City of Los Altos Pedestrian Master Plan

August 2015

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Los Altos

Pedestrian Master Plan

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Executive Summary

A Commitment to People

The City of Los Altos is making a strong commitment to putting people first through the adoption of this Pedestrian Master Plan. After a year-long public planning process, Los Altos joins many other cities in seeking to become a more walkable, livable, and healthy city. This plan identifies policies, programs, guidelines, and infrastructure projects that will better connect Los Altos residents to a wide range of destinations.

Highly walkable downtowns, employment centers, and community-serving nodes help reduce the need for additional vehicle trips, and are essential to the long-term ability to attract jobs and preserve existing single-family neighborhoods. While the City of Los Altos has made many recent investments on behalf of pedestrians, more can always be done to make the city the best walkable city it can be; this Plan helps identify ways to do so.

Background

This Pedestrian Master Plan is the first ever developed for the City of Los Altos. This Plan is largely based on the policies and vision found in the Los Altos General Plan as well as the recently adopted Climate Action Plan.

Other planning efforts conducted by the City of Los Altos complement the goals of a Pedestrian Master Plan, including the Bicycle Transportation Plan, the Los Altos Collector Traffic Calming Plan, and the specific plans for Sherwood Gateway and Loyola Corners.

Plan Process

The City of Los Altos Pedestrian Master Planning process kicked off with a meeting during the summer of 2013. After an initial round of data collection and targeted public input, draft recommendations were developed and presented to the community for feedback at public workshop in April 2014. An informational booth was set up at the Farmers Market on State Street twice, staffed by BPAC members, City staff, and the consultant team (see **Figure ES-1**). At all events, members of the public were invited to provide comments on the draft recommendations, with more than 200 comments received.

Figure ES-1: Members of the public discuss the Plan at the Los Altos Farmers Market

In tandem with the outreach process for the Pedestrian Master Plan, walk audits were held at Los Altos public schools in Spring 2014. These walk audits involved city staff, members of the BPAC, and members of the public. The walk audits observed conditions around schools during morning drop-off periods, leading to improvement recommendations found in **Appendix E: Suggested Routes to School Report**. In addition to these outreach opportunities, a Suggested Routes to School-focused online survey was distributed via email blast to families with K-8 students in Los Altos. The survey was distributed again at Fall 2014 Back to School Nights to allow for additional input.

Utilizing public input given earlier in the year, key components of the report were developed in Fall 2014, including prioritization and cost estimates for identified

projects, developing priority programmatic recommendations, concept plans for the Community Priority Projects identified by the BPAC, and baseline pedestrian measurements for compliance with the Climate Action Plan.

The full draft of the Pedestrian Master Plan was made public in February of 2015. The Plan subsequently was reviewed by both the BPAC and the Los Altos City Council in the winter/spring of 2015, with full adoption in the summer of 2015.

Prioirities for Pedestrians in Los Altos

- **Balancing the rural character with pedestrian need** – Since Los Altos was incorporated in 1952, it has been characterized by tree-lined streets and a small-town village atmosphere. Providing context sensitive walkways and pathways throughout Los Altos can help connect the community better while balancing its rural and small-town style.
- **Activate local business districts** - The City of Los Altos offers a wide range of shopping districts for residents and visitors to enjoy. This Pedestrian Master Plan will help maintain the beauty and vitality that each district offers as well as connect those districts to their surrounding neighborhoods, encouraging residents to walk to go shopping instead of driving.
- **Support the implementation of Complete Streets** – Paired with other plans like the Los Altos Bicycle Master Plan and the Los Altos Collector Traffic Calming Plan, as well as recent upgrades in street maintenance including the addition of traffic calming, this plan will help Los Altos create streets that accommodate all road users.
- **Create viable walking and biking routes to school throughout Los Altos** – The proposed walkway improvements from this plan will enhance the great neighborhoods of Los Altos. By improving routes to Los Altos schools, parents no longer have to drive their children to school which contributes to higher greenhouse gas (GHG) emissions and the incidence of asthma among children. Walking and biking to school can also help to reduce the risk of childhood obesity and diabetes.
- **Meet the goals of the Climate Action Plan by replacing car trips with walking trips** – The Los Altos Climate Action Plan has a goal to reduce GHG emissions by 7,760 metric tons of carbon dioxide equivalent emissions from transportation sources alone. This goal is nearly half of the total 2020 GHG reduction target. As 40 percent of all trips are two miles or less in distance, a more walkable Los Altos will help encourage residents to leave their car at home and help the City reduce air pollution.

Figure ES-2: Los Altos wants to enhance streets to accommodate all road users

Plan Function

The City of Los Altos recognizes the value of walking, and has developed this Citywide Pedestrian Master Plan to improve the pedestrian environment and to establish itself as a more walkable, livable, and healthy city (see **Figure ES-2**). This Plan outlines a broad vision, strategies, and actions for improving the pedestrian environment in Los Altos for people of all ages.

The recommended actions in this Plan are based on detailed research and extensive public outreach efforts that show that residents and visitors are looking for a more livable and sustainable Los Altos while maintaining the unique and charming character of the city.

The Plan will also serve as a way for Los Altos to seek funding for pedestrian projects. Having an adopted plan is extremely helpful in applying for funding from state, federal, and private agencies. Adopting this plan does not commit the City to dedicate or allocate funds, but rather indicates the intent of the City to implement this plan over time, starting with the priority recommended projects and programs found below.

Action Steps

1. Seek Multiple Funding Sources

Multiple approaches should be taken to facilitate pedestrian facility development. It is important to secure the funding necessary to undertake priority projects but also to develop a long-term funding strategy to allow continued development of the overall system. Capital and local funds for sidewalk and crosswalk construction should be set aside each year – even if only for a small amount – as local funding can be matched to outside funding sources. A variety of local, state, and federal options and sources exist and should be pursued. These funding options are described in Appendix D: Funding Sources. Other methods of pedestrian and bicycle facility development that are efficient and cost-effective are described at the end of Chapter 7: Implementation, Funding, & Climate Action Benefits.

2. Improve City Policies Regarding Pedestrians

The City already has a range of policies regarding pedestrians and pedestrian infrastructure, primarily found in the City's mobility element of the General Plan and in the City's newly adopted Climate Action Plan. This plan recommends policy updates and additions to further enhance the City's commitment to pedestrians (see **Figure ES-3**).

3. Implement Priority Recommended Projects

Los Altos currently has many gaps in its pedestrian network. Addressing key-gaps in the network in the near-term with targeted investment, facilities, and traffic calming will generate substantial benefit to residents across Los Altos. This plan not only ranked all recommended projects according to their level of priority, but also developed, in cooperation with the Los Altos BPAC, a "Community Priority" list of projects and corridors for investment and improvement.

Figure ES-3: Los Altos should continue to support pedestrian-friendly events like the Pet Parade

4. Implement Priority Recommended Programs

Beyond enhancements to the built environment, this plan also recommends key programs that the City should champion for encouraging more walking trips. As more facilities are built throughout Los Altos, parallel campaigns for encouragement, education, and enforcement can maximize the investment impact while reducing confusion or surprise around changes to the built environment. This plan not only identifies a range of programmatic offerings, but also provides a list of priority programs to pursue.

5. Benchmark & Reevaluate Progress

Performance measures should be stated in an official City Walkway Benchmark Report within one year after this Plan is officially adopted. The report needs only to cover key performance measures, and should be concise (see Chapter 7: Implementation, Funding, & Climate Action Benefits). This report could also be a showcase of success stories and would serve as a barometer for work that still needs to be accomplished. Furthermore, the City should reevaluate its progress on the goals of the Pedestrian Master Plan every two years and engage in periodic updates to the plan as needed.

Priority Projects and Policies

This Plan presents a series of policies that provide new approaches and guidelines for future projects. Some policies include:

- Consider adopting a six-foot minimum walkway width standard for new residential development
- Study right turn on red restrictions for intersections with significant pedestrian and vehicle turning volumes. Prioritize installation in school zones.
- Adopt a single high visibility crosswalk design.
- Prioritize advance stop bars at all stop controlled or signalized intersections in Downtown and along retail corridors.

The full range of recommended infrastructure policies and projects are presented in Chapter 5: Pedestrian Network Improvements. All recommended projects were measured against a Pedestrian Suitability Index (PSI), an objective process of evaluating existing conditions for pedestrians against the likely demand for pedestrians facilities, for a range of trip purposes, on every one of Los Altos' streets. Projects were also measured against a range of other criteria, including ease of implementation, community feedback, estimated cost, and proximity to schools.

The map of all recommended projects can be found on the following page.

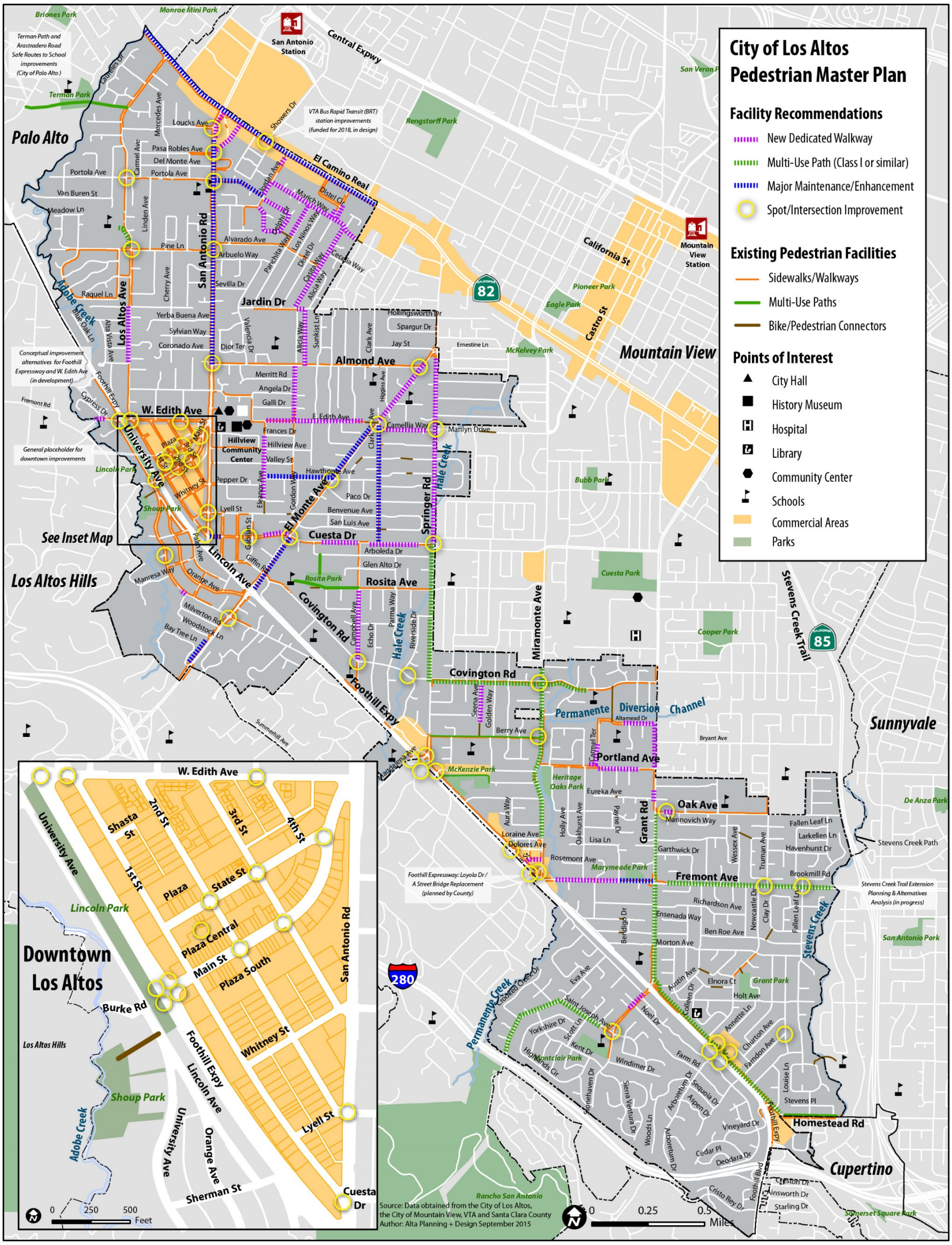

Figure ES-4: Recommended Projects for the City of Los Altos

Priority Programs

Chapter 6: Recommended Programs presents many programmatic recommendations for Los Altos, falling under the categories of education, encouragement, enforcement, and evaluation. A priority list of the Top 10 programs is listed below, developed through input from the community, the BPAC, and City staff.

Priority Recommended Programs

Title	Steps	Cost Estimate
Safe Routes to School Program		
Walk or Wheel	Continue to support the Walk or Wheel (WoW) Program or similar programs that encourage students to walk or bike or to school	$4,000
Promote Suggested Routes	Promote the updated suggested routes to school maps that include suggested routes, crossing locations, traffic controls, and crossing guard locations along routes to each school	$1,000
Appendix E	Promote and implement the additional programmatic recommendations from Appendix E	$100,000
Walk to Work Programs		
City Employee Alternative Commute Modes	Continue to actively promote alternative commute modes for City employees	$14,000
Walk Friendly Community Designation		
Walk Friendly Community	Consider applying to this program to demonstrate dedication to improving the pedestrian environment.	$5,000
Traffic Safety Campaign		
Traffic Safety Program	Implement a traffic safety program such as StreetSmarts	$30,000
Targeted Police Enforcement		
Targeted Enforcement Strategies	Coordinate with the Police Department to continue its existing targeted enforcement strategies to increase the safety of pedestrians in Los Altos	$18,000
Speed Feedback Signs		
Mobile Speed Feedback	The City should work with the Police Department and Public Works to continue operations of mobile speed feedback signs	$30,000
Annual Pedestrian Counts and Survey Program		
Pedestrian Counts and Survey	Conduct an annual pedestrian community survey and an annual pedestrian count program	$3,000
Report Card	Produce a report or 'report card' on walking. Reports published every 2-3 years developed from annual counts and survey efforts can help the City measure its success toward the goals of this Plan as well rate the overall quality or effectiveness of the ongoing efforts to increase walking in the City	$10,000

Climate Action Plan and Emissions Summary

The Los Altos Climate Action Plan (CAP) was passed in 2013 which outlines the strategy for reducing the community's greenhouse gas emissions. Full implementation of the reduction measures contained in the CAP would reduce the community's 2020 emissions by 15,640 metric tons of carbon dioxide equivalents (MTCO2e), which would help the City achieve a 17-percent reduction in greenhouse gas emissions by 2020. It includes a range of incentives, education, and regulations within five focus areas – Transportation, Energy, Resource Conservation, Green Community and Municipal Operations – to achieve greenhouse gas emission reductions. By implementing the Los Altos Pedestrian Master Plan proposed projects and programs, greenhouse gas reduction can result as more families will choose an active mode of travel rather than drive. Chapter 7: Implementation, Funding, & Climate Action Benefits gives a summary of the calculated climate and health impacts associated with Plan implementation and the full impact analysis memo can be found in Appendix F: Benefit Impact Analysis.

If all of the projects on the Los Altos Pedestrian Master Plan recommended project list are implemented, the City could experience a total of $288,000 in health-, environmental-, and transportation-related benefits per year. Table 7-6 summarizes all calculated benefits.

	Low Estimate	Mid Estimate	High Estimate
Annual Health Benefits	$12,000	$19,000	$24,000
Annual Environmental Benefits	$4,000	$7,000	$9,000
Annual Transportation Benefits	$158,000	$262,000	$327,000
Total Annual Benefits	**$174,000**	**$288,000**	**$378,000**

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1. Introduction

1.1. Plan Introduction

Walking is fundamental: it is not just how we move around but also is a primary form of exercise and social activity. Whether taking transit, walking the dog, or heading to a destination after parking the car, nearly everyone is a pedestrian for some portion of their day.

Current planning and policy efforts throughout the San Francisco Bay Area and the City of Los Altos seek to improve conditions for walking. Despite being the least expensive form of travel, decision-makers are increasingly aware that to get more people on foot requires proactive efforts to build and maintain high-quality infrastructure, provide comprehensive planning, and commit to long-term funding. To establish walking as a viable everyday option also demands working with community members and neighbors to build a shared vision for how to accommodate growth and identify what is most achievable in the short-, medium-, and long-term.

Studies have shown that these efforts are also good for a community's economic and social stability. Highly walkable downtowns, employment centers, and community-serving nodes help reduce the need for new streets and improvements, and are essential to the long-term ability to attract jobs and preserve existing single-family neighborhoods. Such locations also encourage more affordable new development and greater community benefits as more space can be devoted to people rather than (storing) cars. Lastly, walkable communities are inclusive communities. Seniors, children, and the mobility-impaired have greater access to services and are able to lead more independent, productive lives.

Figure 1-1: Entrance sign to Los Altos

1.2. Plan Purpose

The City of Los Altos recognizes the value of walking, and has developed this Citywide Pedestrian Master Plan to improve the pedestrian environment and to establish itself as a more walkable, livable, and healthy city.

This Plan provides a broad vision, strategies, and actions for improving the pedestrian environment in Los Altos. Recommendations are built on and consistent with local and regional goals and policies for increasing the number of people who walk in Los Altos. These goals include specific recommendations for streets, sidewalks, and multi-use paths, as well as policy recommendations to make Los Altos more sustainable by reducing the city's carbon footprint.

While walking is the least expensive transportation mode, building and maintaining a high quality pedestrian infrastructure requires comprehensive planning and long term funding. The recommendations in this Plan will help the city reach goals adopted in the General Plan by creating an environment and programs that support walking for transportation and recreation, encourage fewer trips by car, and support active lifestyles.

This Plan is a blueprint for the city to improve the pedestrian environment, secure funds dedicated to pedestrian safety and livable communities, and increase the number of walking trips.

1.3. Overview of Plan

The Los Altos Pedestrian Master Plan contains the following chapters:

Chapter 1. Introduction

Sets the context for the Plan, including purpose and structure.

Chapter 2. Vision & Goals

Summarizes the vision, goals, and policies guiding the implementation of the Plan.

Chapter 3. Existing Conditions

Presents existing pedestrian conditions, including demographics, land use, and pedestrian facilities and programs in order to identify where new facilities are needed and what programs will better support pedestrian activity in Los Altos.

Chapter 4. Needs Analysis

This chapter reviews the relationship between pedestrian attractors and generators, commute patterns, and collisions. This chapter also includes a review of issues unique to Los Altos' pedestrian network as well as a summary of community outreach and input.

Chapter 5. Pedestrian Network Improvements

Presents recommended improvements, including engineering and policy improvements, and projects and studies. This chapter also includes project sheets which present focused improvements for five locations.

Chapter 6. Recommended Programs

Describes proposed pedestrian encouragement, education, enforcement and evaluation programs.

Chapter 7. Implementation, Funding, & Climate Action Benefits

Outlines a strategy for implementation that includes project evaluation strategy, prioritization of projects and potential funding sources available for implementing this Plan's projects and programs. This chapter also includes a summary of the health, environmental, and transportation benefits of implementing the Pedestrian Master Plan.

Appendix A. Design Guidelines

Provides guidelines for the design of pedestrian enhancements that incorporate street design best practice guidance and enhance the safety, convenience, and mobility for pedestrians. Potential treatments include different design options for sidewalks and rural walkways, pedestrian crossings, shared use zones, as well as requirements for compliance with the Americans with Disabilities Act (ADA).

Appendix B. Relevant Plans & Policies

Reviews planning and policy documents relevant to the Citywide Pedestrian Master Plan. The review is organized by City, County, Regional, State, and Federal documents and policies. The review focuses on those sections and specific policies from each document that are most relevant to the Citywide Pedestrian Master Plan.

Appendix C. Pedestrian Suitability Index Memo

Summarizes the indicators used to estimate walking activity.

Appendix D. Funding Sources

Summarizes potential funding sources nationally, statewide and regionally.

Appendix E. Suggested Routes to School Report

As an addendum to the pedestrian master plan, the Los Altos Suggested Routes to School Report provides walk audit reports for each public elementary and middle school within Los Altos city limits. The recommendations in the Suggested Routes to School Report are meant to supplement the infrastructure and programmatic recommendations contained in Chapters 5 & 6.

Appendix F. Benefit Impact Analysis

This memo contains an analysis of the quantified benefits that might occur as the result of implementing the recommended projects in the Los Altos Pedestrian Master Plan. It includes the potential environmental, health, and transportation benefits.

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2. Vision & Goals

The vision, goals, and policies presented in this chapter are drawn largely from the *Los Altos General Plan*, which contains numerous policy statements that are supportive of walking. All recommendations contained within the Pedestrian Master Plan process flow from the vision, goals, and policies. This overall policy framework guides and supports the specific implementation actions identified in the Plan.

2.1. Vision Statement

The vision statement expresses what walking will be like in Los Altos in the future if the city successfully implements this *Pedestrian Master Plan.* The vision statement is:

> *Los Altos is a walkable city where people of all ages and abilities easily, comfortably, and safely walk to downtown, neighborhood commercial centers, schools, parks, community amenities, transit services, and neighboring cities. As a viable travel mode, high rates of walking help reduce traffic congestion and the impacts of transportation on the environment. Recreational and social walking opportunities are provided in all areas of the City by a strategic and accessible network of walkways that connect neighborhoods and promote healthy, active lifestyles. A variety of context-sensitive walkway designs maintains and reflects the unique character of the city, whether it be a wooded, quiet residential neighborhood, downtown, or commercial/mixed-use areas.*

2.2. Goals and Policies

Goals expand on the vision with more detail, while policies provide more specific direction to implement the goals. The goals and policies identified here are drawn and expanded from the *General Plan*'s Circulation Element (noted with the specific *General Plan* Goal and Policy numbers), the Los Altos Bicycle Transportation Plan (2012), and relevant regional and state policy priorities that emphasize integrated, multi-modal transportation planning that encourages viable travel alternatives to the automobile. More detail on these plans is provided in Appendix B.

Proposed additions to the existing General Plan policies are underlined and proposed deletions are struck through.

2.2.1 Goal 1: Routinely plan for pedestrian accommodation and facilities that serve people of all ages and abilities.

Policies/Actions:

P1.1 The planning, funding, design, construction, operation, and maintenance of city streets shall be based on a "Complete Streets" concept that enables safe, comfortable, and convenient access and mobility for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.

P1.2 When constructing new or renovated pedestrian and multi-use facilities, seek to go beyond the minimum design requirements where feasible in order to accommodate people of all ages and abilities, including people too young to drive, people who cannot drive, and people who choose not to drive. [1]

P1.3 Update and expand the City's intersection evaluation and traffic impact analysis (TIA) methodologies to include pedestrian/non-motorized data collection and performance criteria, consistent with the most recent Highway Capacity Manual (HCM2010) and related best practices.

P1.4 Work with the school districts and community organizations to create a Safe Routes to School program to help ensure students are able to safely walk (and bicycle) to and from school. [*General Plan Circulation Element Policy 4.3*]

P1.5 Implement universal design features and the City's ADA Transition Plan, as it relates to public rights-of-way, including curb ramps, accessible signals, crosswalk markings, and other infrastructure programs. Update the ADA Transition Plan as needed to reflect state-of-the-practice design guidelines and regulations.

Figure 2-1: Loyola Corners Shopping Center

P1.6 Ensure specific recommendations and design guidelines from the Pedestrian Master Plan are considered as part of the City's formal commercial/multi-family housing design review processes.
[*More specifically supports General Plan Circulation Element Policy 2.6*]

P1.7 Continue to support regular meetings of the City's Bicycle and Pedestrian Advisory Commission (BPAC) to review projects, plans, policies, and data updates that relate to or impact pedestrian travel and accessibility.

2.2.2 Goal 2: Develop a network of safe, convenient, and context-sensitive pedestrian facilities that connect residents to all community destinations (parks, shopping, schools, etc.), transit services, and neighboring communities.

Policies/Actions:

P2.1 Provide for safe and convenient pedestrian connections to and between Downtown, other commercial districts, neighborhoods, schools, City parks, recreational facilities and major activity centers within the City, as well as with surrounding jurisdictions.
[Modified from General Plan Circulation Element Policy 4.2]

P2.2 Provide trails, sidewalks or separated pathways for improved school access, as well as in areas ~~where needed to provide safe bicycle and pedestrian access to schools~~ expected to serve other potentially

[1] *As specifically encouraged by the United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation, Regulations, and Recommendations (signed March 2010).*

vulnerable and mobility-challenged populations, such as near senior facilities (including housing), parks, community services, medical/health facilities, and bus stops.
[Modified from General Plan Circulation Element Policy 4.4]

P2.3 ~~Consider~~ Provide separated bicycle and pedestrian pathways along arterial and collector roadways, with consideration of such facilities on both sides of the street whenever practical.
[Modified from General Plan Circulation Element Policy 4.5]

P2.4 Continue to identify and promote a Suggested Routes to School network and provide enhanced design guidelines and prioritization of these corridors.

P2.5 Pursue potential rights-of-way such as Santa Clara Valley Water District and other utility easements for bicycle and pedestrian trail development when opportunities arise.
[General Plan Circulation Element Policy 4.6]

P2.6 Cooperate and collaborate with adjacent jurisdictions to provide appropriate roadway transitions and street design, including pedestrian infrastructure.
[Modified from General Plan Circulation Element Policy 2.7]

P2.7 Establish priorities for bicycle and pedestrian improvements commensurate with the volume of vehicular traffic and include those priorities when funding transportation related projects.
[General Plan Circulation Element Policy 4.7]

2.2.3 Goal 3: Focus investments that improve pedestrian safety by reducing risk factors, such as vehicle speeds, crossing distance and conflict points, and by increasing education and awareness among all roadway users.

