishment of district, but approval by 55% of voters or property owners is required to issue bonds*	Construction and improvement of public facilities including streets, highways, drainage, parks, open space, etc.; brownfield restoration and other environmental mitigation.			X
Special Benefit Assessment District	Special Assessment, usually on property	District	50% plus one approval by property owners subject to assessment Size of assessment must be proportional to benefits received by property owners	Uses are specified in various assessment acts, and include roadway and storm drainage repair and maintenance, as well as sidewalks, lighting and landscaping, etc. Funds must be used to provide direct, special benefit to property owners paying the assessment.	X	X	X
Parcel Tax	Special tax on property	Jurisdiction-wide (city, county, or special district)	2/3 approval by registered voters in jurisdiction	Flexible. Most commonly used for schools but has been used to pay for street repair and maintenance, drainage facility repair and maintenance, and other infrastructure improvements.	X	X	X
Development Impact Fee	One-time fee on new development	All new development in a district or jurisdiction	Nexus study identifying a reasonable relationship between the development paying the fee, the size of the fee, and the use of fee revenues	Depends on type of fee; many cities along SR 82 already have citywide fees in place to mitigate traffic and storm drain impacts of new development. Fee revenues must be used to mitigate the impacts of new development, and cannot be used to fund existing deficiencies.			X
Direct Developer Contributions	Developer profit on new development	Specific development project	Negotiations between the city and developer	Based on negotiations between the city and developer.	X		X

(a) If there are 12 or more registered voters in the proposed district, voters must approve formation of a CFD or issuance of an EIFD bond. If there are fewer than 12 registered voters, property owners cast the vote.

Source: Strategic Economics, 2015.

## Competitive Grants

In San Mateo and Santa Clara counties, a wide variety of grants are available for complete streets and other roadway improvements. These are typically allocated through competitive processes and administered by state and regional agencies including Caltrans, MTC, the Bay Area Air Quality Management District (BAAQMD), or the county transportation agencies (C/CAG and SMCTA in San Mateo County and VTA in Santa Clara County).<sup>129</sup> The State of California also administers a smaller number of programs that fund stormwater, sanitary sewer, and water supply projects.

## Potential Uses for SR 82

There are no specific grant sources for relinquishment. In general, infrastructure-related grant funds are only available for the planning, design, and construction of capital projects (as opposed to ongoing operations and maintenance). Grants are most likely to contribute to redesign projects, rather than to basic repaving or other state of good repair needs, because most grant programs are intended to fund significant improvements rather than repair or maintenance. However, there are some exceptions. For example, the One Bay Area Grant Program (OBAG) administered by C/CAG and VTA includes some funding for local streets and roads rehabilitation projects, as well as funding for bicycle and pedestrian projects, Safe Routes to Schools projects, and Transportation for Livable Communities projects that support the revitalization of downtown areas, commercial cores, high-density neighborhoods, and transit corridors projects.

This report does not include a comprehensive list of available grant sources because of the limited availability of grants for state of good repair improvements and operations and maintenance. Moreover, the specific grants that are available at any given time can shift depending on federal, state, and regional funding priorities. For a more comprehensive discussion of the infrastructure grant programs available to local governments in San Mateo and Santa Clara counties as of mid-2013, see the Grand Boulevard Initiative's *Infrastructure Needs Assessment and Financing Strategy* report.<sup>130</sup> Several cities in the corridor are already using grants to pay for improvements to the SR 82 corridor. For example, the City of Sunnyvale is installing bicycle lanes on El Camino Real using grant funds from the BAAQMD's Transportation Fund for Clean Air. The City of San Jose's "The Alameda – a Plan for a Beautiful Way" street improvements, which included pedestrian enhancements and landscaping on the portion of SR 82 that was relinquished to San Jose in 2012, is funded in part by an OBAG grant.

## User Fees and Rates

User fees and rates are fees charged for the use of public infrastructure or goods, such as for use of a toll road or bridge, stormwater, water, or wastewater system, or public parking facility. User fees and rates are typically set to cover a system's operating and capital expenses each year, which can include debt service for improvements to the system. User fees can take various forms, including:

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<sup>129</sup> Note that transportation projects must be listed in the federal Transportation Improvement Program (TIP) in order to receive federal transportation funding, including funding that is allocated competitively through the One Bay Area Grant (OBAG) and other programs.

<sup>130</sup> See Figure D-3 in Appendix D, available at <http://www.grandboulevard.net/projects/if.html>.

- **Service charges:** Rates charged based on the amount of services used. For example, this include a toll charged each time a driver uses a bridge, or a per-unit rate charged for consuming water or electricity.
- **Utility parcel fees:** Property assessments that are designed to reflect the service demands created by the property. Most commonly, these are related to the amount of stormwater runoff a property produces.
- **Connection fees:** Fees charged to property owners and developers for new connections to a utility system.

### **Potential Uses for SR 82**

As part of any relinquishment agreement, local governments are likely to assume ownership of the storm drainage systems that are currently maintained by Caltrans. Many of the cities along the SR 82 corridor charge some type of user fee to help fund capital improvements to or ongoing maintenance of their storm drainage systems. For example, Palo Alto charges a Storm Drainage Fee that is based on the amount of impervious surface area on each parcel in the city. The fee was approved by voters in 2005 and runs through 2017, and fees are used to fund high-priority capacity upgrades to the storm drain system as well as ongoing repair or replacement of deteriorated storm drain infrastructure. Several other cities charge storm drainage connection fees to new development; the use of these funds is often limited to capital projects that serve new development. Further research will be required in each jurisdiction to determine whether funding is available for state of good repair projects, capacity expansions related to new development, or ongoing maintenance and repair of the SR 82 storm drainage system.