Policies/Actions:

P3.1 Staff will be trained in the latest design and operational best crash-reduction practices.

P3.2 Work with neighboring cities and other jurisdictions to provide safe and adequate pedestrian and bicyclist crossings along major roadways to minimize impediments caused by vehicular traffic, especially along major roadways such as El Camino Real, Foothill Expressway, San Antonio Road, and Grant Road.
[General Plan Circulation Element Policy 4.8]

P3.3 Achieve traffic volumes and speeds on collector and local streets that are compatible with the character of the adjacent land uses, the function of the street, and bicycle and pedestrian traffic.
[General Plan Circulation Element Policy 2.11]

P3.4 Implement the Neighborhood Traffic Management Program and related traffic calming measures to reduce the speed and volume of traffic on local streets within the community, especially in residential areas and adjacent to schools.
[General Plan Circulation Element Policy 2.16]

P3.5 Narrow street segments and intersection approaches at appropriate locations to improve pedestrian safety and reduce travel speeds.
[General Plan Circulation Element Policy 2.19]

P3.6 Continue to work with the Police Department to promote compliance with traffic laws to improve the safety of the local roadway system.
[General Plan Circulation Element Policy 2.21]

P 3.7 Evaluate and improve existing and proposed uncontrolled marked crosswalks with the purpose of improving pedestrian safety and, in doing so, enhance pedestrian accessibility and mobility.

P 3.8 Prioritize investment around each public school that services Los Altos residents, such that every street with sufficient width within a quarter mile of every school in Los Altos has a dedicated walkway on at least one side of the street.

Figure 2-2: Crosswalk on El Monte Road by Almond Elementary

P 3.9 Prioritize investment on all arterials, collectors, and neighborhood collector streets in Los Altos for dedicated walkways on both sides of the street.

2.2.4 Goal 4: Increase pedestrian mode share for all types of local trips in order to reduce transportation-related greenhouse gas emissions, congestion, and parking demand.

Policies/Actions:

P4.1 Annually monitor progress towards implementing the Pedestrian Master Plan with a specific focus on local vehicle trip reduction by 2020.
[Climate Action Plan Action Item 1.1.B]

P4.2 Support local events to raise awareness about school commutes, including events at local schools.
[Climate Action Plan Action Item 1.1.C]

P4.3 Continue to pursue and implement Safe Routes to School projects.
[Climate Action Plan Action Item 1.1.D]

P4.4 Develop and utilize a Complete Streets checklist for all major capital projects and maintenance programs to implement traffic calming plans and projects.
[Climate Action Plan Action Item 1.1.E]

P4.5 Encourage City employees to use non-motorized transportation, such as walking or bicycling, when conducting off-site City business.
[Climate Action Plan Action Item 5.2.B]

P4.6 Develop City-sponsored programming and materials that increase public awareness of available facilities for safe walking, such as a walking map, walking tours of the city, street fairs, farmers markets, festivals, and pedestrian safety pamphlets, and promote these materials on the City website and at special events.

P4.7 Develop parking restrictions along identified suggested Safe Routes to School walking routes, in effect during morning drop-off periods (typically from 7AM to 9AM). Additional signage should be used to support the parking restrictions. Develop a year-long pilot-program at a single school, selected in joint cooperation with the Los Altos School District, with results measured and analyzed before a possible citywide program expansion.

P4.8 Develop a maintenance schedule for sidepaths, trails, and bike lanes. Consider annual review of suggested school routes prior to a new school year.

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3. Existing Conditions

This chapter presents existing pedestrian conditions, including demographics, land use, pedestrian facilities and pedestrian programs, to identify where new facilities are needed and what programs will better support pedestrian activity in Los Altos.

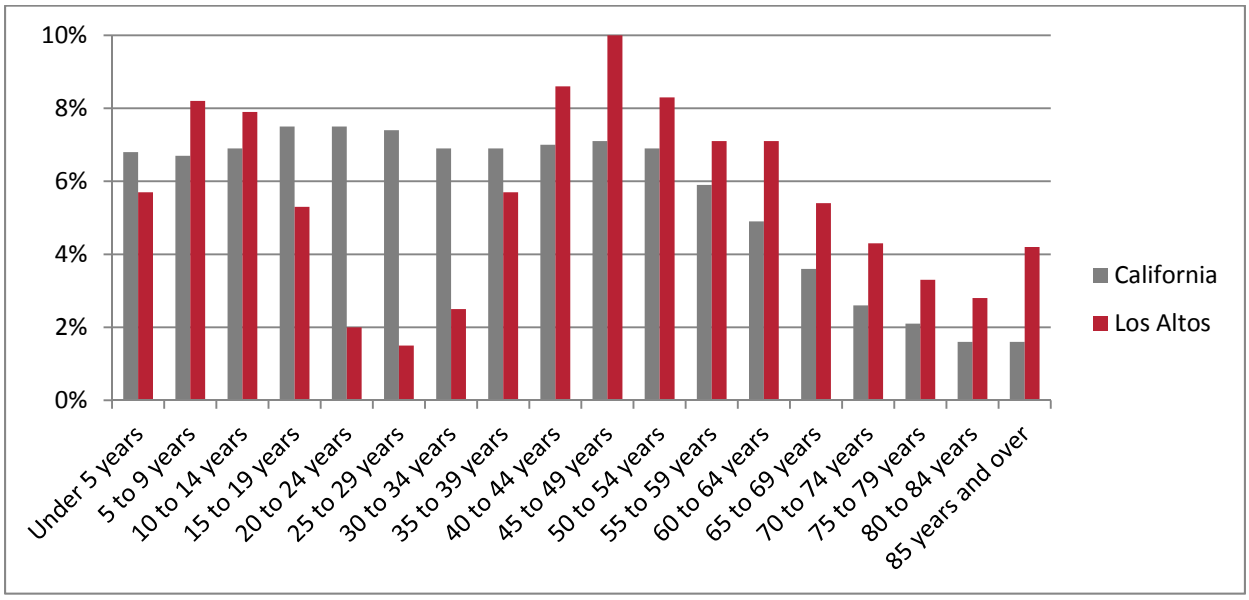
3.1. Demographics and Land Use

To make meaningful improvements for pedestrians in Los Altos, it is first essential to understand the City's demographic makeup and the patterns of land use around the city. Assessing demographics helps us understand the most likely types of walking trips in Los Altos, like walking to school or to the store. Assessing land use—the layout of residential neighborhoods, retail and commercial areas, and parks—helps us understand how "walkable" a city is: how close a resident is to jobs, services, schools, and parks.

3.1.1 Demographics

Los Altos is a small bedroom community in northern Santa Clara County. Compared to its neighbors, Los Altos at 4,500 people per square mile is slightly less dense than neighboring Mountain View (6,000/sq mi) and Sunnyvale (6,200/sq mi) but more dense than northern neighbor Palo Alto (2,500/sq mi) and Los Altos Hills (900/sq mi).

While there are few Los Altos households without a vehicle (an estimated 100 employed residents of Los Altos do not have access to a car), there are many households with members who cannot or may have difficulty driving. Out of nearly 29,000 residents, 20 percent are 65 years of age or older (and over half of these individuals are older than 75 years of age), as shown in **Figure 3-1.** Another 21.8 percent of Los Altos residents are under the age of 15. Additionally, 7.1 percent of Los Altans have a disability, including nearly one-quarter of those over the age of 65.



Source: American Community Survey 5-year estimates, 2008-2012

Figure 3-1: Age of Residents in California and Los Altos

3.1.2 Land Use and Destinations

'Walking distance' is typically defined as trips ranging from ¼ mile to just under 1 mile.[1] Key factors for determining walkability include the density of destinations within such a distance, such as whether jobs, goods, and services are located close to residential neighborhoods and/or near major transit stops. **Figure 3-3** on the following page shows land uses in Los Altos.

Key Destinations

Primary trip generators and destinations in Los Altos include:

Commercial Areas

Downtown and the Village Court/El Camino Real area are the largest and busiest shopping areas within the City. Neighborhood commercial centers that support residential neighborhoods include Loyola Corners, Woodland, Rancho Shopping Center, and Foothill Crossing. Additional commercial nodes include medical facilities, and the City's civic/senior center complex near Hillview and San Antonio Road.

According to a 2011 survey of nearly 1000 senior citizens in Los Altos and Los Altos Hills, 24 percent reported frequently attending Hillview Senior Center in Los Altos.[2]

Medical Services

While nearby El Camino Hospital and Stanford Medical Center offer health specialists, there are local general practitioners, dentists, eye doctors, and other medical professional offices that generate trips to and within Los Altos' neighborhood commercial zones such as on the west side of Altos Oaks Drive and along San Antonio Road near Downtown Los Altos.

Figure 3-2: In front of Los Altos High School

Parks and Schools

Schools in Los Altos are neighborhood-based, with elementary schools serving smaller enrollment areas than the junior high school that pulls from wider areas. Los Altos High School **(Figure 3-2)** pulls students from the cities of Mountain View, Los Altos, and Los Altos Hills. Additionally, neighborhood parks or playgrounds are found within walking distance (approximately ½ mile) of nearly every resident of Los Altos.

[1] *Yang & Diez-Roux, Walking Distance by Trip Purpose and Population Subgroup, American Journal of Preventative Medicine. Jul 2012; 43(1): 11-19.*
[2] *Senior Committees of Los Altos and Los Altos Hills Senior Needs Survey, 2011.*

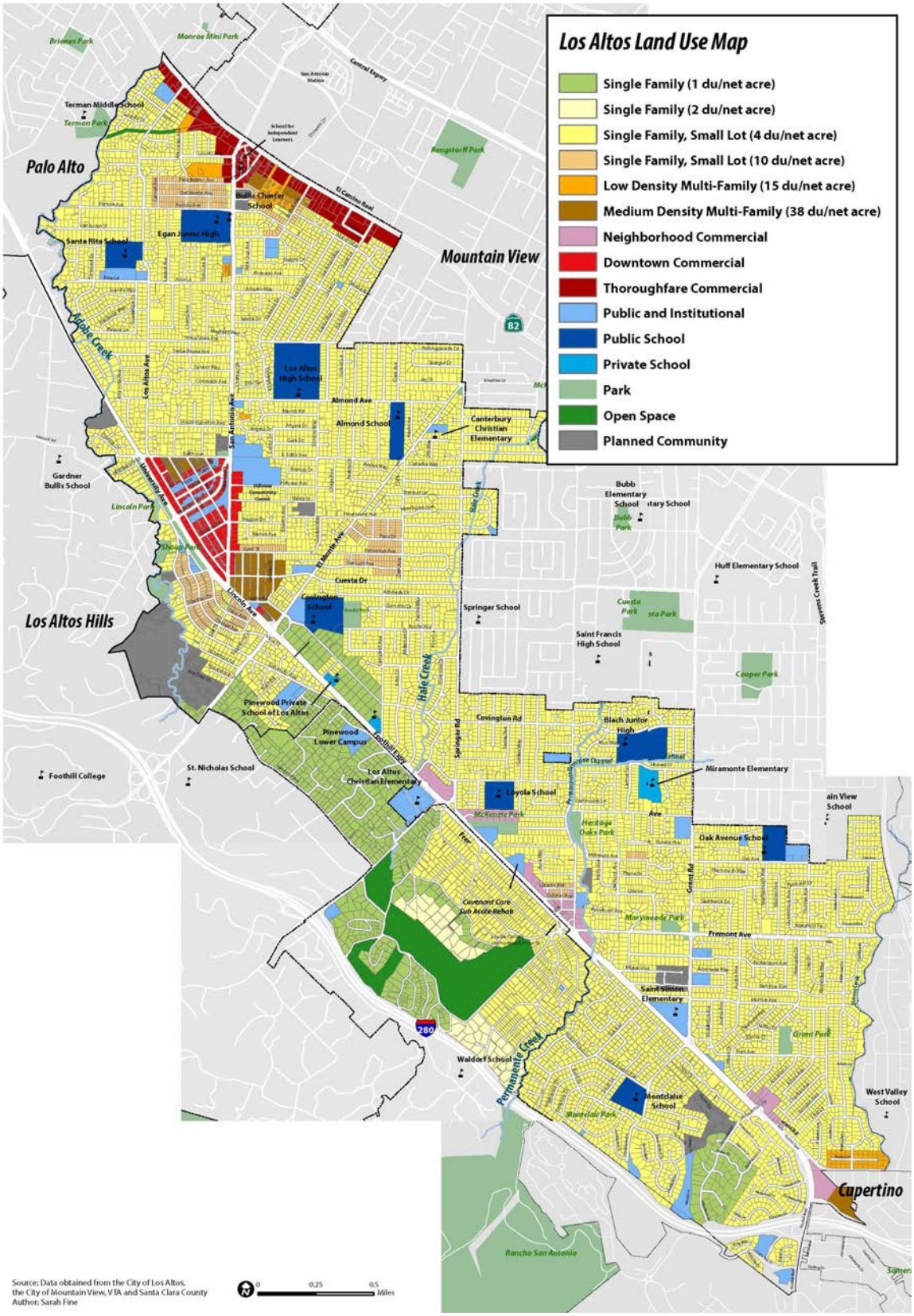


Figure 3-3: Los Altos land uses

3.2. Commuting

According to the American Community Survey, conducted by the U.S. Census Bureau, 1.6 percent of the 11,959 workers living in Los Altos walk to work (**Table 3-1**). The walking rate in Los Altos is similar to other semi-rural and suburban communities with low-density land use patterns.

In addition to the walking mode share of Los Altos residents, the American Community Survey also gathers data on workers whose place of work is within Los Altos. Of those workers, who may or may not live in Los Altos, almost two percent walk to work.

The U.S. Census collects information about the primary mode that residents use when commuting to work. While this provides important data about commute trips, these data only tell us about those residents who are employed and how they typically travel to work. This data does not capture the many other walking trips that Los Altos residents take, including school, shopping, and recreational trips. Additionally, it does not capture the walking trips that someone in Los Altos might take after parking a vehicle or in order to use public transit, nor does it capture non-Los Altos residents who walk in the city.

Table 3-1: Regional Comparisons of Commute Modes

Location	Population	Estimated Residents Who Work	Estimated Residents Who Walk to Work	Estimated Percent of Residents Who Walk to Work	Estimated Residents Who Work from Home	Estimated Percent of Residents Who Work from Home
Los Altos	29,154	12,556	276	2.2%	1,103	9.0%
Cupertino	58,710	25,707	312	1.2%	1,490	5.9%
Mountain View	75,091	42,375	1,118	2.7%	1,949	4.7%
Palo Alto	64,738	30,955	1,763	5.8%	2,598	8.6%
Sunnyvale	142,579	72,633	905	1.3%	3,028	4.3%

There are other substantial modes include driving alone and carpooling. Source: American Community Survey 5-Year Estimate, 2009-2013

3.3. Multi-Modal Connections

Access to frequent transit provides pedestrians with a greater set of destinations compared to walking alone. The reach and frequency of transit service, as well as transit stop amenities, have a role in the desirability of transit as a mode choice.

3.3.1 Transit Service

Transit access in Los Altos is provided by Valley Transportation Authority (VTA) and Caltrain. VTA provides local and regional connections through bus service, such as in **Figure 3-4**. As part of the Pedestrian Master Plan process, all VTA bus stops in Los Altos with at least one boarding or alighting per day (averaged over both weekday and weekend) were assessed for ADA and general accessibility. Characteristics assessed included accessibility of the bus stop and route to nearest intersection, condition of intersection curb ramps, and distance/accessibility to nearest crosswalk of the major street. Provision of benches was also observed.

Regional rail transit is provided by Caltrain and VTA Light Rail. The Caltrain station at San Antonio Road is 0.54 miles from the nearest City boundary and the Mountain View station is less than one mile. At San Antonio Caltrain, Los Altans can board local and limited stop trains. At Mountain View Caltrain, rail service includes local, limited-stop, light rail, and baby bullet trains, providing faster connections to points further north and south along the Peninsula and to San Francisco.

Figure 3-4: A bus stop on Grant Road. Transit access in Los Altos is provided by the Valley Transportation Authority (VTA) and Caltrain (across the border in Mountain View).

The Mountain View Caltrain Station consistently ranks among the top three Caltrain stations in total ridership. Mountain View accounts for 8% of passengers in the Caltrain system; its average weekday passenger activity totals almost 8,000 ons and offs. The San Antonio Road Station sees significantly less ridership, with average ons and offs totaling just over 1200, but ridership has been increasing. Between 2011 and 2012, San Antonio Ave saw the second-largest increase in ridership system-wide, growing 28 percent in one year.[3] VTA Light Rail can be accessed at the Mountain View Station as well. There, passengers board the Mountain View-Winchester line, which extends south from the Mountain View station with local stops in Santa Clara and San José. Transfers to the Alum-Rock Santa Theresa line are made at Tasman Station on the Mountain View-Winchester line.

Figure 3-5 shows the average number of passengers boarding Caltrain during a weekday and the number of passengers boarding VTA buses during a typical week in Los Altos.

[3] *Caltrain, "February 2013 Caltrain Annual Passenger Counts Key Findings."*

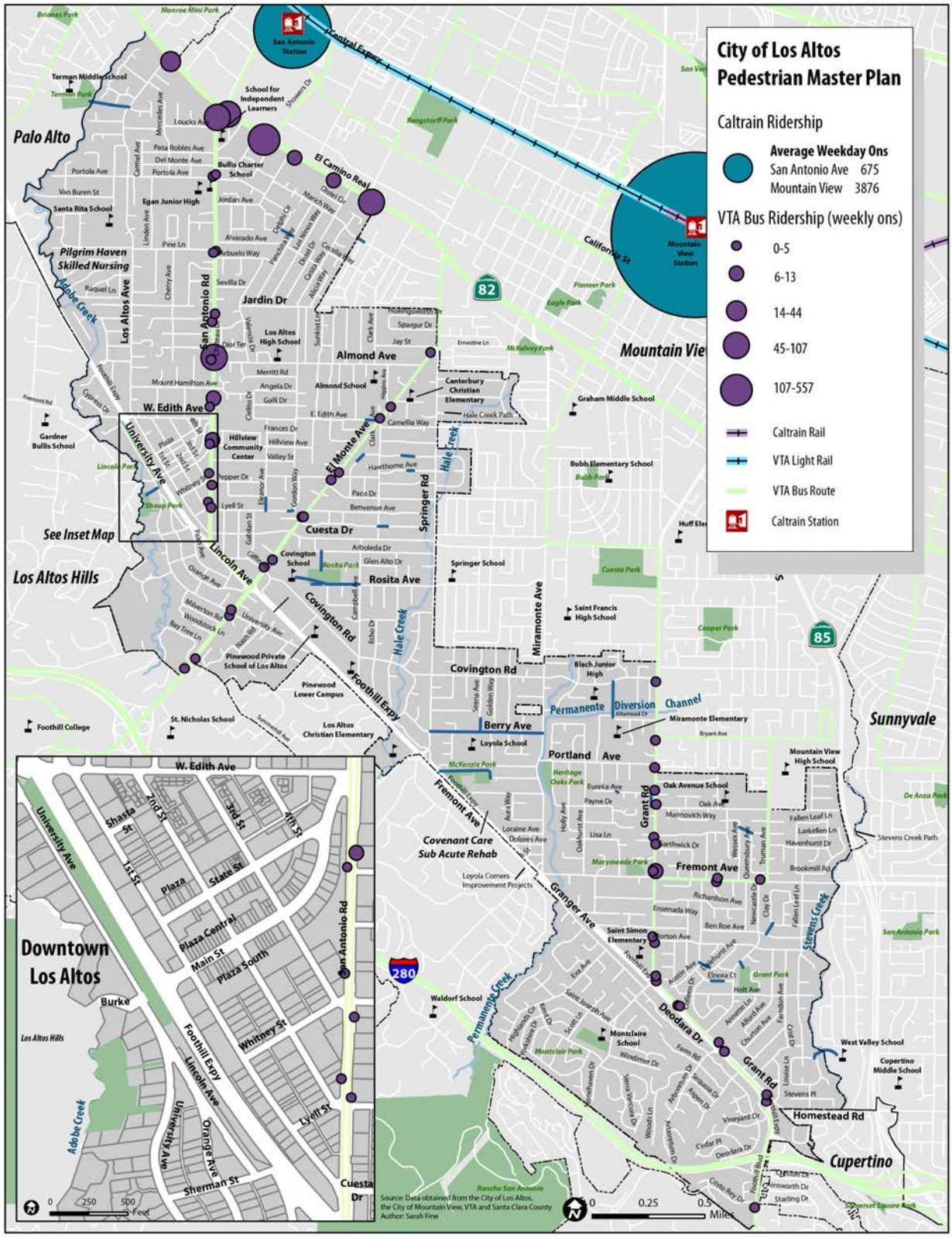


Figure 3-5: Average station/stop level transit ridership

3.3.2 Bus Stop Amenities

While most bus stops in Los Altos provide a bench for waiting passengers, few bus stops are sheltered. This is generally due to low transit demand outside of key stops along San Antonio Road and El Camino Real, but may also be a factor of limited space within the waiting area. The current locations of bus shelters in Los Altos are shown in **Figure 3-5**. Additional assessment of bus stop accessibility is provided in Chapter 5.

3.3.3 Bus Stop Accessibility

Although bus stops on El Camino Real are served by concrete sidewalks and good proximity to signalized crossings, considerable barriers including light poles, trees, street furniture, and numerous driveways with steep cross slopes limit ADA accessibility. The overall width of the sidewalk is also inadequate for the high volume of users, which includes over 8,000 transit riders each week heading to and from eastbound bus stops alone between San Antonio Road and Rengstorff Avenue.[4]

San Antonio Road bus stops are generally accessible, particularly southbound stops that have benefitted from recent streetscape improvements that include the city-led reconstruction of the Plaza S parking lot and the David and Lucille Packard Foundation office development. The southbound stop at Whitney and northbound stop at Hillview Avenue remain two of the least accessible stops.

3.4. Existing Programs and Planning

This section provides a summary of selected City programs and plans related to the pedestrian environment. Appendix B provides a thorough review of the planning and policy efforts relevant to active transportation, as identified in **Table 3-2**. The recommendation of this Plan will be consistent with and build upon the local, regional, and state planning efforts and policies.

Table 3-2: Plans and policies summarized in Appendix B

Plans
Local Plans and Policies
Los Altos General Plan (2002)
Pedestrian Safety Assessment Report (Technology Transfer Program of the Institute of Transportation Studies at the University of California, Berkeley (2011)
Climate Action Plan (2013)
BPAC List - Priority Intersections for Bike and Pedestrian Safety (2013)
City of Los Altos ADA Self-Evaluation and Transition Plan (2013)
Los Altos Parks Plan (2011)
Neighborhood Traffic Management Program (NTMP) (2013)
Collector Traffic Calming Plan (2011)
Los Altos Bicycle Transportation Plan (2011)
Blach School Neighborhood Traffic Study (2011)
Capital Improvement Program

[4] *VTA boardings and alighting, 2013.*

Plans
Local Plans and Policies
Stevens Creek Trail Feasibility Study (in progress, 2014)
Downtown Design Plan (1995)
Sherwood Oaks Specific Plan (2008)
Suggested Routes to School (2008)
City of Los Altos Design Guidelines
Los Altos Municipal Code
Regional Plans and Policies
Mountain View Pedestrian Master Plan (2013)
Palo Alto Bicycle and Pedestrian Master Plan
Palo Alto Safe Routes to School Plans
Plan Bay Area (2013)
Valley Transportation Authority Bus Rapid Transit
Grand Boulevard Initiative Multimodal Corridor Plan (in EIR phase, 2010)
State Plans and Policies
Assembly Bill 32: Global Warming Solutions (2006)
Assembly Bill 1358: Complete Streets (2008)
Senate Bill 375: Sustainable Communities (2009)

3.4.1 Education and Encouragement

Safe Routes to School

The Valley Transportation Authority every year makes grants available through their VERBS (Vehicle Emissions Reductions Based around Schools) program to fund education and encouragement programs through Safe Routes to Schools programs. Such programs encourage students of schools in Santa Clara County to walk or bike to school as a means to reduce morning commute congestion.

Safe Routes to School (SR2S) refers to a variety of multi-disciplinary programs aimed at both increasing the number of students walking and bicycling to school, and reducing the amount of vehicle trips associated with school travel on a national or statewide level. Since 2008, Los Altos has referred to this type of program as "Suggested Routes to School." For this report, "Safe Routes to School" refers to national or statewide programs and their components that contribute to the "Suggested Routes to School" program in Los Altos.

Suggested Routes to School Maps

Since 2008, the City of Los Altos provided suggested routes to school maps for nine schools on its website:

- Egan School
- Blach School
- Covington School
- Gardner Bullis School
- Loyola School
- Montclaire School
- Oak Avenue School
- Springer School
- Santa Rita School

These suggested route maps generally include recommended sidewalks and bikeways. The maps help encourage parents to let their child walk or bike to school.

GreenTown Los Altos/Hills

GreenTown Los Altos/Hills is a grassroots initiative of residents and businesses working to make Los Altos and Los Altos Hills more environmentally friendly. GreenTown goals include reducing vehicle miles travelled in Los Altos.[5]

Traffic Safe Communities Network

The County of Santa Clara guides a collaborative effort of stakeholders to reduce motor vehicle collisions and increase bicycle and pedestrian safety through the Traffic Safe Communities Network (TSCN). TSCN members include representatives from law enforcement, engineering, public health, education, the judicial system, and advocacy groups.[6]

The TSCN Bicycle and Pedestrian Work Group promotes walking and bicycling through education, encouragement, and public policy. Previously funded by a Caltrans Safe Routes to School grant, the group worked with schools in Santa Clara County, including Santa Rita Elementary, to encourage walking and bicycling to school.

3.4.2 Engineering

Traffic Calming

Traffic calming is the practice of engineering roadways to encourage appropriate—often slower—motorist speeds, thereby making walking and bicycling more attractive forms of transportation by increasing pedestrian and bicyclist confidence and safety. The City operates a Neighborhood Traffic Management Program (NTMP), last updated in 2013, that works to slow traffic speeds and increase the comfort of pedestrians, bicyclists, and motorists alike.[7] The City also has a Collector Traffic Calming Plan, from 2011, that provides recommendations for traffic calming devices.

3.4.3 Enforcement

Targeted Enforcement

There are some locations in Los Altos where repeated traffic violations occur and may be resolved with targeted enforcement. The Police Department conducts targeted enforcement at various locations with Class II and III bikeways, which includes heavily traveled areas. The Police Department maintains a database of publicly identified locations where traffic violations have been observed. At the beginning of each school year, the Police Department also targets enforcement around schools.

[5] *For more information about Greentown Los Altos/Hills, visit http://greentownlosaltos.org.*
[6] *For more information on the Traffic Safe Communities Network, visit http://www.sccgov.org/sites/sccphd/en-us/Partners/TrafficSafety/Pages/default.aspx.*
[7] *A traffic calming toolkit is available on the City's website, at http://www.losaltos.ca.gov/publicworks/page/transportation-services.*

Appropriate speeds can be encouraged by speed feedback signs, which notify passing motorists of their speed and display the speed limit. The City has installed speed feedback signs on Miramonte Avenue near Stanley Avenue (as shown in **Figure 3-6**), on Los Altos Avenue near Santa Rita School, and along Grant Road, Fremont Avenue, and Springer Road. Temporary speed feedback signs are available to residents upon request through the police department.

Figure 3-6: Speed feedback sign on Miramonte Avenue near Stanley Avenue

Overgrown Vegetation

Overgrown foliage, as in **Figure 3-7**, can obstruct sidewalks, forcing pedestrians into the roadway. Los Altos Municipal Code 9.20.025 requires property owners to maintain trees, shrubs, plants, and flowers in the area fronting and along the side yard of the property between the property line and the back edge of curb or edge of pavement so that the vegetation does not interfere with public safety or convenient use of streets and sidewalks. Residents may report debris, deteriorated roadway surfaces, faulty traffic signals, and overgrown foliage to the Los Altos Maintenance Division.

Figure 3-7: Overgrown vegetation on El Monte Avenue

3.4.4 Evaluation

Data Collection and Reporting

The City does not routinely collect pedestrian and bicycle volumes and does not require bicycle or pedestrian counts be collected, with the exception of school areas where limited volume data is available since 2003. In 2008, Greentown Los Altos also helped conduct student hand tallies at Los Altos' schools to provide an estimate of travel mode share by school. In 2010, significant count data was provided for key intersections and pedestrian/bicycle routes as part of the Blach Intermediate School walk audit.

In 2008, and most recently 2013, the City also conducted Engineering & Traffic Surveys that document average and critical (i.e., 85th percentile) vehicle speeds and projected Average Daily Traffic (ADT) on arterial and collector roadways, which are important for assessing pedestrian safety and suitability.

Traffic Impacts

The City currently requires assessment of traffic-related impacts, including non-automobile circulation, for all projects that are projected to result in a net increase of 50 daily trips. The City does not currently provide a standard by which to assess these impacts, however, such as pedestrian Level of Service (LOS) or Quality of Service (QOS). Acceptable automobile LOS is generally established as LOS D, although the Circulation Element of the General Plan does allow that LOS E or F may be accepted where there are mitigating circumstances or overriding concerns.

3.4.5 Advisory Commissions

Los Altos Bicycle and Pedestrian Advisory Commission

The City's Bicycle and Pedestrian Advisory Commission (BPAC) is a formal advisory body that supports and advises City Council decision-making related to active transportation projects, plans, and programming. The BPAC meets once a month and maintains a regularly updated project inventory list and FAQ.[8]

Los Altos Planning and Transportation Commission

The Planning and Transportation Commission (PTC) advises the Los Altos City Council on transportation issues related to automobile, pedestrian, bicycle, transit, and ADA-related circulation and access on public right-of-way within the city limits of the City. The PTC meets twice a month and maintains an agenda and minutes on its webpage on the City's website.[9]

3.5. Infrastructure

3.5.1 Pedestrian Inventory

To assess conditions for pedestrians in Los Altos, the City identified a subset of Los Altos streets as priority corridors to evaluate existing conditions and recommend improvements for walking.

Priority corridors were chosen based on existing pedestrian activity, whether a route was identified in Suggested Routes to School maps (2008), the presence of existing sidewalks or pedestrian connectors, and proximity to commercial areas. Figure 3-12 identifies the inventoried segments.

Walkways

Walkways are the basic element of the pedestrian network, providing a separated space outside of the roadway travel lane for people to walk. In Los Altos pedestrian facilities vary significantly, and provide a range of protection and comfort from motor vehicle and bicycle traffic. Facility types fall into four main groups—sidewalks, multi-use paths, pedestrian/bike connectors, and informal walkways such as shoulders and berm-protected walkways.

Sidewalks

Sidewalks create a space for pedestrian activity separated from motor vehicle traffic. Sidewalks, such as in **Figure 3-8**, often accommodate a number of activities and can be divided into one or several zones, based on the activities that occur along the sidewalk.

Figure 3-8: Concrete sidewalk with tree pits in Loyola Corners

Sidewalks in the City include either vertical or rolled curbs. Rolled curbs are mountable, allowing vehicles to encroach onto the sidewalk, which can be advantageous for emergency vehicle maneuverability. However, rolled curbs also make it easy for cars to park atop the curb face, potentially obstructing

[8] *For more information on the Bicycle and Pedestrian Advisory Commission, visit http://www.losaltosca.gov/bicyclecommission.*
[9] *For more information on the Planning and Traffic Commission, visit http://www.losaltosca.gov/planningtransportcommission.*

pedestrian movement along an adjoining sidewalk. Rolled curbs exist primarily within single-family neighborhoods.

Multi-use paths

Figure 3-9: Twelve-foot multi-use path on Rosita Avenue

Paths separate pedestrians from motor vehicle traffic; however, pedestrians may have to share the path with bicyclists and other non-motorized users. Multi-use paths provide a non-motorized paved right-of-way completely separate from any roadway or highway and are classified by specific design criteria established by Caltrans. Multi-use path design standard is at least eight feet of paved width to allow for comfortable two-way movement and two feet of graded shoulders. In Los Altos, multi-use paths are typically adjacent to residential roadways and cross driveways. These paths are most commonly designated for non-motorized transportation uses. Los Altos has six multi-use paths, such as the one featured in **Figure 3-9**, that total approximately 1.4 miles in length.

Pedestrian /Bike connectors

Pedestrian/Bike connectors provide a cut-through for non-motorized users at local dead-end roads. These connectors are generally located in residential neighborhoods and provide a more direct pedestrian route to within and to destinations outside of the neighborhood, as in **Figure 3-10**.

Figure 3-10: This pedestrian connector provides access from Edith Avenue to El Monte Avenue, along the southern edge of Almond Elementary School

Shoulders & Informal Walkways

Where dedicated walkways have not been provided, the quality of the roadway shoulder can determine whether it is an acceptable place for pedestrians to walk. In Los Altos, shoulders range from unimproved dirt or paved areas to a striped shoulder that may be shared with parking and/or bicyclists. On selected roads without formal sidewalks, such as Clark Avenue, Los Altos has created a low-cost informal walkway by installing an asphalt berm that separates a paved shoulder from traffic. **Figure 3-11** shows two examples of this. A map of existing sidewalks and other dedicated pedestrian walkways in Los Altos is presented in **Figure 3-12**.

Figure 3-11: Paved shoulders often double as parking lanes, sidewalks, and bicycle facilities in many residential neighborhoods in Los Altos(left). An asphalt berm (right) converts a paved shoulder into an informal walkway.

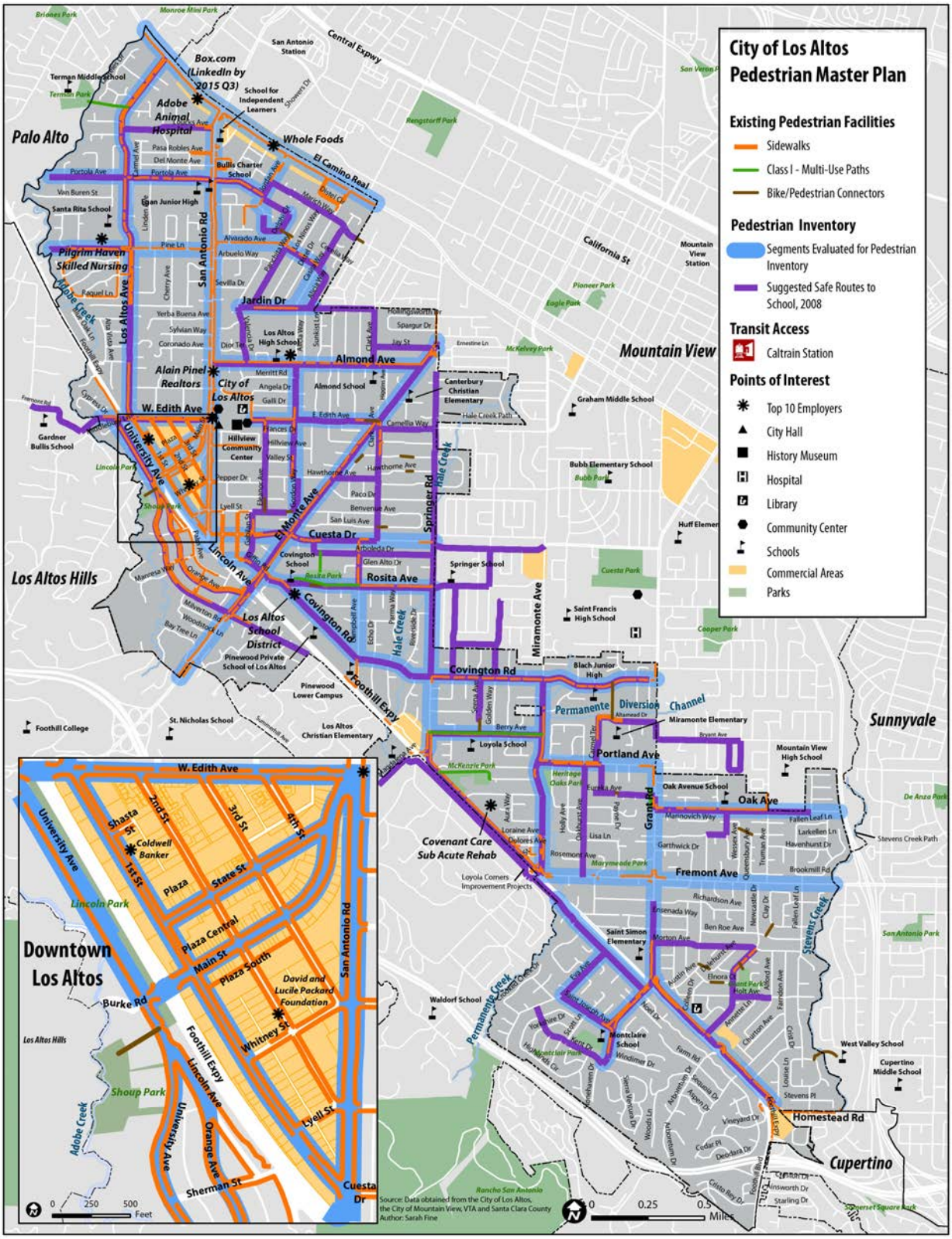


Figure 3-12: Existing pedestrian facilites

3.5.2 Roadway Crossings

Roadway crossings present a unique challenge for pedestrians. A variety of crossing treatments can improve pedestrian access. A map showing crossing treatments and traffic calming measures at Los Altos intersections is shown in **Figure 3-15**. Descriptions of these treatments are discussed in the following sections.

Pedestrian Crossings at Traffic Signals

Traffic signals control movements and provide protected phases for pedestrians to cross. Pedestrian countdown signals tell pedestrians how much time they have to cross the street before the light changes. Countdown signals are especially important for road users who travel slower in the crosswalk than others, such as young children, and seniors.

All traffic signals in Los Altos include pedestrian countdowns and audible signals that can be actuated by hitting push buttons to call the signal, the latter for assisting sight-impaired pedestrians crossing the street.

Major roadways in Los Altos with challenging pedestrian crossing locations include:

- Cuesta Avenue
- E Edith Avenue
- El Camino Real
- El Monte Avenue
- Foothill Expressway
- Fremont Avenue
- Grant Road
- Miramonte Avenue
- San Antonio Road
- Springer Road

Traffic Calming Devices at Roadway Crossings

Curb extensions, or sidewalk/walkway "bulb-outs" into the adjacent parking lane, help shorten crossing distances, provide larger waiting/landing areas for accessibility, and improve pedestrian sight distances and visibility. In areas with high pedestrian demand, they also increase sidewalk capacity for queuing at crosswalks. Examples of well-designed curb extensions exist throughout downtown, including those recently provided by the David and Lucille Packard Foundation office development. **Figure 3-13** shows an example of recent pedestrian improvements near Blach Elementary School.

Figure 3-13: Recent improvements across from Blach Elementary School create a protected waiting area and shorten the crossing distance for pedestrians.

Outside of downtown Los Altos, there are relatively few curb extensions, although several have been built as part of recent Suggested Routes to School projects. "Floating" curb extensions, or chicanes, have also been constructed as part of traffic calming efforts, such as on N. Clark Avenue north of Almond Avenue.

Other traffic calming devices at roadway crossings include raised crosswalks, pedestrian-activated flashers, speed feedback signage and speed humps. Speed humps and speed feedback signage help slow the speed of oncoming vehicle traffic before reaching a key crosswalk. Raised crosswalks and pedestrian-activated flashers, as seen in **Figure 3-14**, help improve the visibility of pedestrians at uncontrolled crossings and reinforce the pedestrian's right-of-way.

Figure 3-14: A crossing on Grant Road at Morton Avenue includes a raised crosswalk, high-visibility striping, and pedestrian-activated in-pavement flashing lights. St. Simon Elementary School is located on the west side of the crossing. A VTA Route 51 bus stop is to the east.

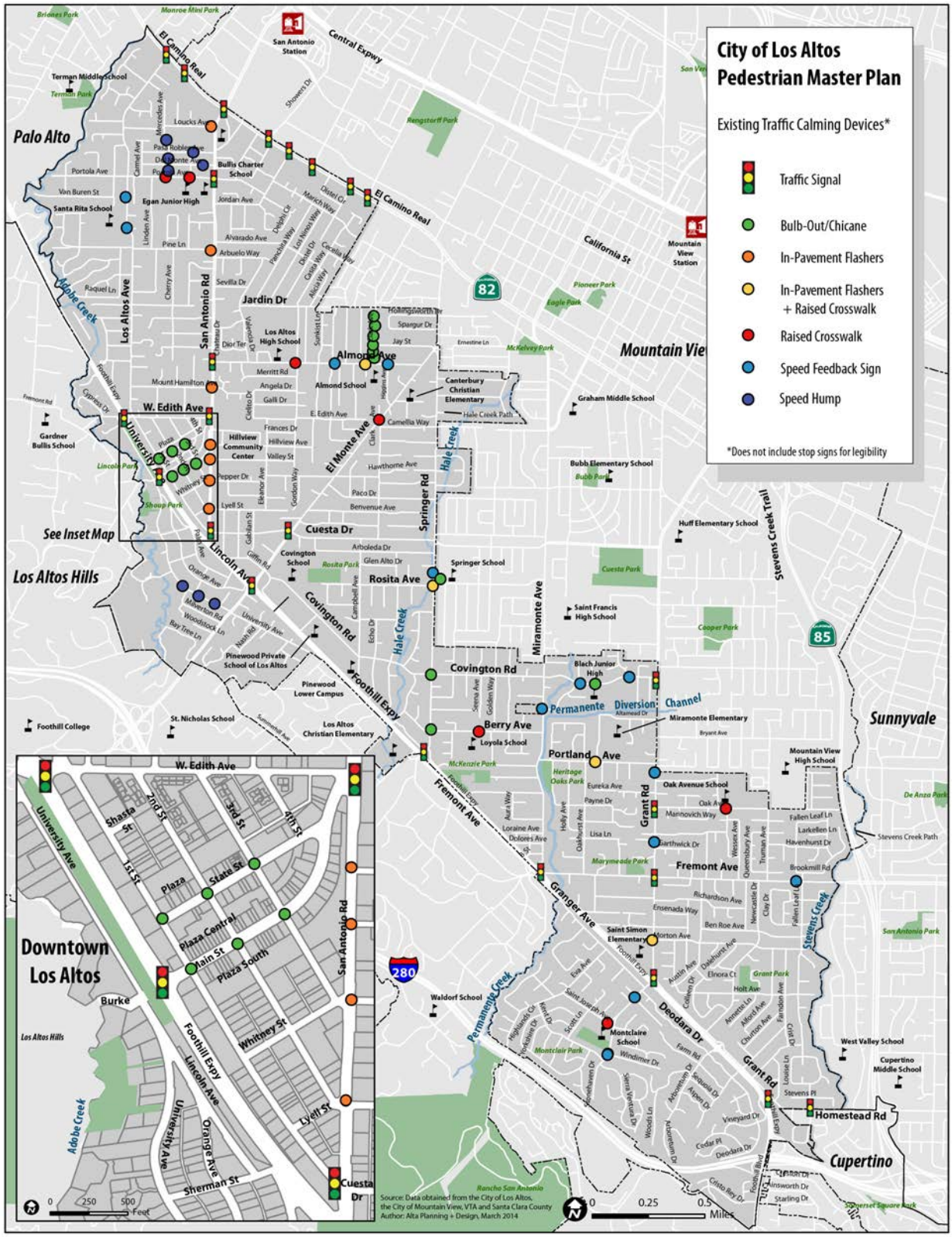


Figure 3-15: Existing traffic signals and traffic calming devices

Marked Crosswalks

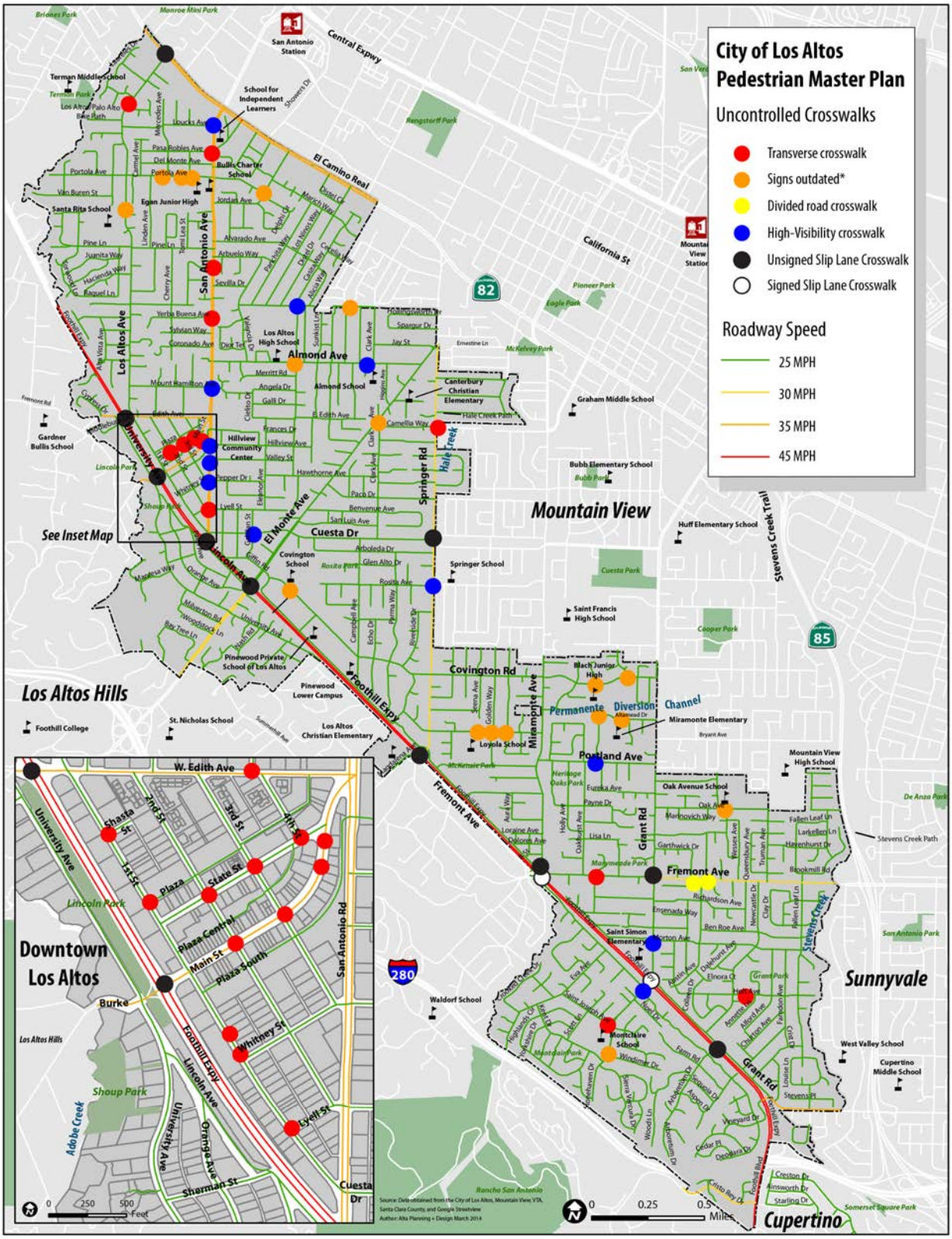
Legal crosswalks are located at all intersections, and are an extension of the sidewalk. Pedestrians have the right-of-way in all crosswalks, marked or unmarked. Marked crosswalks provide enhanced visibility and encourage pedestrians to cross at specific locations. The City currently makes decisions regarding crosswalk design and installation on a case-by-case basis following guidelines set forth by the California Manual on Uniform Traffic Control Devices (CAMUTCD). In general, transverse crosswalks (i.e., two parallel, longitudinal markings) are provided at signalized and major all-way, stop-controlled intersections, although in many locations only two or three legs of the intersections are marked.

An assessment of uncontrolled crosswalks prepared as part of the Pedestrian Master Plan reveals variability in crosswalk design (Figure 3-17).[10] Recent installations and upgrades include sufficient warning signage (known as traffic sign assemblies), high-visibility striping, in-roadway warning lights (actuated by pedestrians), and raised crosswalks (Figure 3-14). In many older installations, however, crosswalk visibility is more limited and signage is missing, outdated, or not optimally located. These include downtown decorative crosswalks, which have limited reflectivity and signage, as well as Foothill Expressway and other "free" right-turn slip lanes with minimally treated crosswalks. Multi-lane uncontrolled crosswalks, which tend to pose the greatest challenges for pedestrians due to a "double threat" of collision, exist at El Camino Real and San Antonio Road. [11]

Figure 3-16: Example of a minimal crosswalk treatment across Edith Avenue at 4th Street (left), and a decorative crosswalk with curb extensions on Main Street in downtown Los Altos (right)

[10] *For a good summary of the discussion of pedestrian safety and marked crosswalks, see Mitman, et al (2007). "The Marked Crosswalk Dilemma: Uncovering Some Missing Links in a 35-Year Debate," Transportation Research Board 2008 Annual Meeting CD-ROM.*

[11] *A 'double threat' condition refers to a scenario in the crosswalk when the nearest lane of vehicle traffic yields to a pedestrian but not the vehicle on the inside travel lane.*



**The outdated signs are not consistent with current CAMUTCD standards; however, under the "grandfather" clause, the signs shall be permitted to be retained for the remainder of their useful service life.*

Figure 3-17: Uncontrolled crosswalk map

Medians

Medians separate opposing lanes of traffic and can be used as a refuge by pedestrians to aid in crossing wide roadways. Center landscaped median islands help to physically separate opposing lanes of traffic and can offer a sense of protection for pedestrians crossing the roadway. Landscaped medians may also help reduce vehicle travel speeds (since the roadway is visually more interesting and narrow) as well as localized urban heat island effects (by improving tree canopy).

In all but a few cases center medians within Los Altos are not optimally designed to benefit pedestrians. They are typically too narrow to provide accessible refuge for pedestrians desiring to make "two-phase" roadway crossings, and are too narrow for additional warning signage to improve crosswalk visibility.

More so than center medians in Los Altos, triangular refuge islands help improve walkability by reducing crossing distances and separating vehicle movements at skewed and/or multi-leg intersections (of which there are many in Los Altos). Slip lane refuge islands, also called "pork chop islands" are most commonly applied at intersections with free-right-turn lanes.

A successful example of both a triangular and center median can be found at the entrance to Main Street from San Antonio Road, where they offer accessible refuge while also acting as a gateway feature into the downtown, as seen in **Figure 3-18**.

Figure 3-18: Two types of medians—slip lane and center—shorten crossing distances and create a gateway at the skewed intersection of Main Street and San Antonio Road. (Image: Google)

Crossing Guards

Although not an engineered facility, crossing guards are an important factor at street crossings. Crossing guards are located at 18 locations in Los Altos, mapped in **Figure 3-19**, assisting students who walk or bike to school. Crossing guards are located when requested by the School District, where the volume of traffic—for both pedestrians and vehicles—warrants extra protection.

Crossing guard shifts are timed to coincide with the various bell schedules of the school the guard is serving. Shifts typically begin 30 to 45 minutes before and end 15 minutes after the morning bell. In the afternoon, crossing guards are present 15 minutes before the first afternoon bell and 30 to 45 minutes after the last.

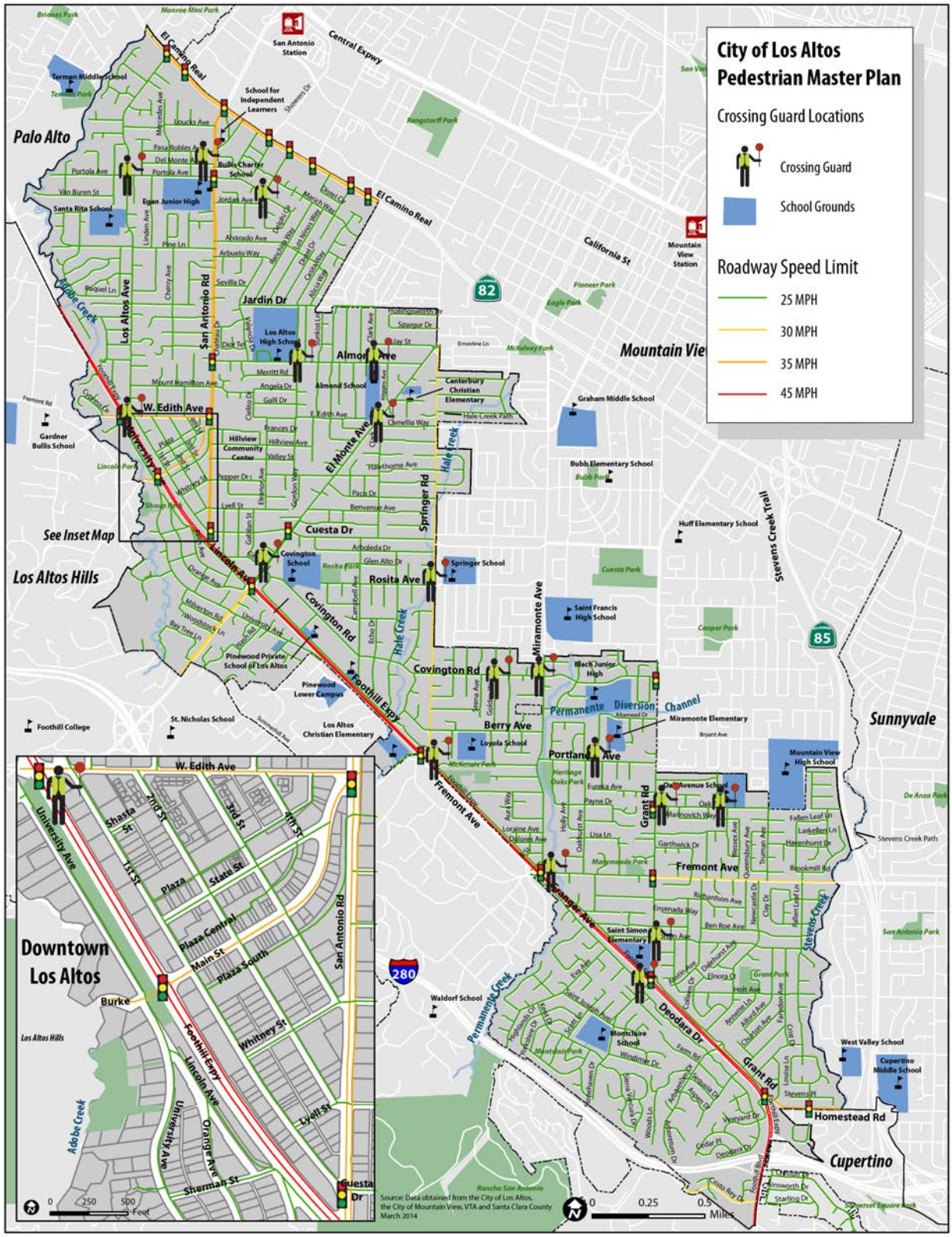


Figure 3-19: Crossing guard locations

3.6. Safety

3.6.1 Roadway Speed Limits and Vehicle Speeds

The posted speed limit of most roadways in Los Altos is 25 mph. Exceptions are listed in the table below, which identifies recorded 85th percentile speeds and land uses adjacent to roadways in Los Altos with speed limits greater than 25 mph.

According to speed surveys conducted in 2008 and 2013, most roadways listed in **Table 3-3** experience 85th percentile vehicle speeds that are well above the posted speed limit. For several corridors, the posted speed limit had been proposed to increase to more closely match that of the critical vehicle speed, although no changes have been approved by City Council as of early 2015.

The City does have a traffic calming plan for collector arterials (**Figure 3-20**), but most recommendations have been challenging to incorporate. Many require significant alterations to the right-of-way and have limited support from adjacent neighbors, according to City officials. Concepts from the traffic calming plan also did not take into account potential installation of sidewalks, walkways and trails.

Table 3-3: Speed Limits and Actual Speed on Select Roadway Segments[12]

Speed Limit	Roadway	85th Percentile Speed[13]	Adjacent Land Uses
45 MPH	Foothill Expy	48-54mph	Downtown commercial, neighborhood commercial, single family residential, school
35 MPH	El Camino Real	41mph	Thoroughfare commercial, low and medium density multi-family residential
	Homestead Rd	37-42mph	Neighborhood commercial, multi-family and single-family residential
	San Antonio Rd	37-42mph	Neighborhood commercial, single family residential
30 MPH	Cristo Ray Dr	40mph	Single-family residential, park
	El Monte Ave (I-280 to Foothill Expressway)	43mph	Single family residential
	Fremont Ave (Grant to east city limits)	37mph	Neighborhood commercial, single family residential, park
	Springer Rd	36-39mph	Single family residential, school, neighborhood commercial
25 MPH (previously recommended for speed limit increases)[14]	Covington Rd (Fremont to Miramonte)	34mph	Single-family residential
	Cuesta Dr (El Monte to east city limits)	36mph	Single-family residential
	W. Edith Ave	33mph	Single family, medium density multi-family, downtown commercial
	El Monte Ave (Foothill Expy to Springer Rd)	34mph	Single-family residential, school, churches
	Fremont Ave (El Monte to Grant)	35-37mph	Neighborhood commercial, medium-density residential, single-family residential, parks
	Granger Rd	35mph	Single-family residential
	Grant Rd	37-39mph	Neighborhood commercial, single family residential, park
	Miramonte Ave	35mph	Neighborhood commercial, single family residential, park
	Portland Ave	33mph	Single-family residential, school, church
	St Joseph Ave	31mph	Single-family residential, school

[12] *Los Altos speed limits are 25 mph unless otherwise posted.*
[13] *Data from 2013 Engineering & Traffic Survey.*
[14] *Speed limits not currently enforceable by rada.r.*

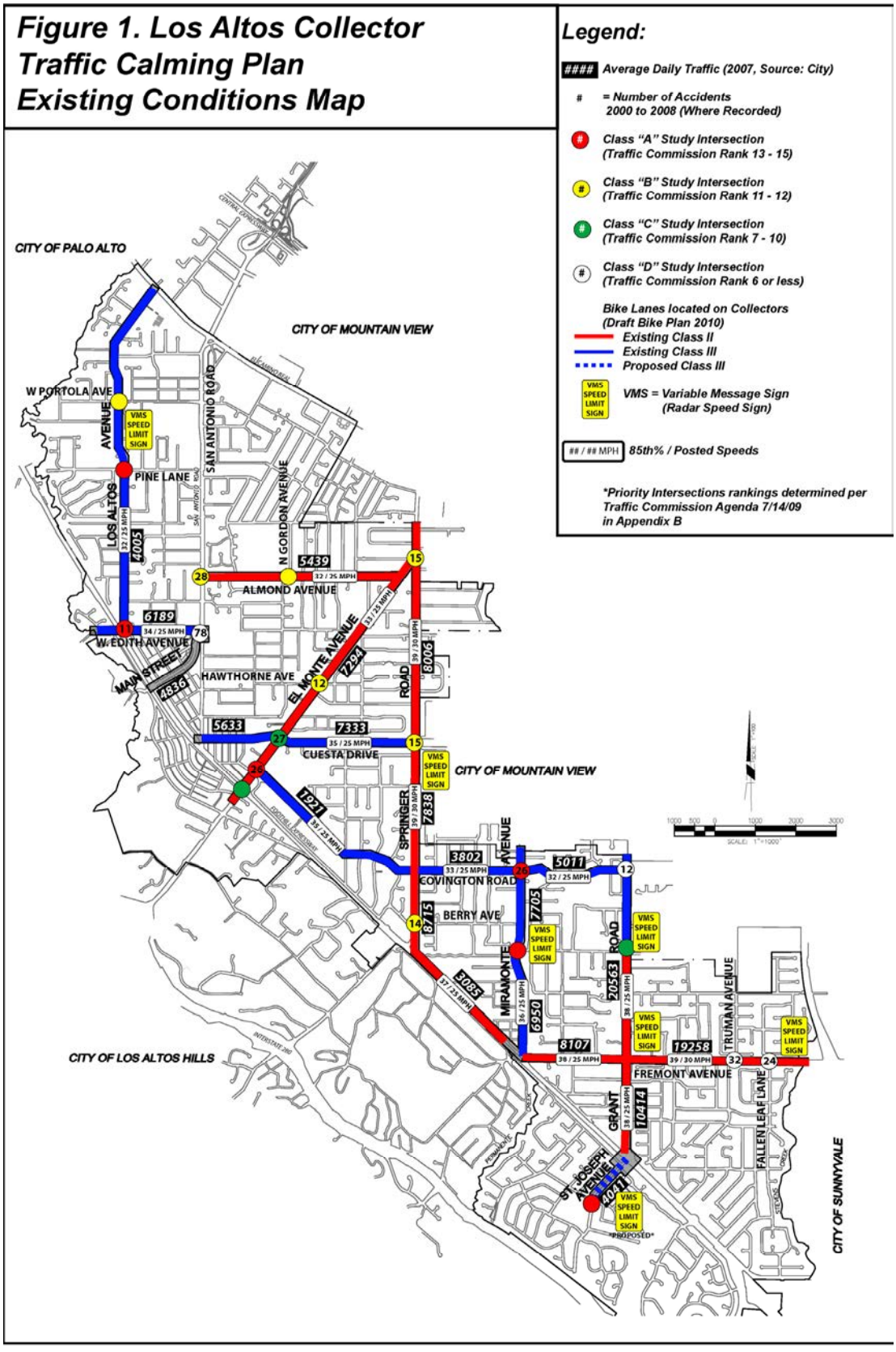


Figure 3-20: Collector traffic calming existing conditions map (2011)

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4. Needs Analysis

This needs analysis examines where pedestrian improvements are needed in Los Altos. The examination begins with a quantitative analysis of pedestrian-related collisions and review of a Pedestrian Suitability Index model to understand locations likely in need of pedestrian related improvements based on supply of pedestrian infrastructure and pedestrian demand. It is followed by a summary of issues common to the citywide pedestrian network, concluding with a summary of public outreach efforts.

4.1. Collision History

Collision data for Los Altos was collected using the Statewide Integrated Traffic Records System (SWITRS). This data only includes collisions reported to the California Highway Patrol (CHP) and local police agencies, therefore the totals presented in this section likely represent an underestimate of the total pedestrian-related collisions that have occurred in Los Altos, particularly those that caused only minor injuries.

With relatively modest and dispersed pedestrian volumes throughout Los Altos, few statistically valid conclusions can be made about the risk exposure of pedestrian-related collisions with respect to a particular location. In general, however, pedestrian-related collisions occur where the most people walk and/or drive (e.g., in downtown and along El Camino Real), and the overall number of collisions is relatively low compared to peer California cities.

From 2008-2014, 33 reported pedestrian-related collisions occurred in Los Altos. Almost half of the pedestrians, 45 percent, were crossing the roadway within a crosswalk. **Figure 4-1** shows the pedestrians' movements when the collision occurred.

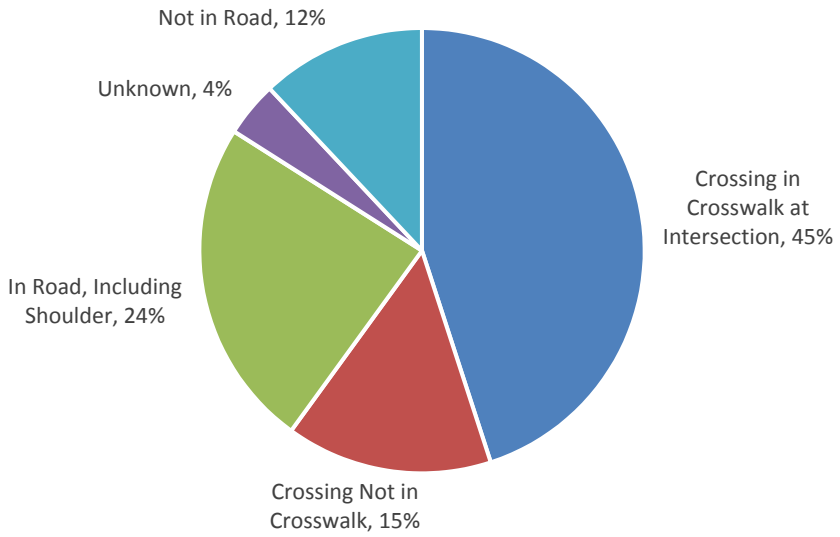

Figure 4-1: Pedestrian movement preceeding collision

Eleven of the collisions were recorded in downtown Los Altos, and two others near downtown, just east of San Antonio Road. All of the collisions resulted in an injury, ranging from a fatality to complaint of pain. Three collisions were fatal:

- El Camino Avenue at Showers Drive
- Los Altos Avenue at Hacienda Way
- San Antonio Road and Loucks Avenue, one block from El Camino Real

Four injury-inducing collisions were reported on El Camino Real over this time period, as were two injury collisions at Almond Avenue and Gordon Way near Los Altos High School (see **Figure 4-2**).

Children and older adults are two groups most susceptible to being involved in collisions as pedestrians. Eleven collisions involved children under the age of 18; thirteen other collisions involved adults over the age of 65. Seven of the 25 collisions occurred during morning commute hours, between 8am and 10am. Eleven collisions occurred in the afternoon, between the hours of 3pm and 7pm.

That so many collisions occurred while pedestrians were crossing intersections in crosswalks may indicate that collision locations need additional crossing treatments. These locations include:

- 3rd Street at Main Street
- El Camino Real at San Antonio Road (two collisions)
- El Camino Real at Showers Drive
- Homestead Road at Fallen Leaf
- Los Altos Avenue at Hacienda Way
- Pine Avenue at Los Altos Avenue
- San Antonio Road at Lyell Street
- State Street at 1st Street
- State Street at 3rd Street

Over half of the collisions were the fault of the driver (70 percent), the primary cause being a violation of the pedestrian right-of-way. Seven collisions were the fault of the pedestrians for violating the automobile right-of-way. This indicates the need for greater education and awareness of pedestrian safety for both drivers and pedestrians.

The roadways with the most collisions were El Camino Real (eight collisions), San Antonio Road (two collisions) and State Street (five collisions). These roads should have high priority for infrastructure improvements.

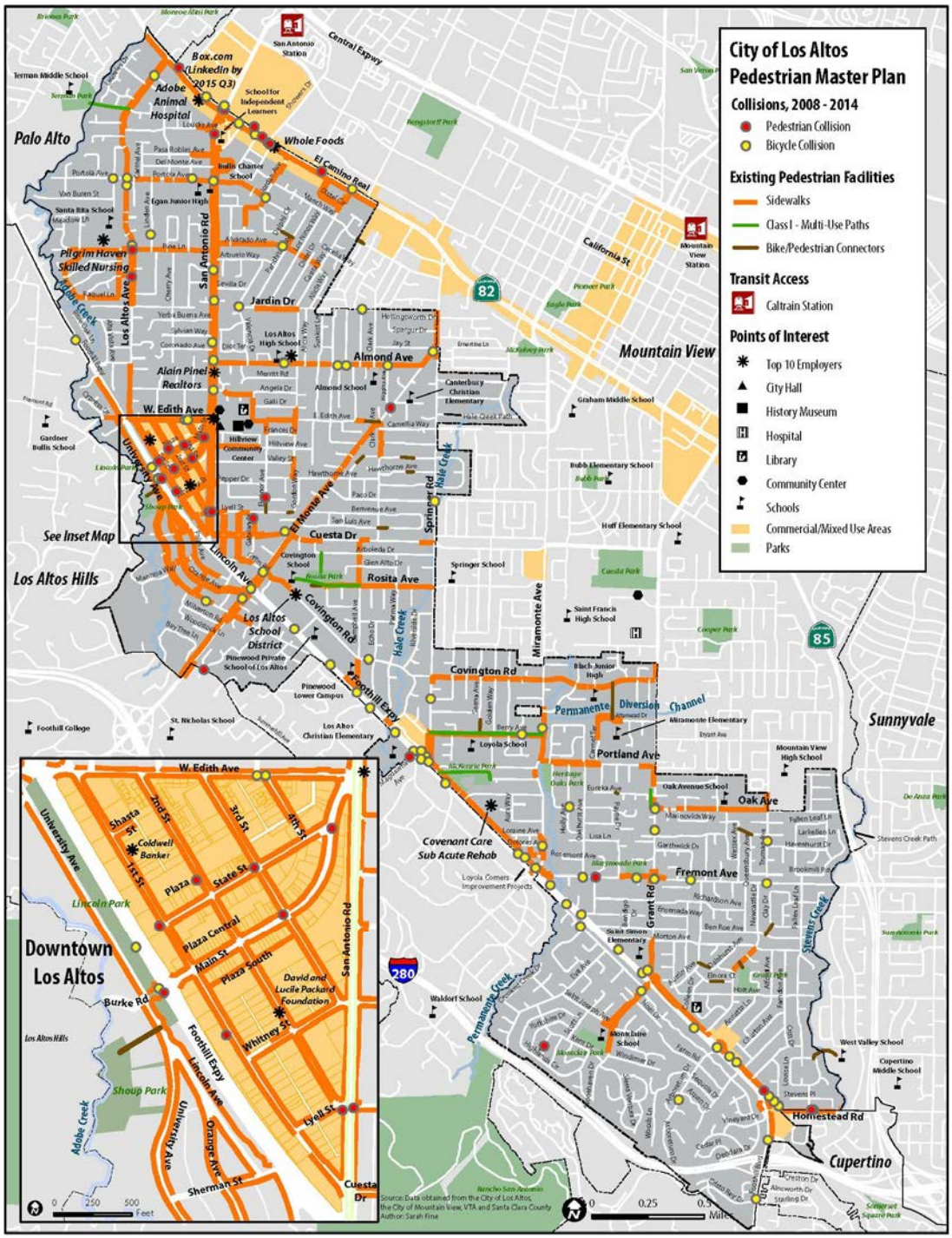

Figure 4-2: Pedestrian- and bicycle-involved collisions in Los Altos, 2008-2014

4.2. Pedestrian Demand and Suitability

As part of the Pedestrian Master Plan, a Pedestrian Suitability Index (PSI) was conducted to identify areas for improvement and help prioritize potential pedestrian projects. This section presents a summary of the Pedestrian Suitability Index (PSI) analysis for Los Altos, which is detailed in Appendix C: Pedestrian Suitability Index Memo.

The PSI measures the relationship between supply (the pedestrian network) and demand (pedestrian activity) by quantifying factors that support or hinder pedestrian movement, utilizing Geographic Information Systems (GIS) software. PSI results can be used to identify geographic patterns of supply and demand for pedestrian infrastructure, defining variations in pedestrian demand and the experience of pedestrians on the street across the city.

PSI provides the following benefits:

- Quantifies factors that impact pedestrian activity
- Provides for a geographically informed project list
- Helps identify pedestrian network gaps and corridors as potential projects
- Guides community leaders and the public on one aspect of the project prioritization process

4.2.1 Development of PSI

The analytical methods in the PSI provide an objective, data-driven process of identifying network gaps and areas of high pedestrian activity. PSI combines categories representative of where people live, work, play, access transit, and go to school, creating a composite sketch of city-wide demand. Los Altos' specific land use and transportation factors, such as the Downtown and neighborhood commercial nodes, are considered as well as demographic factors influencing high pedestrian trip generation, such as percentage of zero-vehicle households. A variety of roadway and sidewalk characteristic categories provide a general understanding of the quality of the pedestrian environment.

4.2.2 Supply and Demand Typology Model

- Areas with **high demand** for walking and **high supply** of suitable infrastructure can benefit from innovative programs and capital projects that further support walking and closure of key gaps. In some cases further study of high suitability may be required, but overall these areas represent cost-effective opportunities for improvements.
- Areas with **high demand** and **low supply** of suitable infrastructure can benefit from infrastructure improvements to improve walking conditions. These areas may require new or wider sidewalks/ walkways to accommodate high levels of demand, traffic calming, or marked crossings. They should also be considered high priority areas for investment.
- Areas with **low demand** for walking and **high supply** of suitable infrastructure can benefit from programs to encourage walking, and land use changes or development to increase the density of attractors and generators. These areas may be considered medium priority for investment.
- Areas with **low demand** for walking and **low supply** of suitable infrastructure can benefit from basic infrastructure improvements. These areas generally should be low-priority for investments, except in cases where connectivity of neighborhoods or key routes serving high demand areas are identified.

Figure 4-3 illustrates the combination of the supply model with Demand Scenario 3: Learn and Play. Because the demand scenario weighted school and parks more heavily than residential density and job density, the areas surrounding schools and parks are identified as areas with high demand for pedestrian facilities (signified by dark blue and red lines). Areas with low supply (red) are possible focus areas for pedestrian improvements.

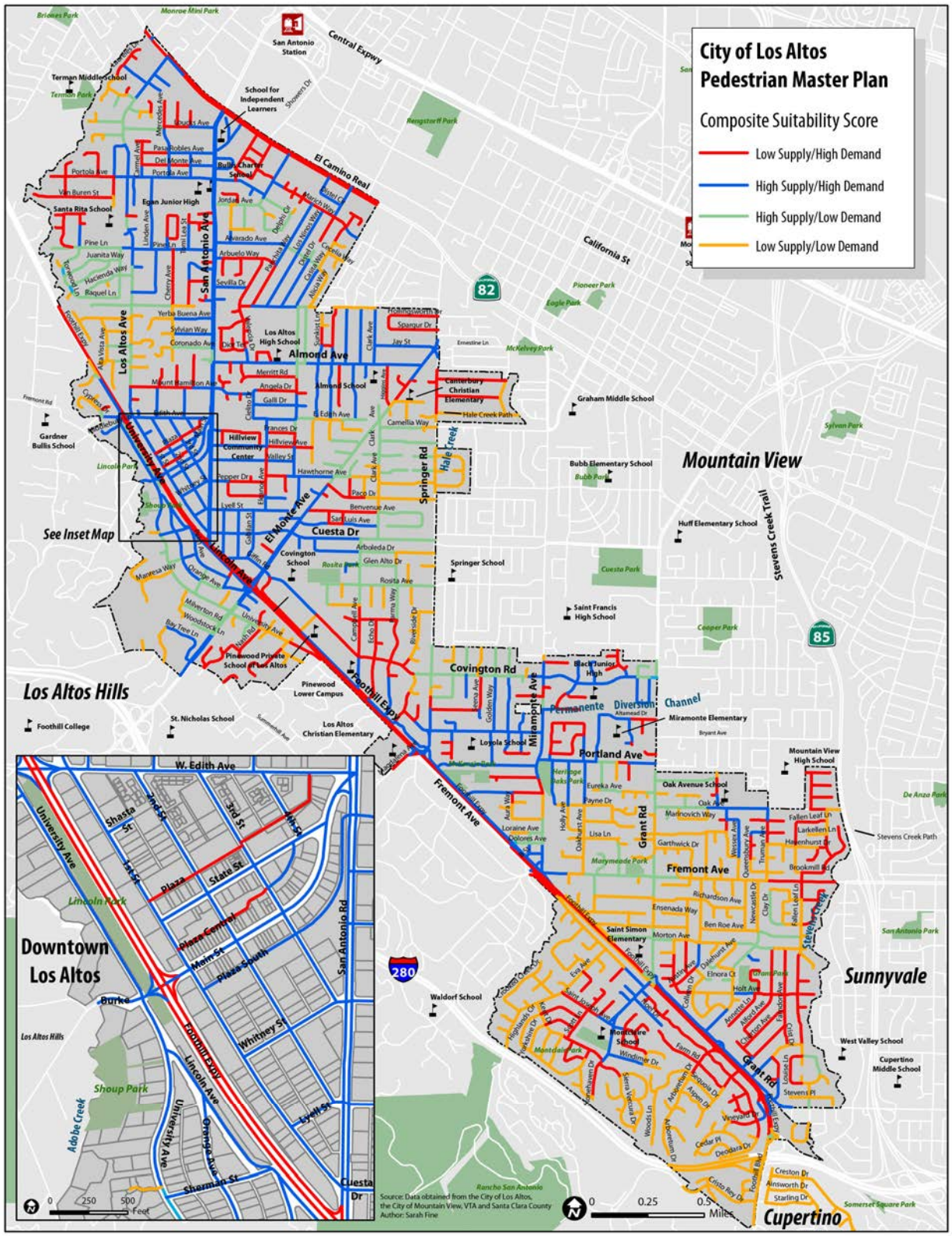

Figure 4-3: Pedestrian composite suitability score

4.3. Public Outreach and Input

Public outreach was conducted at numerous events to gather input from Los Altos residents. An informational booth, staffed by BPAC members and City and consultant staff, was set up at the Farmers Market on State Street on two occasions and visitors were invited to provide comments on walking in Los Altos. More than 200 comments were received during these events.

At the Los Altos Farmers' Market, the consultant team presented the draft opportunities and constraints maps to the public for comment. Passing visitors were given sticky notes and pens and invited to record their experiences related to walking in Los Altos. The team also solicited general comments about pedestrian conditions through a large flip chart, recording more than 200 general comments.

Attendees highlighted both positive and negative aspects of walking in particular locations. Comments mainly covered issues of infrastructure, while programs were not mentioned. Comments on infrastructure needs included sidewalk gaps, inadequate crossing facilities, vehicles' lack of awareness of pedestrians, wide roadways and high traffic speeds and volumes.

Many of the comments made by attendees included a need for facilities that would help students safely walk to school. **Figure 4-6** shows the locations of the comments, highlighting clusters of areas that received the most frequent comments. Most comments were clustered around Downtown Los Altos. The following roadways received over 10 comments each:

- Cuesta Drive: Attendees cited high automobile volumes and speeds, lack of sidewalks and bike facilities, and crossing improvements.
- El Monte Avenue: Comments on this roadway included high traffic volumes and speeds, sidewalk gaps, bumpy roads for bicyclists, lack of vehicle compliance with pedestrian crossings, tight intersections for pedestrians and bicyclists, a center median and landscaping.
- Foothill Expressway: This roadway is difficult for pedestrians to cross. Sidewalk gaps, traffic and a general lack of pedestrian visibility prevent pedestrians from being able to safely cross this roadway.
- Edith Avenue: Most comments referred to necessary crossing improvements such as a lack of crosswalks.
- Grant Road: Comments on this roadway included the issues with its proximity to schools. Insufficient roadway conditions, including sidewalk gaps and a lack of crosswalks, prevent students from using this roadway to walk to school.
- 2nd Street: This roadway was noted for needing traffic calming and stop signs. There were numerous positive comments about the State Street Green, and suggestions for new plazas and more places for children to play.

Figure 4-4: The project team engaged with visitors at the Los Altos Farmers Market and recorded their thoughts about walking conditions in Los Altos.

Figure 4-5: Visitors recorded comments on the maps (above). The comments were then geocoded and analyzed.

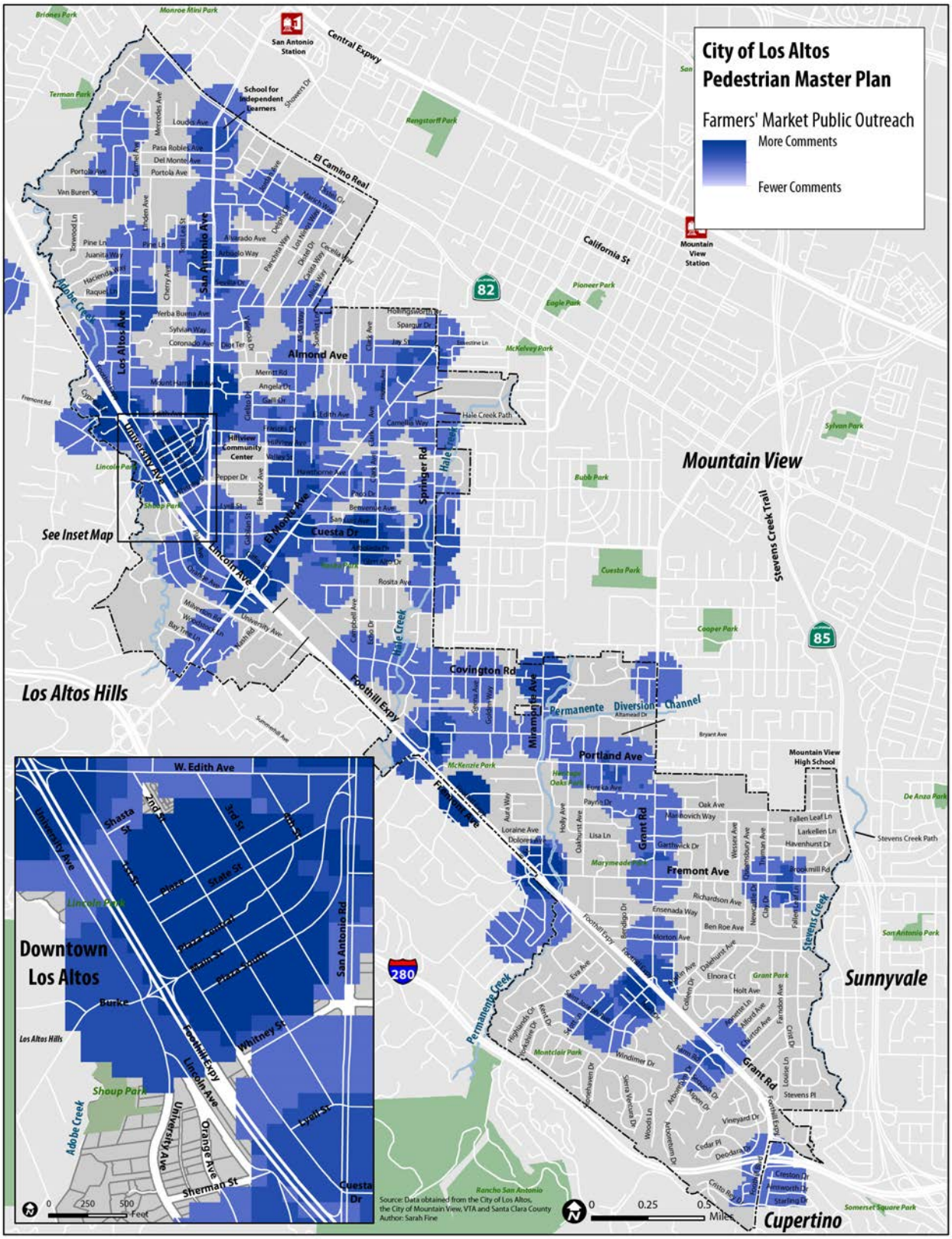

Figure 4-6: Farmers Market public outreach comments

After an initial round of data collection and targeted public input, draft recommendations were developed and presented to the community for feedback at public workshop at Grant Park in April 2014. The first portion of the workshop included information on the planning process, existing conditions analyses, and draft recommendations. After reviewing this information, attendees were asked to participate in breakout sessions/activities that included a "Pay to Play" prioritization exercise. Participants received $680 in "money" to spend on improvements, helping the project team to determine what improvements are the most important to the community.

Throughout the outreach process, the BPAC, Senior and Park/Precreation Commission (Joint Commission), and City Council discussed the Plan at several meetings. BPAC meetings were held on August 28, 2013 and February 25, 2015. The first meeting discussed goals for the Plan and the types of public outreach throughout the Plan process. The second meeting provided minor changes to the recommendations and goals of the Plan. The Joint Commission meeting was held September 16, 2013 and focused on the proposed goals and policies to include in a Plan as well as the public outreach process. Los Altos City Council discussed the Plan on September 25, 2012; October 9, 2012; June 25, 2013; April 8, 2014; March 24, 2015; May 12, 2015; and June 23, 2015. Overall, comments from these meetings were positive and revisions to the priority projects were suggested and incorporated into the final Plan.

In tandem with the outreach process for the Pedestrian Master Plan, walk audits were held at Los Altos public schools in Spring 2014. These walk audits involved city staff, members of the BPAC, and members of the public. The walk audits observed conditions around schools during morning drop-off periods, leading to improvement recommendations found in **Appendix E: Suggested Routes to School Report.** See **Figure 4-8** for an example of a problem area and **Figure 4-7** for an example of Suggested Routes to School map recommendations. In addition to these outreach opportunities, a Suggested Routes to School-focused online survey was also distributed via email blast to families with K-8 students in Los Altos. The survey was distributed again at Fall 2014 Back to School Nights, to allow for additional input.

Figure 4-8: Noted problem area on the Covington Elementary School walk audit with a vehicle parked on the sidepath

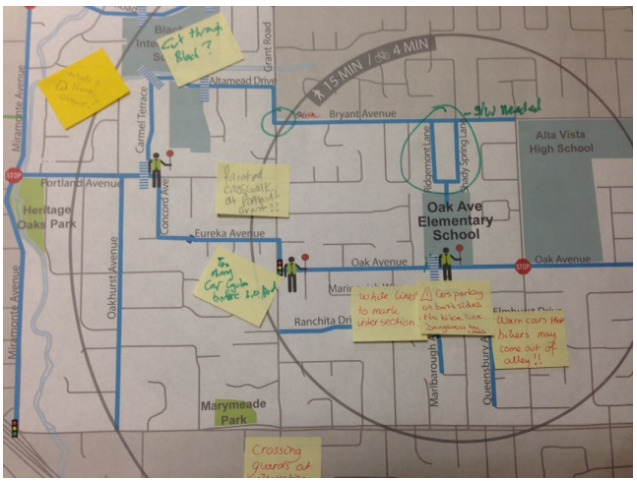

Figure 4-7: Suggested Routes to School map with recommendations

4.4. Network Design Considerations

This section seeks to clarify appropriate sidewalk, walkway, trail, and shared facility designs given the adjacent land uses, community support, funding concerns, and existing characteristics/usage of the right-of-way.

4.4.1 Connectivity

Connectivity of existing pedestrian networks is essential for Los Altos. Some network connectivity is impeded by natural barriers (like creeks) and county-run facilities (like expressways). The largest impediment to pedestrian connectivity, however, is the subdivision of land and street network layout. To walk or jog any significant distance involves turns at "T" intersections, travel out-of-direction, or travel along arterial and collector roadways. Pedestrian connectors and recent enhancements/developments have improved walking options, but the lack of connectivity will remain a basic underlying problem for the foreseeable future.

4.4.2 Parking Prohibitions/Shoulder Barrier Removal

The Los Altos Police Department has not actively enforced parking violations of paved shoulders on collector and local streets in large part due to a lack of clear regulatory guidance and signage. These shoulders are often used as pedestrian (and bicycle) facilities, but parked vehicles can block the path of travel and force non-motorized users into the vehicular travel lane. In other cases, existing residential streets do not include shoulders or parking restrictions, but are sufficiently wide (e.g. 40 feet) to stripe or add dedicated walkways/bikeways if parking were restricted to one side of the street.

Figure 4-9: A mailbox blocks part of the walkway on El Monte Road

4.4.3 Walkway and Shoulder Barriers

On private property adjacent to walkways, property owners must maintain trees so that there is a minimum thirteen-foot vertical clearance from the top of the curb to any part of the tree. Compliance with these requirements is generally poor, and overgrown vegetation greatly reduces the accessibility and value of sidewalks and shoulders in many locations. Enforcement is difficult given limited staff resources, and residents are encouraged to report debris, deteriorated roadway surfaces, faulty traffic signals and overgrown foliage to the Los Altos Maintenance Division. The presence of drainage issues and other barriers (e. g. telephone poles, illegal fences, minor trees) is also a source of conflict for certain pedestrian pathways in Los Altos due to lack of right-of-way; see **Figure 4-9**.

4.4.4 One Side of the Road versus Both Sides

In many areas within Los Altos, it may be appropriate to provide a pedestrian zone and/or shared use trail facility on just one side of the roadway, rather than separate, narrower walkways on both sides (given that consistent connectivity is provided along the street). This is because in many areas, there is insufficient right-of-way available. The multi-use pathways on Berry and Rosita Avenues are successful examples of such an approach, as they help provide functional corridors that allow social walking and low-stress bicycle access within a limited right-of-way. Issues that must be considered when providing a pedestrian or trail facility on one side of a roadway include existing roadway cross section (including striped shoulders that act as bicycle lanes), crossing treatments (especially at all-way intersections), parking, utility conflicts, and drainage.

4.4.5 Bicycle Facility Integration

Providing both Class II bicycle lanes and new high-quality pedestrian walkways is not feasible on many streets in Los Altos due to lack of right-of-way. Additionally, many existing Class II bike lanes and proposed Class III bike routes

(as identified in the BTP) include unmarked shoulders. Determining which shoulders should be maintained or improved for on-street bicycle travel will be important for determining feasibility and design of many pedestrian facilities.

Due to the issues described above, it may also make sense to integrate bicycle travel into high-priority walkway projects, in the form of multi-use pathways. Taking such an opportunistic approach can serve to complete important Suggested Routes to School connections or provide new recreational destinations.

4.4.6 Separation from Traffic versus Aesthetics

During the public outreach process for this Plan, the project team heard diverging opinions about the best treatments of Los Altos roadways. A number of residents noted their appreciation for the "rural" aesthetic of the roadways in Los Altos. Many others, however, said that provision of safe paths for their children and for other vulnerable users (including seniors) was their primary concern. While conducting Suggested Routes to School walk audits, parents and students at every Los Altos school requested walking routes be fully separated from vehicle traffic. This plan recommends as a top priority designing and creating pathways distinct from vehicular travel lanes and shoulders that also maintain the community's rural aesthetic.

4.4.7 Separation from Traffic versus Cost

Particularly on residential streets with limited traffic volumes and reasonable vehicle speeds, walkway and trail designs that require extensive drainage and ADA improvements can be cost-prohibitive (and impractical). High demand for safe school access routes, however, will continue to require consideration of improved bicycle and pedestrian facilities. These competing demands suggest a need to develop low-cost options for separation and/or improved shared conditions. Examples and discussion of potential models to consider—some of which already employed in Los Altos—are provided throughout this section.

4.4.8 Inter-Agency Coordination

Los Altos shares a border with four other incorporated cities and one unincorporated area of Santa Clara County. Roadways in Los Altos are owned by the City, as well as Caltrans and Santa Clara County.

Table 4-1 identifies a summary of issues related to inter-jurisdictional ownership of pedestrian facilities.

Table 4-1: Inter-Agency Coordination

Jurisdiction	Street or Intersection	Issues
Caltrans	El Camino Real	All but one pedestrian crossing of El Camino Real in Los Altos is controlled. Linear facilities are adequate but may need additional buffer from the roadway.
Cupertino	Homestead Rd	Cupertino owns the south side of Homestead Road. Los Altos owns the north side. A new multi-use pathway on the north side connects residents from Cupertino, Los Altos, and Sunnyvale to the shopping center.
	Montclaire Elementary School	Although not technically the same jurisdiction as the City of Cupertino, Montclaire Elementary School, located in Los Altos, is part of the Cupertino Unified School District.
Los Altos Hills	Burke Rd	Route to Downtown Los Altos from Los Altos Hills. Walking on either side of Burke Road/Main Street to downtown requires crossing several intersections.

Jurisdiction	Street or Intersection	Issues
	W. Edith Ave	Pedestrian walkway on north side of Edith Avenue is at times separated from the roadway. Crossing into downtown Los Altos on Edith Avenue requires crossing up to 7 intersections.
	El Monte Ave	Four-lane corridor, cross on- and off-ramps of I-280. In Los Altos, El Monte crosses Foothill Expressway. On both sides of Foothill Expressway, sidewalks are intermittent and of varying quality.
Santa Clara County	Granger Rd	Shoulder walkway is present on Los Altos side, drops off at the City boundary.
	Loyola Dr / A St	Route between Los Altos Golf & Country Club, across Foothill Expressway to Loyola Corners. Multiple crossings, no pedestrian walkway until Foothill Expressway overpass.
	Magdalena Ave	Four-lane roadway with concrete sidewalks. Connects northern Loyola, southeastern Los Altos Hills across Foothill Expressway to Rancho Shopping Center.
	Permanente Creek	North-south barrier between two east-west barriers (I-280 and Foothill Expressway)
	Foothill Expy	Major roadway with no linear pedestrian facilities. Nine pedestrian crossings at controlled intersections within Los Altos.
Mountain View	Arboleda Dr & Springer Rd	Sidewalks on east side of Springer Road (Mountain View), unimproved shoulder on west side (Los Altos). Crossing
	Covington Rd & Grant Rd	New development north of Covington Road & Grant Road intersection constructed buffered sidewalks. South of development, pedestrian facilities consist of a dirt pathway.
	Cuesta Dr	Sidewalks to the east of Springer Road (Mountain View), short southern sidepath west of Springer Road (Los Altos) drops off. Gravel shoulder mixed with decaying pavement shoulder forms pedestrian walkway blocked by parking.
	El Monte Ave	No parallel route is available
	Rosita Ave & Springer Rd	Curb extensions improve crossing. Pedestrian walkway is consistent on north side of Rosita west of Springer Road (Los Altos).
	Springer Rd	East side of Springer Road (Mountain View) has sidewalk. West side of Springer Road (Los Altos), pedestrian facilities are comprised of intermittent dirt pathway.
	Miramonte Ave	Sidewalks on both sides of street & bike lanes end at Mountain View city limit.
	Grant Rd	Sidewalks on parts of west side (Los Altos) and sidepaths on parts of east side (Mountain View)
Sunnyvale	Fremont Ave	West of Stevens Creek, pedestrian facilities include sidewalks (Sunnyvale). East of Stevens Creek, pedestrian facilities include unimproved sidepaths.
	Homestead Rd	Sunnyvale owns the north side of Homestead Road east of Stevens Creek.

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5. Pedestrian Network Improvements

The following chapter presents recommended pedestrian network improvements. Recommendations were identified through community input, City staff, and the Needs Analysis Chapter. Proposed improvements are intended to make walking trips more comfortable, enjoyable, and safer for pedestrians of all ages and abilities and all trip purposes.

This chapter presents the following improvement types:

- **Policy Recommendations** outline recommended approaches and guidelines for future pedestrian projects.
- **Citywide Recommendations** identify universal pedestrian improvements that can be made across Los Altos, not specific to certain locations. Further study may be required to implement some recommendations in this section.
- **Site-Specific Projects** identify potential improvements at specific locations. These locations include intersection, crossing, streetscape, and placemaking recommendations. Further study may be required to implement recommendations in this section.

Detailed recommendations for SRTS improvements are found in Appendix E: Suggested Routes to School Report and are cross-referenced in the corridor, intersection and spot recommendations. The full Design Guidelines can be found in Appendix A.

5.1. Policy Recommendations

5.1.1 Sidewalk Standards

Standardizing streetscape design by land use can ensure that future development of public rights-of-way in Los Altos' residential, commercial, and mixed use areas meet the City's vision for vibrant, healthy pedestrian environments. The Pedestrian Design Guidelines (see Appendix A) present sidewalk types for residential, commercial, and mixed use land uses.

Recommendations

- In areas zoned "Commercial Thoroughfare" adopt a walkway width standard of 12 feet or more to provide a minimum eight-feet walk zone and four-foot landscape/furnishing zone
- Consider adopting a five-foot minimum walkway width standard for new residential development
- Adopt the following policy regarding the installation of sidewalks near schools:
    - Sidewalks and/or paths shall be installed on at least one side of existing streets on identified Suggested Routes to School.

5.1.2 Walkway Reconstruction and Maintenance

Improving existing walkways where high usage and ADA accessibility warrant upgrades is just as important as expanding the pedestrian network. Efforts to improve and widen shoulders with repaving, and/or to

identify and remove select barriers on existing shoulders is a valid strategy for enhancing the pedestrian environment where dedicated facilities are infeasible or impractical.

Recommendations

- Adopt a policy to repave and widen existing walkways, where feasible, per recommended sidewalk standards based on land use
- Improve education and enforcement efforts related to existing private property vegetation management code requirements as a prudent, cost effective way to improve ADA accessibility
- Increase CIP funding and expand to cover a wider range of walkway enhancement activities (CIP currently includes $200,000 annually for repair of concrete sidewalk and curb/gutter).

5.1.3 Citywide Signal Timing

Traffic signal timing is the amount of time each phase of a signal is allotted for vehicles, bicycles, and pedestrians to cross. The City of Los Altos currently employs a standard walking speed of 3.5 feet per second, in compliance with the 2014 *California Manual on Uniform Traffic Control Devices* (CA MUTCD) and the *National MUTCD*. Additional signal timing considerations should be given in the following situations. Each of the policy recommendations below would be subject to future study.

Leading Pedestrian Interval (LPI)

A lead pedestrian interval is a tool where traffic signals are programmed to give pedestrians a walk indication before vehicles receive the green light to proceed. Crossing with this "head start" allows pedestrians to be more visible to motorists approaching the intersection. LPI signal timing typically allows pedestrians to start 2-4 seconds before vehicles, and is appropriate at any signalized location with significant volumes of turning vehicles.

Figure 5-1: Lead Pedestrian Interval and "No RIght on Red" Intersection

No Right Turn on Red Restrictions

Right turn restrictions can be limited to "When Children Are Present" signage for important school routes, or may be electronic overhead signage that remains dark until actuated by a pedestrian push button (or other on-demand detection method). **Figure 5-1** shows both an LPI and a right turn restriction.

Signal Timing near Senior Living Facilities and Schools

The US Department of Transportation (US DOT) and the Federal Highway Administration (FHWA) recommend in the *Older Driver Highway Design Handbook* a signal timing of 2.8 feet per second to accommodate older pedestrians.[1] The FHWA[2] and the MTC[3] also recommend a slower crossing rate where concentrations of children are expected. The 2014 CA MUTCD permits the use of a signal timing of 2.8 feet per second where older or disabled pedestrians routinely use the crosswalk.

[1] *FWHA Older Driver Highway Design Handbook.* www.fhwa.dot.gov/publications/research/safety/97135/rec1.cfm#n.
[2] *FHWA Traffic Signal Timing Manual, Section 5.3 Pedestrian Timing Intervals.* ops.fhwa.dot.gov/publications/fhwahop08024/chapter5.htm.
[3] *MTC Safety Toolbox: Engineering, Signal Timing for Pedestrians.* www.mtc.ca.gov/planning/bicyclespedestrians/tools/signalTiming/index.htm.

Recommendation

- Study Leading Pedestrian Intervals for intersections with significant pedestrian and vehicle turning volumes. Prioritize installation in school zones.
- Study right turn on red restrictions for intersections with significant pedestrian and vehicle turning volumes. Prioritize installation in school zones.
- Adjust signal timing within an eighth of a mile (660 feet) of priority community centers, senior living facilities, and schools to 2.8 feet per second.

5.1.4 Green Infrastructure and Low Impact Development

Designs that collect, slow down, and recharge storm water back into the ground, or filter before entering the drainage pipe system, are known as 'green' infrastructure or Low Impact Development (LID). Integrating LID and Suggested Routes to School improvement priorities can create multi-faceted, sustainable projects that can attract community attention and offer teaching/volunteer maintenance opportunities for students.

Recommendations

- Incorporate green infrastructure and LID treatments on alternative walkways in Los Altos.
- Consider integrating LID treatments on routes where children access school grounds.

5.1.5 Development Review Process

The current design review process for single-family residential development and reconstruction does not specifically address planned or prioritized walkway design.

Recommendations

- Update the neighborhood design review checklist and training plan reviewers on best practices or unique designs treatments identified for Los Altos.

5.1.6 Curb Extensions

Curb extensions are an effective method to improve pedestrian visibility and reduce pedestrian crossing time. Curb extensions, as shown in **Figure 5-2**, extend the sidewalk or curb line out into the parking lane, reducing the effective street width. Details on curb extensions are included in Appendix A: Design Guidelines.

Figure 5-2: Curb extensions with landscaping

Recommendations

- Consider a policy to install curb extensions at uncontrolled marked crosswalks citywide where feasible.
- Prioritize installation of curb extensions at the locations presented in **Table 5-4**. The locations were selected based on a number of factors, including pedestrian related collision history, vehicle volume, and pedestrian demand.

5.1.7 Pedestrian Refuge Islands

Pedestrian refuge islands, as seen in **Figure 5-3**, are raised islands in the middle of the roadway that create a protected space where people may safely pause or wait while crossing a street. Raised pedestrian refuge islands can be provided in painted center medians, transit boarding islands, and corner islands. Design guidelines for pedestrian refuge islands can be found in Appendix A: Design Guidelines.

Figure 5-3: Pedestrian refuge island (Source: Google StreetView)

Recommendations

- Institute a policy to install pedestrian refuge islands at crosswalks across streets of 60 feet width or greater
- Promote accessible pedestrian refuges on new and existing center medians

5.1.8 High Visibility Crosswalks

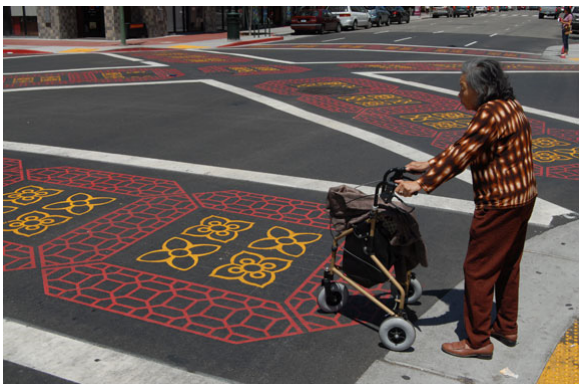
Figure 5-4: High visibility crosswalk in Oakland, CA

High visibility crosswalks are typically used where there is existing or anticipated high pedestrian activity, where slower pedestrians are expected, at uncontrolled crossings, and where high numbers of pedestrian related collisions have occurred. **Figure 5-4** shows an intersection in the Chinatown neighborhood of Oakland, CA with a design that fits the character of the neighborhood. Design guidance for high visibility crosswalks is provided in Appendix A: Design Guidelines.

Recommendations

- Adopt a single high visibility crosswalk design. This Plan recommends the continental crosswalk as the standard.

5.1.9 Advance Stop Bars & Yield Lines

Advance stop bars are placed in advance of marked crosswalks at stop controlled or signalized intersections. Advance yield lines indicate the point where vehicles should yield at uncontrolled locations. Design guidance for advance yield lines (see **Figure 5-5**) and advance stop bars (seen in **Figure 5-6**) can be found in Appendix A: Design Guidelines.

Figure 5-5: Advance yield lines

Figure 5-6: Advance stop bar from Santa Barbara

Recommendations

- Adopt a policy to incorporate advance stop bars at intersections with high pedestrian activity and those with a history of pedestrian related collisions.
- Adopt a policy to incorporate advance yield lines at all midblock uncontrolled marked crossings.
- Prioritize advance stop bars at all stop controlled or signalized intersections in Downtown and along retail corridors.

5.1.10 Flashing Beacons & Devices

The City currently uses in-pavement flashers at priority uncontrolled crosswalks. Based on community feedback, these crossings are less visible in daylight and can pose maintenance issues. Studies show pedestrian crossing beacons improve driver yield rates and reduce the number of pedestrian related collisions at higher rates than in-pavement flashers.[4]

Figure 5-7: Rectangular rapid flashing beacon

Rectangular rapid flashing beacons (RRFB), as seen in **Figure 5-7**, approved for use at uncontrolled pedestrian and school crosswalk locations,[5] are pedestrian actuated devices mounted adjacent to the roadway that flash in an alternating pattern when activated.

Pedestrian hybrid beacons, also known as HAWK (High intensity Activated crossWalK) signals hang over the roadway like a traffic signal and flash when activated. Pedestrian hybrid beacons have been approved by the Federal Highway Administration (FHWA) and incorporated

[4] *FHWA. Safety Effectiveness of the HAWK Pedestrian Crossing Treatment. July 2010.*
[5] *Approval number IA-11-83-RRBF-California Statewide.*

into the 2012 CA MUTCD. HAWK beacons should be used if gaps in traffic are not adequate to permit pedestrians to cross, if vehicle speeds on the major street are too high to permit pedestrians to cross, or if pedestrian delay is excessive.

Recommendations

- Rectangular rapid flashing beacons are preferred for increased visibility and improved motorist yield rate.
- At existing uncontrolled crosswalks and future potential midblock crossings of El Camino Real, RRFB's may not provide sufficient protection while crossing the street due to a larger volume of vehicles. At such locations, a pedestrian hybrid beacon should be considered as it provides higher rates of driver compliance especially for larger volumes of traffic.
- In-roadway warning lights may continue to be used.

5.2. Citywide Recommendations

Following are general recommendations for best practices infrastructure improvements to benefit pedestrians. More detailed descriptions of individual infrastructure recommendations are contained in the Appendix A: Design Guidelines. Site-specific recommendations for infrastructure improvements are contained in section 5.3 of this chapter.

5.2.1 Pedestrian Scale Lighting

Pedestrian scale lighting is a category of lighting with frequent lampposts of lower height that illuminate the pedestrian walking area. Combined, street and pedestrian lighting increase visibility of pedestrians at night, promote perceived security for pedestrians, illuminate potential hazards, and can help create a vibrant and inviting streetscape.

Recommendation

- Prioritize pedestrian scale lighting in locations and pedestrian corridors near retail, transit and other civic facilities.

5.2.2 Lowered Speed Limits

New California law expands coverage and reduces possible speed limits for conditional school speed zones on residential streets with a total of no more than two vehicle travel lanes and an existing posted speed limit no greater than 30 mph. Speed limits within 500 feet of a school can be as low as 15 mph when children are present, and limits between 500 to 1,000 feet can be 25 mph – without the need for an approved Speed & Engineering Survey[6].

Implementation of reduced school speed limits can occur on an individual site basis, but is recommended as a City-wide project due to the need for City Council resolution adopting such standards, and for tandem public education and outreach. **Figure 5-8** documents the possible range of 15mph and 25mph conditional speed limits for schools in Los Altos.

[6] *Additional interpretation of the AB321's impacts is recommended to confirm enforcement issues.*

Recommendations

- Adopt a resolution allowing City Transportation staff to consider conditional speed limits of 15-20 mph on Suggested Routes to School corridors within 500 feet of school grounds, and 25mph conditional speed limits within 1,000 feet if applicable/advantageous for enforcement.
- Analyze 85th percentile speed limits for key school routes on local streets to supplement speed data for collector arterials.

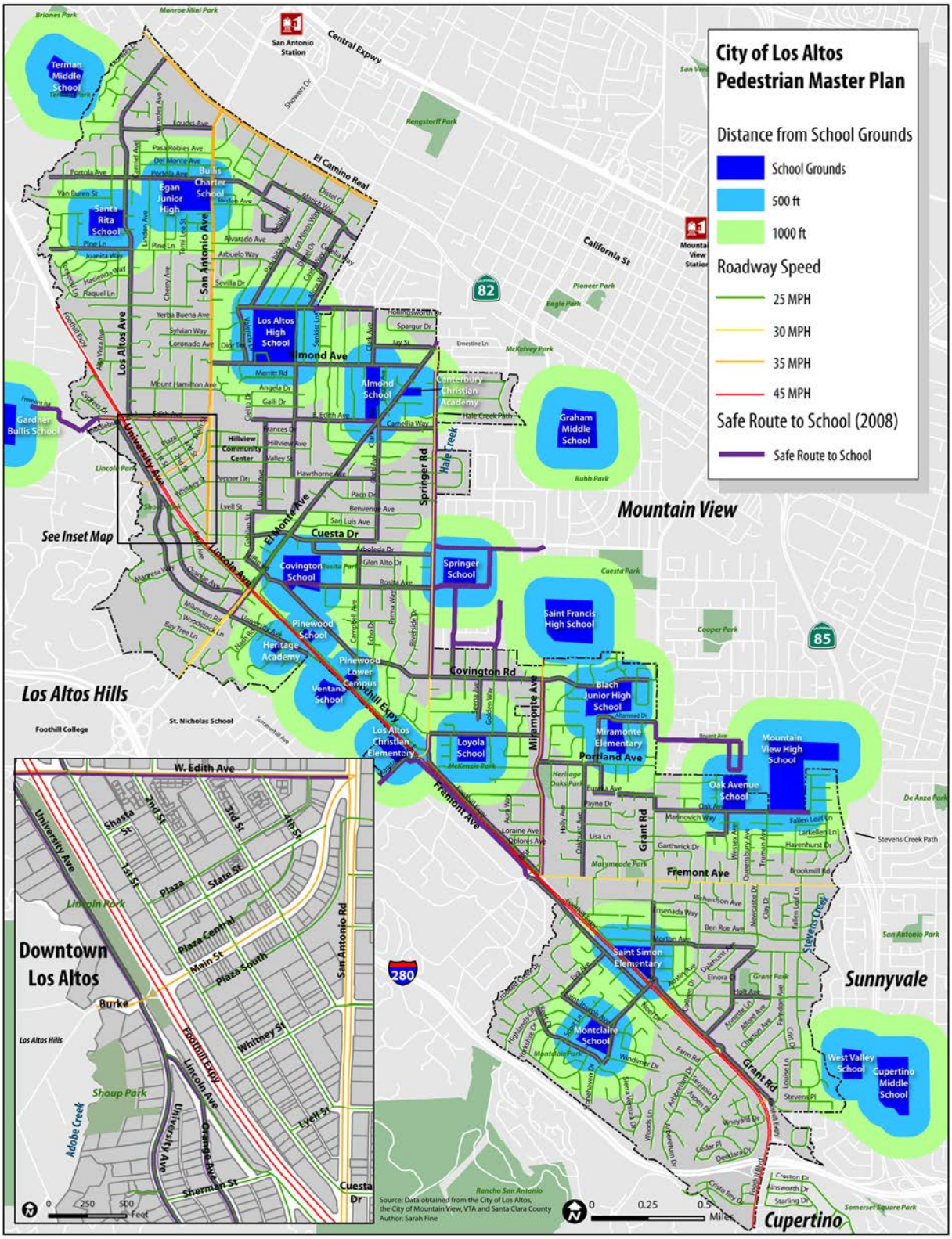

Figure 5-8: Potential areas for reduced speed Limts around schools

5.2.3 Curb Ramps

Figure 5-9: Perpendicular curb ramp in San Francisco, CA

As part of the City's development of its ADA Transition Plan, the City has an established plan to install curb ramps throughout Los Altos as seen in **Figure 5-9**.

Recommendations

- Adopt perpendicular curb ramps as the City's preferred standard and install curb ramps citywide.
- Install perpendicular curb ramps on community identified locations and City collector and arterial streets. Priority should be given to locations near senior facilities.
- Install truncated domes at curb ramps on all Tier 1 corridor improvement projects. Los Altos standard is a bronze, cast-iron design.

5.2.4 Slip Lane Refuge Islands

Intersection slip lanes in Los Altos, free flowing lanes of right-turning vehicle traffic, often do not include warning signage or high-visibility crosswalks. The triangular median refuges are often too small for pedestrian comfort, and most slip lane approaches encourage drivers to accelerate into the area where pedestrians must cross. Where slip lanes remain necessary for vehicular access, design may be improved to reduce pedestrian stress and increase accessibility (see **Figure 5-10**).

Recommendations

- Consider curb extensions with minimized turning radii in lieu of slip lane refuge islands.
- Where slip lanes are appropriate, provide enhanced treatments such as raised crosswalks, warning signage (for pedestrians or combined pedestrians/bicycles), bollards (with or without lighting), and appropriate geometrics that provide proper crosswalk visibility.
- Work with Santa Clara County and Caltrans to waive inside shoulder requirements for slip lanes in favor of greater refuge space or increased barrier protection, where feasible.

Figure 5-10: Slip lane refuge island

5.2.5 Interim Improvement Strategies

Low-cost, interim tactics – such as hatched striping, asphalt berms, and soft-post delineators –can more quickly bring intersections into preferred geometries from a traffic operations standpoint, and increase the visual protection and separation of pedestrians at a fraction of the cost of solutions involving drainage impacts.

Figure 5-11: Temporary pedestrian improvements

Recommendations

- Consider low-cost improvements as appropriate to test geometric reconfigurations and/or provide interim solutions until funding or final design concepts can be secured.

5.2.6 Warning Signage

The 2014 CA MUTCD requires fluorescent yellow-green school signage, and allows such coloring for other pedestrian/bicycle signage to differentiate from other warning signs.

Recommendation

- Update school zone and crosswalk assembly signage to be more consistent with current standards.

5.2.7 Traffic Signals

Audible signals emit sounds to guide visually impaired pedestrians by indicating when to cross. Different audible signals are usually used to also indicate crossing direction. Sounds are activated by the pedestrian push button.

Signs such as the R10-3e at traffic signals with pedestrian countdown signal heads and push buttons inform pedestrians of when to cross the street so that they complete their crossing before the signal changes.

Recommendation

- Consider audible signals near senior centers and living facilities and near homes of those who are visually impaired. The current Draft PROWAG (Public Rights of Way Guidelines) include requirements for audible pedestrian signals at new and modified intersections.
- Install MUTCD sign R10-3e or other comparable sign immediately above or incorporated in pedestrian pushbutton units.

5.2.8 Neighborhood Gateways / Pocket Parks and Open Spaces

The value of integrated open space/pedestrian facilities and of smaller neighborhood parks is already established in the City of Los Altos' Capital Improvement Plan (CIP) and recently adopted Parks Master Plan. The City has also invested in downtown plaza enhancements and high-quality gateway monuments at major entrance points as a way to enliven commercial areas and the City's sense of identity.

Recommendations

- At the locations identified as Gateway opportunity areas, install amenities such as drinking fountains, seating, public art, and wayfinding.
- Provide gateways at multi-use path trailheads

5.3. Site-Specific Projects

On the following page is **Figure 5-12**, showing site-specific recommended pedestrian improvements across Los Altos.

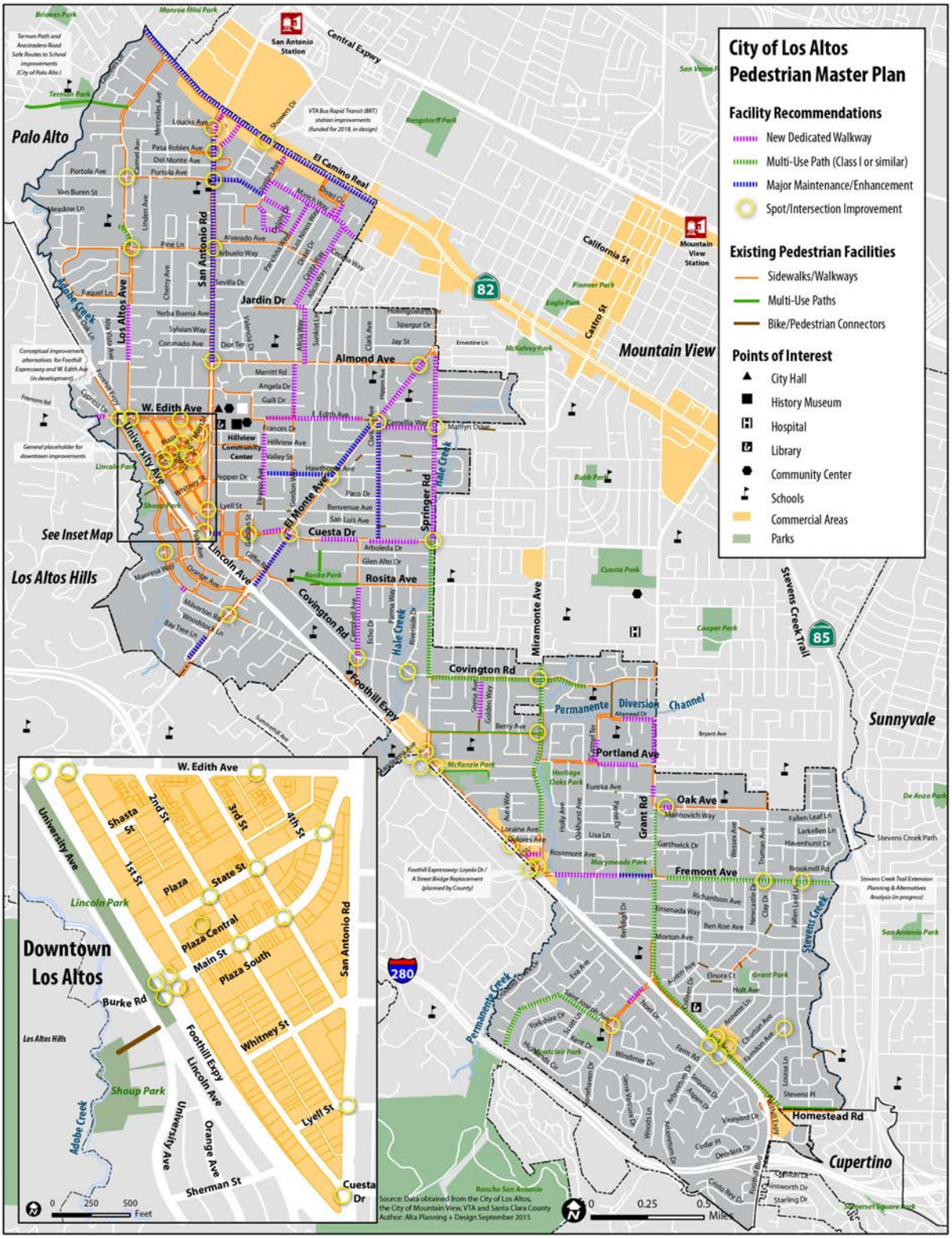

Figure 5-12: Pedestrian improvement recommendations

5.3.1 Walkway Gap Closures

Substantial construction and renovation of new linear pedestrian facilities is critical to improving the safety and comfort of walking in Los Altos, and in maximizing the value of existing facilities.

Table 5-1: Recommended Locations of Dedicated Walkways

Street	Start	End	SRTS	Notes / Comments
Alicia Way	Almond Ave	Jardin Dr	Yes	Close sidewalk gap.
Altamead Dr	School	Grant Rd	Yes	Connection to School.
B St	Fremont Ave	Miramonte Ave	No	Close sidewalk gap.
Campbell Ave	Rosita Ave	Covington Rd	Yes	Sidewalk gap, south of Covington, pathway on west side.
Camellia Way	Clark Ave	Springer Rd	Yes	Wide rolled curbed street.
Carmel Ter	500' north of Portland Ave	Portland Ave	Yes	Gap closure, SRTS route. Could restrict parking to certain times of the day. West side preferred.
Casita Way	Jardin Dr	Marich Way	Yes	Close sidewalk gap.
Cuesta Dr	115' east of Gabilan St	El Monte Ave	No	Close sidewalk gap.
Cuesta Dr	Arboleda Dr	Springer Rd	No	High priority public input.
Cuesta Dr	S. Clark Ave	Campbell	No	Construct pedestrian pathway on north side.
Delphi Cir	Jordan Ave	Portola Ct	No	Leads to pedestrian connector.
Distel Dr	Distel Cir	Marich Way	No	Sidewalk gap both sides.
Edith Ave	Eleanor Ave	Bike/Ped Connector west of El Monte	Yes	Connection to Civic Center.
El Monte Ave	Clark Ave/Edith Ave	Almond Ave	Yes	Close sidewalk gap. Consider with concepts for traffic calming and potential El Monte Ave/Springer Road reconfiguration.
Eleanor Ave	Bike /Ped Connector	Frances Dr	No	Close sidewalk gap.
Fremont Ave	Permanente Creek	Lisa Lane	No	Connects Loyola Corners area with Marymeade Park and proposed Stevens Creek Trail. Lisa Ln to Oakhurst Ave appears feasible with minimal investment / vegetation clearance.
Grant Rd	Eureka Ave	Miravalle Ave	Yes	Short sidewalk gap closure for Blach school route; proposed Class I in BTP.
Grant Rd	Portland Ave	Altamead Dr	Yes	Include bus stop ADA upgrade.
Jordan Ave	250' from El Camino	115' from El Camino	No	Single property frontage; opposite side of street also has multiple gaps north of Portola Court.
Jordan Ave	Portola Ave	Marich Way	No	310' sidewalk gap on west side of street.
Los Altos Ave	Mariposa Ave	Yerba Santa Ave	Yes	Santa Rita Elementary school route. Minor impact to existing shoulder/bike lane.

Street	Start	End	SRTS	Notes / Comments
Marich Way	Distel Dr	Casita Way	No	Possible phasing, low cost walkway concept.
Marich Way	Jordan Ave	Panchita Way	No	Wide rolled curbed street; important Class III bikeway; possible phasing, low cost walkway concept.
Marich Way	Panchita Way	Distel Dr	No	Possible phasing, low-cost walkway concept.
N Gordon Way	Edith Ave	Almond Ave	Yes	North-South corridor that serves multiple school routes; Gordon Way has supportive land uses with wide/deep lots and few driveways; east side seems preferred.
Oak Ave	Grant Ave	Approx. 50' west of Marinovich Way	Yes	North side of street. Requires tree preservation; may be implemented as traffic calming project without dedicated walkway.
Panchita Way	Bike/Ped Connector	Marich Way	No	Connects Delphi Circle with Marich Way.
Portland Ave	Carmel Ter	200' east of Carvo Ct	Yes	Close sidewalk gap.
Portola Ct	Jordan Ave	Delphi Cir	No	No gutter north side; leads to pedestrian connector.
Russel Ave	Berry Ave	Covington Ave	Yes	Close sidewalk gap.
San Antonio Rd	Sherwood Ave	El Camino Real	Yes	Intermittent existing sidewalk; angled parking on private property; likely to occur with redevelopment and/or with significant changes to parking.
Seena Ave	Berry Ave path	Covington Rd	Yes	Close sidewalk gap.
Sherwood Ave	San Antonio Rd	El Camino Real	Yes	Intermittent existing sidewalk non-compliant; gap closure likely to occur with redevelopment.
Springer Rd	Berry Ave	Los Altos city limit (north of Covington Rd)	Yes	Close sidewalk gap.
Springer Rd	Todd St	Cuesta Ave	Yes	Requires coordination with City of Mountain View. Preliminary investigation indicates east side is likely preferred location.
St. Joseph Ave	Robles Ranch Rd	Granger Ave	Yes	Close sidewalk gap.
Truman Ave	Fremont Ave	Oak Ave	Yes	Close sidewalk gap.

5.3.2 Multi-Use Paths

Multi-use paths provide dedicated space for two-way pedestrian and bicycle travel separated from vehicular traffic. In Los Altos, existing facilities have generally been constructed as Suggested Routes to School projects, with secondary recreational and social walking benefits. These multi-use paths typically do not meet more stringent "Class I" design standards as established by Caltrans.

The Los Altos Bicycle Transportation Plan proposes seven Class I Pedestrian and Bicycle Paths that remain under consideration in this Plan. **Table 5-2** lists these facilities as well as other trails proposed in the City's Capital Improvement Program.

Table 5-2: Recommended Locations for Multi-Use Pedestrian and Bicycle Paths

Location	Start	End	SRTS	Notes / Comments
Berry Ave	Loyola Elementary	Miramonte Ave	Yes	Re-construct curb ramps on existing multi-use path.
Civic Center	Edith Ave	San Antonio Rd	No	Identified in BTP and CIP.
Covington Rd	Miramonte Ave	Blach Junior High	Yes	Construct multi-use path on south side.
Covington Rd	Miramonte Ave	Springer Rd	Yes	Identified as Class III in BTP.
Fremont Ave	Grant Rd	Stevens Creek Trail	No	Identified in BTP.
Grant Rd	Oak Ave	Fremont Ave	Yes	East side of street appears most feasible.
Grant Rd	Fremont Ave	Grant Rd	Yes	Identified in BTP.
Grant Rd	Crist Dr	Grant Rd	No	Construct multi-use path.
Miramonte Ave	Alegre Ave	Loraine Ave	Yes	Permanente Creek on east side of roadway. Path could connect through Heritage Oaks Park. Also would connect existing Berry path with proposed Covington path.
Santa Rita Elementary	Santa Rita Elementary	Pine Lane	Yes	Direct connection to Santa Rita Elementary.
Springer Rd	Rosita Ave	Covington Rd	Yes	Identified as Class II in BTP.
Springer Rd	Cuesta Dr	Rosita Ave	Yes	Construct multi-use path on west side.
St Joseph Ave	Montclaire Elementary	I-280 undercrossing	Yes	Roadway is wide (40').

Note: Site conditions may call for designs treatments outside of Caltrans design guidelines, which may limit funding opportunities.

5.3.3 Walkway Enhancement & Major Maintenance

Many existing walkways in Los Altos are in need of enhancement or major maintenance. In many cases, this involves widening a walkway to accommodate higher pedestrian volumes or to accommodate pedestrians using mobility assisting devices. Some older walkways are need of significant maintenance to address pavement breaks or degradation.

Table 5-3: Recommended Walkway Enhancement & Major Maintenance

Location	Start	End	SRTS	Notes / Comments
Clark Ave	El Monte Ave	Cuesta Dr	Yes	Repair and widen existing sidewalk / berm-protected walkway. Supports access to Covington Elementary School.
Cuesta Dr	San Antonio Rd	Tyndall St	No	Widen sidewalk approaches into downtown and consider landscaping/street trees to match cross section to east. Improve crossing at San Antonio.
E Portola Ave	San Antonio Rd	Jordan Ave	Yes	Repair and widen existing sidewalk / berm-protected walkway.
El Camino Real	Palo Alto border	Mountain View border	No	Widen sidewalks to conform with proposed BRT station improvement and improve transit and commercial/retail access.
El Monte Ave	Cuesta Dr	Foothill Expy	Yes	Widen sidewalks on east side of street, or relocate utility poles, during next repaving cycle.
El Monte Ave	Edith Ave	Hawthorne Ave	Yes	Repair and widen asphalt sidewalk south of Riconada Ct; Study removal of parking lane north of Riconada Ct to widen sidewalk.
Fremont Ave	Lisa Ln	Grant Rd	No	Widen sidewalk on north side along Marymeade Park.
Hawthorne Ave	El Monte Ave	Eleanor Ave	Yes	Repair existing sidewalk and fill gaps. Supports access to Los Altos High School, and pedestrians traveling to downtown.
S El Monte Ave	Bay Tree Ln	225' south of Woodstock Ln	No	Rebuild curb.
San Antonio Rd	Almond Ave	El Camino Real	Yes	Generally minimum ADA accessibility is met, but opportunities for opportunistic sidewalk widening, tree root repair, and vegetation maintenance should be explored. Extents may be revised based on feedback.

5.3.4 Intersection Improvement Recommendations

Table 5-4 provides a list of priority intersection for geometric improvements, based on existing priorities. In most cases, specific solutions will require further study in conjunction with proposed dedicated walkways/pathways and collector arterial traffic calming recommendations.

Table 5-4: Intersection Improvement Recommendations

Location	SRTS	Notes / Comments	Neighborhood Gateway
1st St at San Antonio Rd/Cuesta Dr	No	Remove slip lane on SW corner and provide new crosswalk across San Antonio Rd; consider NW corner curb extension.	Yes
Altos Oaks Dr at Fremont Ave	Yes	Construct curb extensions as noted in CTCP; consider with trail concept for Fremont Avenue.	
Covington Rd at Miramonte Ave	Yes	Construct curb extensions.	
Covington Rd at Riverside Ave	Yes	Pedestrian refuge island or curb extensions.	Yes

Location	SRTS	Notes / Comments	Neighborhood Gateway
Covington Rd at Campbell Ave	Yes	Reduce curb radii at four corners. Coordinate crossing improvements with proposed dedicated walkway on west side of Campbell north of Covington.	
Cuesta Dr at Gabilan St	No	Curb extension in NE corner, new crosswalks & signage	
Dolores Ave at Maple Ln/Fremont Ave	No	intersection reconfigured, upgrade crosswalks	
E Edith Ave at Gordon Way	Yes	Curb extensions or refuge islands at off-set intersection.	
El Monte Ave at Almond Ave	Yes	Square up intersection with curb extensions, install crosswalk in N leg with median refuge island.	
El Monte Ave at Cuesta Dr	Yes	Construct curb extensions and improve sidewalk connectivity.	
El Monte Ave at Clark Ave	Yes	Square up intersection with curb extensions and median island enhancement, RRFB at crossing.	
El Monte Ave at Springer Rd	Yes	Traffic calming at intersection	Yes
El Monte Ave at University Ave	No	4 curb extensions, extend medians to become refuge islands	
Farndon Ave at Crist Dr	No	mini traffic circle	
Foothill Expy at Arboretum Dr/Grant Rd	No	1 median extension, 3 raised crosswalks at slip-lanes, ADA upgrades	
Foothill Expy at Main St	No	Improve slip lane crossings with raised crosswalks and marking and signs (per design guideline); potentially close slip lanes.	
Foothill Expy at Springer Rd/Magdalena Ave	Yes	Close slip lane or improve slip lane crossing with raised crosswalk and markings and signs (per design guideline).	
Foothill Expy at W Edith Ave/1st St	No	Close slip lanes or improve slip lane crossing with raised crosswalk and markings and signs (per design guideline). Coordinate with potential improvements at 1st Ave and Edith Ave.	
Fremont Ave at Miramonte Ave	No	Remove slip lane on NW corner.	Yes
Hawthorne Ave at El Monte Ave	Yes	Reconfiguration; also supports low performing bus stop pair ADA	
Los Altos Square	No	Address barrier issues at Los Altos Square. Consider easement options or alterative corridor access with improvements along ECR prioritized. Possible signalized pedestrian crossing through median to northwest. Planned BRT stop/existing bus stops.	
Loyola Dr/A St at Frontero Ave/Granger Ave/Foothill Expy ramps	No	Provide permanent curb extensions, median islands, and ADA upgrades for access to Loyola Corners.	

Location	SRTS	Notes / Comments	Neighborhood Gateway
San Antonio Rd at Sherwood Ave	Yes	Reduce curb radius on SE corner; consider adding center median refuge island.	Yes
Springer Rd at Fremont Ave	Yes	Reconfigure northbound approach to Springer; add medians, lighting, consider with trail concept and Foothill Expressway at Magdalena improvements.	Yes
Springer Rd at Cuesta Dr	Yes	Remove slip lane on SW corner improve slip lane crossing with raised crosswalk and markings and signs (per design guideline).	
W Edith Ave at 4th St	No	Add curb extensions on north and south side of Edith at existing uncontrolled crossing.	Yes

5.3.5 Unsignalized Crossings

Guidance for RRFB/flashing beacon placement is provided in **Table 5-5**. Further study will be required to implement enhanced treatments at these currently unsignalized marked crosswalks.

Table 5-5: Recommended Locations for Pedestrian Beacons

Location	SRTS	Notes / Comments
El Camino Real at Sherwood Ave	No	Add new crossing of El Camino Real. Conduct a signal warrant in coordination with Caltrans. If warrant is not met, consider pedestrian hybrid beacon in coordination with Caltrans.
El Camino Real at Monroe Dr	No	Add pedestrian hybrid beacon, high-visibility crosswalk and advance yield bar (2 spaces). Restrict on-street parking between bank driveway and crossing.
Fremont Ave at Fallen Leaf Ln	No	Add RRFB to crosswalk.
Fremont Ave at Truman Ave	No	Add RRFB to crosswalk.
Main St at 2nd St	No	Conduct stop warrant analysis.
Main St at 3rd St	No	Analyze if a 4-way stop is warranted at this intersection.
Main St at State St	No	Analyze if a 4-way stop is warranted at this intersection.
San Antonio Ave at Loucks Ave	No	Add RRFB to crosswalk.
State St at 2nd St	No	Analyze if a 4-way stop is warranted at this intersection.
State St at 3rd St	No	Analyze if a 4-way stop is warranted at this intersection.

5.3.6 Intentionally Designed Shared Spaces

Designing the public right-of-way without clear delineation between modes can, in some instances, help to calm traffic. In these spaces, there are no or few traffic control devices, and all actors—pedestrians, bicyclists, and vehicles—negotiate movement through slower speeds and eye contact.

Parking plazas and commercial areas where off-street parking and pedestrian facilities already blend together, and where temporary pedestrian programming opportunities exist, are also good candidates for shared space

design and are priority locations to consider shared space streetscape designs. **Table 5-6** lists suggested locations for shared spaces in Los Altos.

Consider re-designing existing parking alleys in downtown Los Altos as shared spaces, opening up the back of merchants and restaurants for additional frontage.

Table 5-6: Pilot Shared Space Locations

Location
Downtown behind Peet's Coffee
Sherwood Avenue redevelopment
Rancho Shopping Center parking lot (private)
Loyola Corners at A Street/Caron Lane

5.3.7 Transit Stop Accessibility Improvements

Recommendations

- Although sidewalk widening is anticipated at Showers Drive as part of the El Camino BRT project, there is opportunity for continuous widening to Jordan Avenue and for adjacent stops.
- Curb ramps throughout San Antonio Road should be assessed for replacement or minor retrofitting to introduce compliant tactile warning devices.
- Prioritize accessibility improvements at the following bus stops: southbound Grant Road at Bryant Street, where there is a sidewalk gap; and northbound S El Monte Avenue at University Drive.
- Prioritize bus stop ADA accessibility according to usage: San Antonio Road at Hillview Avenue and Whitney Street, Grant Road at Bryant Street, and S El Monte Ave at University Drive. Consider also revising/adding service to the Rancho Shopping Center area.
- Pursue funding and project coordination with VTA and Caltrans to widen the southern sidewalk on El Camino Real to provide continuous ADA accessibility to bus stops on this corridor.

5.3.8 Traffic Calming

Collector Traffic Calming Plan

The City of Los Altos Collector Traffic Calming Plan (CTCP), approved in 2011, identifies roadways in Los Altos where common speeds exceed the posted speed limit and recommends traffic calming devices to reduce traffic speeds on collector roadways. **Table 5-7** provides an assessment and comment of proposed traffic calming measures.

Recommendations

- Consider using PSI rankings to help prioritize traffic calming elements
- Consider the traffic calming benefits of new dedicated walkways and multi-use pathways in addition to those elements listed in the CTCP

Table 5-7: CTCP Recommened Traffic Control Device

Recommended Traffic Control Device	Consistency with Pedestrian Needs	Comments
Modern Standard Roundabout	Yes – Moderate; May require deflection of potential trails/sidewalks and careful attention to splitter island design	Proposed for Grant Road and Fremont Road (both proposed Class I trails); Springer Road
Mini-Roundabout (aka Traffic Circle)	Yes – Moderate; Better if curb extensions are included in design; helps at skewed intersections; may require deflection of trails/walkways	Proposed for Cuesta Drive (x2), El Monte Ave (x3), Miramonte Ave (x1) Covington Road (x2); latter two roadways may conflict with trail concept
Bulbout / Curb Extension	Yes - Highly Consistent	Proposed numerous locations
Raised Intersection	Yes – Moderate; may not be as cost effective as other solutions	Proposed numerous locations; placemaking/gateway aspect is important
Raised Crosswalk	Yes - Highly Consistent	Proposed numerous locations
Surface Treatment / Mound	Yes- Moderate – asphalt berms may provide superior separation; supports enhanced crosswalk design	Proposed mostly near downtown; crosswalk textures should be relatively smooth for ADA
Chokers / Chicanes	Yes – Highly consistent if properly designed and does not preclude walkway/trail options	Proposed for Springer Road
Medians	Moderate – May conflict with proposed new trail and walkway facilities given limited right-of-way; may also be appropriate at intersections to reduce crossing distances	Proposed numerous locations; consistency highly dependent on site conditions; Study recommendations for Cuesta Drive, Covington Road
Meandering Roadways	Yes – Consistent if properly designed and does not preclude walkway/trail options, force out-of-direction travel	Proposed as alternative concept for Fremont Road
Treated (Enhanced Colored) Class I Bike Lanes	Yes – Consistent unless existing bike lanes/shoulders being removed for provision of walkway/path; may also be utilized for walkway delineation	Proposed for existing bike lanes on Fremont Road, Grant Road, Springer Road, and El Monte Ave

Traffic Calming

Table 5-8 provides a list of priority intersections for traffic calming improvements. Traffic calming solutions and treatments will require further study and consideration with proposed dedicated walkways/pathways and collector arterial traffic calming recommendations. While there are no specific recommendations for geometric design for these intersections in the pedestrian plan, conducting a traffic calming study is the best first step towards determining what geometric design improvements would create the greatest impact for pedestrian safety and comfort.

Table 5-8: Priority Intersections for Traffic Calming Improvements

Location	SRTS	Notes / Comments
San Antonio Ave at W Portola Ave	Yes	Included in CTCP
Los Altos Ave at W Portola Ave	Yes	Included in CTCP
San Antonio Rd at Lyell St	No	Included in CTCP
St. Joseph Ave at Stonehaven Dr	Yes	Included in CTCP
Almond Ave at N Gordon Way	Yes	Included in CTCP
Miramonte Ave at Covington Rd	Yes	Included in CTCP
El Monte Ave at Hawthorne Ave	Yes	Included in CTCP
Springer Rd at Camellia Way	Yes	School connection
San Antonio Rd at Cuesta Dr	No	Downtown connection
San Antonio Rd at Paso Robles Ave/Sherwood Ave	Yes	
San Antonio Rd at Almond Ave	Yes	Included in CTCP
Los Altos Ave at Pine Ln	Yes	Included in CTCP
Los Altos Ave at W Edith Ave	No	Included in CTCP
Miramonte Ave at Portland Ave	Yes	Included in CTCP

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6. Recommended Programs

Continued support of education, enforcement and evaluation programs are critical to increasing safety and the number of pedestrian trips. These programs ensure more residents know about new/improved facilities, integrate walking into their activities, and receive positive reinforcement about active transportation choices. The following section presents program recommendations intended to support walking. The end of each section offers each of the listed recommended programs in a tabular format. The final section of this chapter shows the top ten recommended programs that were rated as the highest level of priority.

6.1. Encouragement

6.1.1 Transportation Demand Management

Transportation Demand Management refers to a set of programs aimed at reducing the demand for auto-oriented transportation, particularly targeting work commute trips. These programs can include employer-based incentive programs that encourage employees to walk, bike, carpool, or take transit.

Recommendations

- Continue to support TDM programs for City of Los Altos employees, encouraging carpools to meetings.
- Encourage employers in Los Altos to offer commuter benefit programs, providing incentives for employees to walk, bike, carpool, or take transit to work.

6.1.2 Safe Routes to School Program

Suggested routes to school maps help school officials, parents, and students plan walking and bicycling routes to and from school. Such maps encourage more families and students to walk and bike to school rather than drive. Communities throughout the San Francisco Bay Area, including Palo Alto and Redwood City, use these maps to increase the number of students walking and biking to school. Walking Route Maps and Improvement recommendations were prepared for all Los Altos schools as part of this Pedestrian Master Plan and these, along with additional SRTS specific program recommendations, can be found in Appendix E.

Recommendations

- Continue to support the Walk or Wheel (WoW) Program (see **Figure 6-1**) or similar programs that encourage students to walk or bike or to school.
- Promote the updated suggested routes to school maps that include suggested routes, crossing locations, traffic controls, and crossing guard locations along routes to each school.
- Additional recommendations can be found in Appendix E.

Figure 6-1: WoW program outside Almond Elementary

6.1.3 Street Closures & Programming

Festival Streets are public places or streets that are officially designated for repeated temporary closure to vehicular traffic and use by pedestrian-oriented special activities. Typically considered for non-arterial streets near parks, plazas, transit stations or commercial areas, Festival Streets might also include surface parking lots that already host special events.

During the spring and summer, the weekly Farmers' Market in downtown Los Altos demonstrates the popularity of repeated pedestrian-friendly street closures. Likewise, the State Street Green, a temporary park on State Street erected for the summer of 2013 and the smaller "Green" Streets on Third Street demonstrate the viability of pedestrian-oriented programming in concert with downtown retail as seen in **Figure 6-2**.

Figure 6-2: Street closure for Pet Parade in Spring 2014

Recommendations

- Encourage recurring street closures for pedestrian- and bike-focused programming in Downtown Los Altos by expediting the permitting process for these events.

6.1.4 Walk to Work Programs

Walking to work has many benefits, including reducing the stress associated with driving in rush-hour traffic, reducing health costs by improving worker health and helping businesses market their environmental sustainability.

Recommendations

- Work with and provide information to employers about alternative commute options, with the intention of reducing the number of Los Altos workers to drive alone to work.
- Continue to promote alternative commute modes for City employees.

6.1.5 Walk Friendly Community Designation

Walk Friendly Communities (WFC) is a national recognition program for cities that have shown a commitment to improving walkability and pedestrian safety, mobility, access and comfort through comprehensive programs, plans and policies. An application for a WFC designation is estimated to take approximately 20-60 hours. Further information is available at www.walkfriendly.org. The WFC program is maintained by the University of North Carolina Highway Safety Research Center's Pedestrian and Bicycling Information Center, with support from a number of national partners.

Los Altos recently applied for WFC designation, but was not awarded recognition. The adoption of this Pedestrian Master Plan and the implementation of several projects recommended in this Plan will strengthen the Los Altos WFC application in the future.

Recommendation

- Consider re-applying to this program to demonstrate dedication to improving the pedestrian environment.

6.1.6 Volunteers

Volunteers play a key role in the successful operation and maintenance of pedestrian facilities. Formalized maintenance agreements between the City and local businesses or organizations can improve the conditions of local facilities. Local schools or community groups, such as a scout group, may choose to adopt a facility project. Advantages of utilizing volunteers include increased community pride and personal connections to the City's pedestrian network.

Recommendation

- Create a volunteer program to connect residents with opportunites to improve the pedestrian environment in Los Altos. This program can be used to organize volunteers for light sidewalk and trail maintenance such as garbage collection, pruning, conducting annual counts and identifying larger improvement opportunities.

Recommended Encouragement Programs

Title	Steps	Priority Level	Cost Estimate
Transportation Demand Management			
Promote TDM	Continue to support the TDM program for City of Los Altos employees, encouraging carpools to meetings	Medium	$5,000
Commuter Benefit Program	Encourage employers in Los Altos to offer commuter benefit programs, providing incentives for employees to walk, bike, carpool, or take transit to work	Low	$5,000
Safe Routes to School Program			
Walk or Wheel	Continue to support the Walk or Wheel (WoW) Program or similar programs that encourage students to walk or bike or to school	High	$4,000
Promote Suggested Routes	Promote the updated suggested routes to school maps that include suggested routes, crossing locations, traffic controls, and crossing guard locations along routes to each school	High	$1,000
Appendix E	Promote and implement the additional recommendations from Appendix E	High	$200,000
Street Closures & Programming			

Recommended Encouragement Programs			
Title	**Steps**	**Priority Level**	**Cost Estimate**
Open Street Events	Encourage recurring street closures for pedestrian- and bike-focused programming in Downtown Los Altos by expediting the permitting process for these events	Medium	$45,000
Walk to Work Programs			
Alternative Commute Options	Work with and provide information to employers about alternative commute options, with the intention of reducing the number of Los Altos workers to drive alone to work	Medium	$30,000
City Employee Alternative Commute Modes	Actively promote alternative commute modes for City employees	High	$5,000
Walk Friendly Community Designation			
Walk Friendly Community	Consider applying to this program to demonstrate dedication to improving the pedestrian environment.	High	$5,000
Volunteers			
Pedestrian Environment Volunteers	Create a volunteer program to connect residents with opportunities to improve the pedestrian environment in Los Altos. This program can be used to organize volunteers for light sidewalk and trail maintenance such as garbage collection, pruning, conducting annual counts and identifying larger improvement opportunities	Low	$7,000

6.2. Education

Education programs teach safety rules and laws as well as increase awareness. Education programs may be designed to reach groups at varying levels of knowledge and there may be many different audiences: pre-school age children, elementary school students, teenage and college students, workers and commuters, families, retirees, the elderly, new immigrants and non-English speakers.

6.2.1 Traffic Safety Campaign

Developed by the City of San Jose, the StreetSmarts traffic safety campaign uses print media, radio spots and television spots to educate people about safe driving, bicycling, skateboarding, and walking behavior. More information about StreetSmarts can be found at www.getstreetsmarts.org. San Jose developed the Street Smarts program in mind for regional sharing so that interested agencies could adopt the Street Smart

Campaign without paying and copyright fees. The only fees are those required to have the design firm rebrand the materials with the local agencies name and logo. Los Altos could easily rebrand and relevant materials to focus on the local context.

Should Los Altos decide to not rebrand StreetSmarts materials, local resources for conducting a traffic safety campaign can be maximized by assembling a group of local experts, law enforcement officers, businesspeople, civic leaders, and dedicated community volunteers. It may be necessary to develop creative strategies for successful media placement in order to achieve campaign goals.

The Federal Highway Administration provides resources detailing elements of a successful local safety campaign. (http://safety.fhwa.dot.gov/local_rural/pedcampaign/guide.htm#2).

Figure 6-3: Example StreetSmarts campaign posters

Recommendation

- Consider implementation of a traffic safety program such as StreetSmarts.

6.2.2 Pedestrian Safety Workshops

The Peninsula Traffic Congestion Relief Alliance (Alliance) offers employers free one-hour pedestrian safety workshops at their business. The workshop includes information encouraging walking as a safe, stress-relieving commute mode, as well as instruction about traffic laws for pedestrians and other road users. Additional information including how to request a workshop is available at www.commute.org.

Recommendation

- Work with the Alliance or the BPAC to develop safety materials and education, to host pedestrian safety workshops at City Hall, and encourage additional workshops in Los Altos.

6.2.3 Senior Citizen and Disabled Pedestrian Education

Senior citizens and disabled community members are more vulnerable as pedestrians. A program targeting such groups could include information specific to the needs of the seniors and disabled. Presentations should be conducted at community centers, churches, clubs, senior citizen centers, physician offices, and hospitals. Presentations should address issues of physical limitations when traveling to key destinations (e.g. medical appointments, food shopping, etc.).

Recommendations

- Create an education program specific to senior citizens and disabled community members.
- Coordinate guest speakers and identify sponsors and funding sources to offset the costs associated with presentations.

6.2.4 Pedestrian Resource Website

A Pedestrian Resource Center website can include information about walking for all ages and ability. Topics can include safety issues, laws and policies, how to incorporate walking into trips to work or school, places to walk, special events, and walking trail maps.

Tools as Google maps allow local pedestrian trip planning on mobile devices and provide detailed information through *Streetview.*

(http://maps.google.com/help/maps/streetview/).

There are a number of free web resources that have been developed to support local agencies in their efforts to increase walking in their communities:

- Pedestrian and Bicycling Information Center www.walkinginfo.org
- Safe Routes National Partnership www.saferoutespartnership.org
- Federal Highway Pedestrian & Bicycle Safety http://safety.fhwa.dot.gov/ped_bike
- Association of Pedestrian and Bicycling Professionals www.apbp.org
- American Public Health Association www.apha.org

Recommendation

- Create a Pedestrian Resource Center website.
- Work with the BPAC to add these sites to the existing BPAC Frequently Asked Questions (FAQ) webpage, as appropriate.

6.2.5 City Walking Map

City Walking Maps help make pedestrians more aware of existing pedestrian networks within Los Altos.

Recommendation

- Develop and provide a walking map that includes major destinations, trails, major hills, and approximate walking times between locations. The map could be made available on the City website and offered for free in local retail stores.

Recommended Education Programs

Title	Steps	Priority Level	Cost Estimate
Traffic Safety Campaign			
Traffic Safety Program	Consider implementation of a traffic safety program such as StreetSmarts	High	$2,500
Pedestrian Safety Workshops			
Peninsula Traffic Congestion Relief Alliance	Work with the Alliance to host pedestrian safety workshops at City Hall and encourage additional workshops in Los Altos	Low	$5,000

Recommended Education Programs			
Title	**Steps**	**Priority Level**	**Cost Estimate**
Senior Citizen and Disabled Pedestrian Education			
Senior Citizen and Disabled Education Program	Create an education program specific to senior citizens and disabled community members	Medium	$10,000
Guest Speakers	Coordinate guest speakers and identify sponsors and funding sources to offset the costs associated with presentations	Low	$12,000
Pedestrian Resource Website			
Walking Website	Create a Pedestrian Resource Center website	Low	$2,000
City Walking Map			
Existing Facility Maps	Develop and provide a walking map that includes major destinations, trails, major hills, and approximate walking times between locations. The map could be made available on the City website and offered for sale in local retail stores.	Medium	$6,000

6.3. Enforcement

Enforcement programs enforce legal and respectful use of the transportation network. The pedestrian safety analysis and community identified needs indicate enforcement programs will help educate both motorists and pedestrians about the rules and responsibilities of the road.

6.3.1 Parking Enforcement

Vehicles illegally parked on sidewalks or crosswalks impede pedestrian travel and force pedestrians to travel in the street. Parking on dedicated walkways is prevalent in Los Altos due to the presence of rolled sidewalk curbs and informal berm-protected walkways. The Los Altos Police Department does not enforce parking violations of paved shoulders on collector and local streets due to a lack of clear regulatory signage.

Recommendation

- Increase parking enforcement efforts. On a neighborhood level, distribute flyers notifying drivers of illegal parking practices.
- Encourage residents to request parking enforcement/ticketing of repeat offenders.

6.3.2 Targeted Police Enforcement

Targeted enforcement focuses police efforts in specific locations with a history of traffic violations. Enforcement campaigns designed to increase yielding behavior can produce a marked and sustained improvements in driver behavior depending on the length of the campaign. The Police Department patrols locations upon public request that are in heavily travelled areas.

Recommendation

- Coordinate with the Police Department to continue its existing targeted enforcement strategies to increase the safety of pedestrians in Los Altos.

6.3.3 Speed Feedback Signs

Speed feedback signs display the speed of passing motor vehicles, with the intent that motorists will slow down if they are made aware of their speed. These can either be permanent signs or trailers that can be periodically moved to new locations.

Recommendation

- The City should work with the Police Department and Public Works to continue operations of mobile speed feedback signs.

6.3.4 Community-Based Traffic Program

Community-based traffic programs develop relationships between a city's Public Works, Police Department, and its residents. Residents work with City staff to identify problem areas to target for enforcement and infrastructure improvements, with the City of Sacramento serving as a recent example.[1] The program also informs the community about how Public Works operates, empowering residents to report problems they see in their community.

Recommendation

- Establish a community-based traffic program.

Recommended Enforcement Programs

Title	Steps	Priority Level	Cost Estimate
Parking Enforcement			
Flyer Distribution	Increase parking enforcement efforts. On a neighborhood level, distribute flyers notifying drivers of illegal parking practices	Medium	$4,000
Parking Ticket Requests	Encourage residents to request parking enforcement/ticketing of repeat offenders	Medium	$1,000
Targeted Police Enforcement			
Targeted Enforcement Strategies	Coordinate with the Police Department to continue its existing targeted enforcement strategies to increase the safety of pedestrians in Los Altos	High	$18,000
Speed Feedback Signs			
Mobile Speed Feedback	The City should work with the Police Department and Public Works to continue operations of mobile speed feedback signs	High	$30,000
Community-Based Traffic Program			
Community-Targeted Feedback	Establish a community-based traffic program	Medium	$20,000

6.4. Evaluation

[1] *Information about the Neighborhood Traffic Management Program is available at: http://www.ite.org/traffic/documents/CCA96B62.pdf.*

Evaluation programs help the City measure progress towards the goals of this Plan, the General Plan and the Sustainable Initiatives. It is also a useful way to communicate success with elected officials as well as local residents.

6.4.1 Annual Pedestrian Counts and Survey Program

Pedestrian counts and community surveys act as methods to evaluate not only the impacts of specific pedestrian improvement projects but can also function as way to measure progress towards City goals such as increased pedestrian travel for trips one mile or less.

Figure 6-4: Volunteers count pedestrians in Los Angeles, CA

Recommendation

- Conduct an annual pedestrian community survey and an annual pedestrian count program.
- Produce a report or 'report card' on walking every 2-3 years. Reports developed from count and survey efforts can help the City measure its success toward the goals of this Plan as well rate the overall quality or effectiveness of the ongoing efforts to increase walking in the City.

Recommended Evaluation Programs

Title	Steps	Priority Level	Cost Estimate
Annual Pedestrian Counts and Survey Program			
Pedestrian Counts and Survey	Conduct an annual pedestrian community survey and an annual pedestrian count program	High	$3,000
Report Card	Produce a report or 'report card' on walking every 2-3 years. Reports developed from count and survey efforts can help the City measure its success toward the goals of this Plan as well rate the overall quality or effectiveness of the ongoing efforts to increase walking in the City	High	$10,000

6.5. Top Ten Priority Programs

These programs were rated the highest priority level and include programs that are already being implemented by the City of Los Altos.

Priority Recommended Programs

Title	Steps	Priority Level	Cost Estimate
Safe Routes to School Program			

Priority Recommended Programs

Title	Steps	Priority Level	Cost Estimate
Walk or Wheel	Continue to support the Walk or Wheel (WoW) Program or similar programs that encourage students to walk or bike or to school	High	$4,000
Promote Suggested Routes	Promote the updated suggested routes to school maps that include suggested routes, crossing locations, traffic controls, and crossing guard locations along routes to each school	High	$1,000
Appendix E	Promote and implement the additional recommendations from Appendix E	High	$200,000
Walk to Work Programs			
City Employee Alternative Commute Modes	Continue to actively promote alternative commute modes for City employees	High	$5,000
Walk Friendly Community Designation			
Walk Friendly Community	Consider applying to this program to demonstrate dedication to improving the pedestrian environment.	High	$5,000
Traffic Safety Campaign			
Traffic Safety Program	Consider implementation of a traffic safety program such as StreetSmarts	High	$30,000
Targeted Police Enforcement			
Targeted Enforcement Strategies	Coordinate with the Police Department to continue its existing targeted enforcement strategies to increase the safety of pedestrians in Los Altos	High	$18,000
Speed Feedback Signs			
Mobile Speed Feedback	The City should work with the Police Department and Public Works to continue operations of mobile speed feedback signs	High	$30,000
Annual Pedestrian Counts and Survey Program			
Pedestrian Counts and Survey	Conduct an annual pedestrian community survey and an annual pedestrian count program	High	$3,000
Report Card	Produce an annual report or 'report card' on walking. Annual reports developed from count and survey efforts can help the City measure its success toward the goals of this Plan as well rate the overall quality or effectiveness of the ongoing efforts to increase walking in the City	High	$10,000

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7. Implementation, Funding, & Climate Action Benefits

This Citywide Pedestrian Master Plan recommends projects and programs that will improve the pedestrian environment and help the City reach its sustainability goals; however, implementation of the projects and programs will take a significant amount of time and funding to implement. This Chapter lays out the strategy for implementing the Citywide Pedestrian Master Plan projects and programs and is divided into the following sections:

- **Project evaluation strategy** is intended to measure how well a project meets this Plan's goals and policies.
- **Cost estimates and funding** present unit costs, costs by project type and provides a summary of funding opportunities.
- **Priority projects** presents the highest-scoring projects from all areas of Los Altos.
- **Priority programmatic recommendations** presents priority improvements that cannot be evaluated using the same strategy as engineering projects.
- **Project list** presents each project, its tier and evaluation score.
- **Climate Action & Emissions Summary** gives the snapshot analysis of the total health, environmental, and transportation benefits should the recommended projects and programs be implemented in Los Altos.

7.1. Project Evaluation Strategy

The intent of an evaluation strategy is to identify achievable, priority projects for near-term implementation as well as projects for mid- and longer-term implementation. Evaluation criteria were developed to measure a project against this Plan's goals, policies, and best practices. **Table 7-1** describes the evaluation criteria, which include:

- **Pedestrian Suitability Index**: Is the project located in an area with limited sidewalk connectivity and/or significant pedestrian demand?
- **Public Involvement/Support**: Is the project identified in a previous plan and supported by the community?
- **Safety**: Is the project in an area with a high number of pedestrian related collisions?
- **Ease of Implementation**: Does the require acquisition of public-right-of-way?
- **Gap Closure**: Does the project connect existing walkways?
- **Proximity to Schools, Parks, and Community Centers**: Does the project improve access to schools, parks and community centers?
- **Existing/proposed bikeway:** Does the project improve or connect to an existing or proposed bikeway?
- **Livability/ Multimodal Synergy**: Does the project have synergistic qualities that improve the livability of Los Altos?

Each criterion was given a score based on qualitative and quantitative assessment of conditions and issues, resulting in a maximum possible score of 30. In an effort to provide equal distribution of projects throughout the City, the projects were classified into four regions described below.

- **Downtown:** Bounded by Edith Avenue, University Avenue and San Antonio Road
- **North:** Northwest of El Monte Avenue
- **Central:** Between El Monte Avenue and Miramonte Avenue
- **South:** East of Miramonte Avenue

Table 7-1: Prioritization Criteria

Criteria	Guidelines	Scoring
Pedestrian Suitability Index	Incorporates jobs density, housing density, proximity to transit stations/stops (see Ch 3 for more information on PSI) **High:** Low supply, high demand **Medium:** High supply, high demand **Low:** High/Low supply, low demand	High: 5 Medium: 3 Low: 1
Public Involvement/Support	Project is identified in previous plans or planning documents, developed through a collaborative planning process that included broad partnerships among a variety of stakeholders	1 point per plan or qualitative support within plan process (up to 5)
Safety	**High:** Project will address a well-documented safety issue with a proven or demonstrated countermeasure **Medium:** Project will address a potential safety issue based on some evidence such as near-misses, excessive speed, or evidence of high vehicle traffic or speed **Low:** Project will generally improve safety, even though there are no known problems, reducing exposure/risk of conflicts between motor vehicles and pedestrians	High: 5 Medium: 3 Low: 1
Ease of Implementation (ROW, Parking Impacts)	**High**: No ROW acquisition needed, no parking impacts, negligible anticipated traffic impacts **Medium:** Some ROW acquisition anticipated, some impact to existing parking or utilities or vehicle operations **Low:** Major ROW acquisition required, major parking or utility impacts required, high costs for maintenance, or significant impacts to vehicle operations	High: 3 Medium: 2 Low: 1
Gap closure	**High:** Project proposes a shorter route, completes sidewalks, closes gaps in a transportation facility and/or multimodal network	High: 3 Medium: 2 Low: 1
Proximity to Schools, Parks, and Community Centers	**High:** Project located within 1/8 mile of more than one (1) school, park, or center **Medium:** Project located within 1/8 mile of one school, park, or center **Low:** Project located within 1/4 mile of one school, park, or center	High: 3 Medium: 2 Low: 1

Criteria	Guidelines	Scoring
Existing/proposed bikeway	**High:** Project would help implement a proposed bikeway **Med:** Project would improve an existing bikeway or be highly compatible with a proposed bikeway **Low:** Project facilitates access to existing/proposed bikeway **No points:** Project would neither help nor hinder an existing or proposed bikeway	High: 3 Med: 2 Low: 1
Livability/ Multimodal Synergy	The overall project will have identifiable and likely synergistic effects. The overall project will improve livability and create a sense of place. Project addresses and/or improves three or more transportation modes. Project increases access to food, retail, or entertainment uses.	High: 3 Medium: 2 Low: 1
		Max Possible Score: 30 pts

7.2. Cost Estimates & Funding

7.2.1 Cost Estimates

Table 7-2 presents planning-level cost assumptions used in determining project cost estimates. Unit costs provided are typical or average for costs incurred in comparable California cities. While the table below represents typical costs, they do not consider project-specific factors such as intensive grading, right-of-way acquisition, utility relocation or other location-specific factors that may increase actual costs. For some projects, costs may be significantly greater. For other projects, utilizing temporary or short-term treatments in lieu of permanent construction may significantly reduce project costs.

Table 7-2: Unit Cost Estimates

Treatment	Unit Cost	Unit
Multi-Use Path	$120	LF
New Sidewalk	$100	LF
Soft Surface Path/"walkway"	$85	LF
Sidewalk Repair	$40	LF
Advance Stop Bars	$200	EA
Advance Yield Bars	$300	EA
Remove Crosswalk	$150	EA
Standard Crosswalk	$1,000	EA
High-Visibility Crosswalk	$1,200	EA
Raised Crosswalk	$15,000	EA
Curb/Lane Striping	$4	EA
Pavement Markings	$800	EA
Crossing/street signage	$400	EA
Curb Extension	$30,000	EA

Treatment	Unit Cost	Unit
Curb Ramp	$4,000	EA
Rectangular Rapid Flashing Beacon (RRFB)	$15,000	EA
Pedestrian Hybrid Beacon (HAWK)	$50,000	EA
Median Extension	$15,000	EA
Refuge Island (small)	$20,000	EA
Refuge Island (large)	$30,000	EA
Landscaping	$20	SF
Traffic Circle (small)	$30,000	EA
Traffic Circle (large)	$50,0000	EA

7.2.2 Funding

There are a variety of potential funding sources that can be used to build the proposed improvements, including local, state, regional and federal funding programs, as well as private sector funding.

In terms of local funding, sources include the City's General Fund (of which approximately $200,000 is budgeted annually for bicycle and pedestrian maintenance and improvements) and potential mitigation funds from nearby projects. Additional implementation of recommended projects and design concepts may occur as streets are repaved, or as other capital projects move forward. The City has in the past successfully applied for Safe Routes to School grants and Office of Traffic Safety (OTS) grant funding.

At the statewide and federal level, non-motorized funding is increasingly competitive but there are many potential sources. The California Active Transportation Program (ATP), launched in 2014, consolidates past programs including the state Safe Routes to School (SR2S) program, the Bicycle Transportation Account (BTA) program, and Recreational Trails program. More information on potential funding sources is located in Appendix D: Funding Sources.

7.3. Priority Projects

This plan contains two sets of priority projects for implementation. The first set of projects are the "Community Priority Projects", identified by the Los Altos BPAC and are identified in detail in Chapter 5: Pedestrian Network Improvements. The second set of projects are all projects across the City receiving a high priority score. Some high priority projects are identified in both tables, and are identified as such in the tables below.

7.3.1 Community Priority Projects

Table 7-3: Community Priority Projects

Community Priority Projects				
Location/Corridor	**Start**	**End**	**Treatment**	**Cost Estimate**
Cuesta Drive Concept Plan				
Cuesta Dr/San Antonio Rd at 1st St	--	--	Remove slip lane, square intersection, curb extension, new crosswalk	$94,705
Cuesta Dr at San Antonio Rd	--	--	Traffic Calming Study	$20,000
Cuesta Dr at Gabilan St	--	--	Intersection Improvement	$63,011
Cuesta Dr	El Monte Ave	Gabilan St	Sidewalk Gap Closure	$85,150
Cuesta Dr at El Monte Ave*	--	--	Curb extensions	$124,020
Cuesta Dr	Clark Ave	Campbell Ave	Sidewalk Gap Closure	$50,830
Cuesta Dr	Arboleda Ave	Springer Rd	Sidewalk Gap Closure	$250,946
Miramonte Road Shared Use Path/Trail				
Miramonte Ave	Alegre Ave	Loraine Ave	Multi-Use Path	$697,788
Miramonte Ave at Covington Rd	--	--	curb extensions at crosswalk	$156,000
Miramonte Ave at Covington Rd	--	--	Traffic Calming Study	$20,000
Miramonte Ave at Portland Ave	--	--	Traffic Calming Study	$20,000
Miramonte Ave at Fremont Ave	--	--	Loyola Gateway, remove SB slip lane	$58,630
Grant Road Shared Use Path/Trail				
Foothill Expy at Arboretum Dr	--	--	Intersection Improvement	$117,910
Grant Rd	Crist Dr	Grant Rd	Multi-Use Path	$503,150
El Monte Ave Concept Plan				
El Monte Ave at Springer Road*	--	--	Reconfigure intersection	$165,230
El Monte Ave at Almond Ave	--	--	Square up intersection with curb extensions, consider traffic circle	$120,120
El Monte Ave	Edith Ave	Almond Ave	Sidewalk Gap Closure	$206,310
El Monte Ave at Clark Ave	--	--	Squre up intersection	$86,255
El Monte Ave	Hawthorne Ave	Edith Ave	Repair/expand sidewalk	$87,360
El Monte Ave at Cuesta Dr*	--	--	Curb extensions	$124,020
El Monte Ave	Foothill Expy	Cuesta Dr	Repair/expand sidewalk	$200,460

** Project cross-listed in Community Priority Projects*

7.3.2 High Priority Projects

Table 7-4: High Priority Projects

High Priority Projects				
Location	**Start**	**End**	**Treatment**	**Cost Estimate**
Miramonte Ave	Alegre Ave	Loraine Ave	Multi-Use Path	$697,788
Grant Road	Crist Dr	Grant Rd	Multi-Use Path	$530,150
Fremont Ave at Truman Ave	--	--	RRFB, re-stripe crosswalk	$49,400
Miramonte Ave at Covington Rd	--	--	curb extensions at crosswalk	$156,000
Fremont Ave at Altos Oaks Dr	--	--	Curb extension/trail extension	$44,200
Springer Rd at El Monte Ave	--	--	Reconfigure intersection	$165,230
Cuesta Dr	Arboleda Ave	Springer Rd	Sidewalk Gap Closure	$250,946
Springer Rd at Fremont Ave	--	--	Reconfigure intersection, add median, lighting, connect to Berry Ave path	$111,150
El Monte Ave	Edith Ave	Almond Ave	Sidewalk Gap Closure	$206,310
El Monte Ave	Foothill Expy	Cuesta Dr	Repair/expand sidewalk	$200,460
Covington Rd at Campbell Ave	--	--	Skewed intersection with blind corner especially SW) obscured further by vegetation; consider with proposed walkway/pathway options	$67,535
Covington Rd	Miramonte Ave	Blach Jr High	Multi-Use Path	$148,200
Covington Rd at Riverside Ave	--	--	Pedestrian refuge island or curb bulbs; possible traffic circle; gateway to Rancho from north	$41,340
Foothill Expy at Edith St/1st St	--	--	Remove slip lanes	$329,340
Main St at 2nd St	--	--	Stop warrant analysis	$2,080
Marich Way	Distel Dr	Panchita Way	Possible phasing, low cost walkway concept (Sidewalk Gap Closure)	$29,744
San Antonio Rd at Sherwood Ave	--	--	Square up SE corner; supports gateway function in Sherwood Area Specific Plan	$39,000
Hawthorne Ave	El Monte Ave	Eleanor Ave	Repair existing sidewalk and fill gaps. Supports access to Los Altos High School, and pedestrians traveling to downtown	$87,880
San Antonio Road	Almond Ave	El Camino Real	Opportunities for opportunistic sidewalk widening, tree root repair, and vegetation maintenance should be explored. Extents may be revised based on feedback.	TBD
San Antonio Rd at Paso Robles Ave	--	--	Traffic Calming Study	$20,000
San Antonio Rd at Loucks Ave	--	--	Add RRFBs	$19,500
San Antonio Rd at Portola Ave	--	--	Traffic Calming Study	$20,000

7.4. Priority Programmatic Recommendations

Table 7-5: Priority Recommended Programs

Priority Recommended Programs			
Title	**Steps**	**Priority Level**	**Cost Estimate**
Safe Routes to School Program			
Walk or Wheel	Continue to support the Walk or Wheel (WoW) Program or similar programs that encourage students to walk or bike or to school	High	$4,000
Promote Suggested Routes	Promote the updated suggested routes to school maps that include suggested routes, crossing locations, traffic controls, and crossing guard locations along routes to each school	High	$1,000
Appendix E	Promote and implement the additional recommendations from Appendix E	High	$200,000
Walk to Work Programs			
City Employee Alternative Commute Modes	Continue to actively promote alternative commute modes for City employees	High	$14,000
Walk Friendly Community Designation			
Walk Friendly Community	Consider applying to this program to demonstrate dedication to improving the pedestrian environment.	High	$5,000
Traffic Safety Campaign			
Traffic Safety Program	Consider implementation of a traffic safety program such as StreetSmarts	High	$2,500
Targeted Police Enforcement			
Targeted Enforcement Strategies	Coordinate with the Police Department to continue its existing targeted enforcement strategies to increase the safety of pedestrians in Los Altos	High	$18,000
Speed Feedback Signs			
Mobile Speed Feedback	The City should work with the Police Department and Public Works to continue operations of mobile speed feedback signs	High	$30,000
Annual Pedestrian Counts and Survey Program			
Pedestrian Counts and Survey	Conduct an annual pedestrian community survey and an annual pedestrian count program	High	$3,000
Report Card	Produce an annual report or 'report card' on walking. Annual reports developed from count and survey efforts can help the City measure its success toward the goals of this Plan as well rate the overall quality or effectiveness of the ongoing efforts to increase walking in the City	High	$10,000

7.5. Project List

Table 7-6: High Priority Projects

High Priority Projects (18 points or above)					
Location	**Start**	**End**	**Treatment**	**Score (1-30)**	**Cost Estimate**
South Los Altos - East of Miramonte Avenue					
Miramonte Ave	Alegre Ave	Loraine Ave	Multi-Use Path	27	$697,788
Grant Road	Crist Dr	Grant Rd	Multi-Use Path	26	$530,150
Fremont Ave at Truman Ave	--	--	RRFB, re-stripe crosswalk	22	$49,400
Miramonte Ave at Covington Rd	--	--	curb extensions at crosswalk	19	$156,000
Fremont Ave at Bright Oaks Ct	--	--	Curb extension/trail extension	19	$44,200
Central Los Altos - Miramonte Ave to El Monte Ave					
Springer Rd at El Monte Ave	--	--	Reconfigure intersection	26	$165,230
Cuesta Dr	Arboleda Ave	Springer Rd	Sidewalk Gap Closure	23	$250,946
Springer Rd at Fremont Ave	--	--	Reconfigure intersection, add median, lighting, consider trail to connect to Berry Ave path	20	$111,150
El Monte Ave	Edith Ave	Almond Ave	Sidewalk Gap Closure	20	$206,310
El Monte Ave	Foothill Expy	Cuesta Dr	Repair/expand sidewalk	19	$200,460
Covington Rd at Campbell Ave	--	--	Skewed intersection with blind corner especially SW) obscured further by vegetation; consider with proposed walkway/pathway options	19	$67,535
Covington Rd	Miramonte Ave	Blach Jr High	Multi-Use Path	19	$148,200
Covington Rd at Riverside Ave	--	--	Pedestrian refuge island or curb bulbs; possible traffic circle; gateway to Rancho from north	18	$41,340
Downtown Los Altos					
Foothill Expy at Edith St/1st St	--	--	Remove slip lanes	21	$329,340
Main St at 2nd St	--	--	Stop warrant analysis	18	$2,080
North Los Altos - Northwest of El Monte Ave					
Marich Way	Distel Dr	Panchita Way	Possible phasing, low cost walkway concept (Sidewalk Gap Closure)	22	$29,744
San Antonio Rd at Sherwood Ave	--	--	Square up SE corner; supports gateway function identified in Sherwood Area Specific Plan	21	$39,000
San Antonio Road at Portola Ave	--	--	Traffic Calming Study	20	$20,000

High Priority Projects (18 points or above)					
Location	**Start**	**End**	**Treatment**	**Score (1-30)**	**Cost Estimate**
Hawtorne Ave	El Monte Ave	Eleanor Ave	Repair existing sidewalk and fill gaps. Supports access to Los Altos High School, and pedestrians traveling to downtown	19	$87,880
San Antonio Road	Almond Ave	El Camino Real	Opportunities for opportunistic sidewalk widening, tree root repair, and vegetation maintenance should be explored. Extents may be revised based on feedback	19	TBD
San Atonio Rd at Paso Robles Ave	--	--	Traffic Calming Study	19	$20,000
San Antonio Rd at Loucks Ave	--	--	Add RRFBs	18	$19,500
University Avenue	Redwood Grove	--	High-visibility crosswalk	18	$14,000
University Avenue	Milverton Rd	160' north of Milverton Rd	Sidewalk Gap Closure	19	$55,000

Table 7-7: Medium Priority Projects

Medium Priority Projects (14 to 17 points)					
Location	**Start**	**End**	**Treatment**	**Score (1-30)**	**Cost Estimate**
South Los Altos - East of Miramonte Avenue					
Fremont Ave at Fallen Lean Ln	--	--	RRFB, new crosswalk	17	$66,560
Fremont Ave at Miramonte Ave	--	--	Corners, remove SB slip lane	17	$58,630
St Joseph Ave	Granger Ave	Robles Ranch Rd	Sidewalk Gap Closure	17	$60,840
St Joseph Ave	Montclaire Elementary	I-280	Multi-Use Path	17	$313,300
Altamead Drive	Grant Rd	Miramonte Christian School	Sidewalk Gap Closure	16	$106,730
Fremont Ave	Grant Rd	Lisa Ln	Widen Sidewalk	16	$97,500
Truman Ave	Oak Ave	Fremont Ave	Sidewalk Gap Closure	16	$164,675
Grant Rd	Fremont Ave	Grant Rd	Multi-Use Path	15	$381,576
Carmel Terrace	Portland Ave	500' north of Portland Ave	Sidewalk Gap Closure	15	$55,250
Fremont Ave	Lisa Ln	Permanente Creek	Sidewalk Gap Closure	15	$153,816
Miramonte Ave at Portland Ave	--	--	Traffic Calming Study	15	$20,000
Fremont Ave	Stevens Creek	Grant Rd	Multi-Use Path	14	$711,516
Miramonte Ave at Covington Rd	--	--	Traffic Calming Study	14	$20,000
Central Los Altos - Miramonte Ave to El Monte Ave					
Berry Ave	Loyola Elementary	Miramonte Ave	Re-construct curb ramps on existing multi-use path.	17	$41,600
B Street	Fremont Ave	Miramonte Ave	Sidewalk Gap Closure	17	$25,090
Springer Rd at Foothill Expy	--	--	Close slip lanes, reconfigure crossings	17	$202,020
Seena Avenue	Covington Rd	Berry Ave	Sidewalk Gap Closure	16	$128,700
El Monte Ave at Almond Ave	--	--	Square up intersection with curb extensions, consider traffic circle	16	$120,120
El Monte Ave at Cuesta Dr	--	--	Curb extensions	16	$124,020
El Monte Ave at Clark Ave	--	--	Squre up intersection	16	$86,255
Loyola Drive/A Street	--	--	Curb extensions, median islands, ADA access upgrades	15	$195,130
Campbell Ave	Rosita Ave	Covington Rd	Sidewalk Gap Closure	15	$158,236
Springer Rd	Covington Rd	Cuesta Dr	Multi-Use Path	15	$520,728
Russel Ave	Berry Ave	Covington Rd	Sidewalk Gap Closure	15	$109,055
El Monte Ave	Hawthorne Ave	Edith Ave	Repair/expand sidewalk	14	$87,360
Camellia Way	Clark Ave	Springer Rd	Sidewalk Gap Closure	14	$171,860

Medium Priority Projects (14 to 17 points)					
Location	**Start**	**End**	**Treatment**	**Score (1-30)**	**Cost Estimate**
Downtown Los Altos					
1st St at San Antonio Rd/Cuesta Dr	--	--	Remove slip lane, square intersection, curb extension, new crosswalk	17	$94,705
Foothill Expy at Main St	--	--	Improve crossings at slip-lanes	15	$126,120
W Edith Ave at 4th St	--	--	Curb extension	14	$39,000
Main St at State St	--	--	Analyze if a 4-way stop is warranted at this intersection.	15	$2,340
Main St at 3rd St	--	--	Analyze if a 4-way stop is warranted at this intersection.	14	$1,560
State St at 3rd St	--	--	Analyze if a 4-way stop is warranted at this intersection.	14	$1,560
North Los Altos - Northwest of El Monte Ave					
Los Altos Square	--	--	Consider easement options or alterative corridor access with improvements along ECR prioritized. Possible signalized pedestrian crossing through median to northwest. Planned BRT stop/existing bus stops.	17	
Cuesta Dr	El Monte Ave	Gabilan St	Sidewalk Gap Closure	17	$85,150
El Camino Real	Palo Alto border	Mountain View border	Repair/expand sidewalk	17	$416,000
W Portola Ave	Egan Jr High	Los Altos Ave	Repair/expand sidewalk	17	$93,925
Eleanor Ave	Lyell St	Frances Dr	Sidewalk Gap Closure	17	$167,518
San Antonio Rd at Cuesta Dr	--	--	Traffic Calming Study	15	$20,000
E Edith Ave at Gordon Way	--	--	Curb extension or refuge island	15	$58,110
Cuesta Dr at Gabilan St	--	--	Intersection Improvement	15	$63,011
E Portola Ave	San Antonio Rd	Jordan Ave	Repair and widen existing sidewalk / berm-protected walkway.	15	$65,988
San Antonio Rd	Sherwood Ave	El Camino Real	Intermittent existing sidewalk; angled parking on private property; likely to occur with redevelopment and/or with significant changes to parking	15	$71,500
Los Altos Ave at Portola Ave	--	--	Traffic Calming Study	15	$20,000
N Gordon Way	Edith Ave	Almond Ave	Sidewalk Gap Closure	15	$179,400
Edith Ave	Eleanor Ave	El Monte Ave	Sidewalk Gap Closure	14	$189,800
Alicia Way	Almond Ave	Jardin Dr	Sidewalk Gap Closure	14	$171,600
Marich Way	Jordan Way	Panchita Way	Possible phasing, low cost walkway concept (Sidewalk Gap Closure)	14	$54,444
Hawthorne Ave	El Monte Ave	Eleanor Ave	Repair/expand sidewalk	14	$87,880
Los Altos Ave at Pine Ln	--	--	Traffic Calming Study	14	$20,000

Table 7-8: Low Priority Projects

Low Priority Projects (13 points or lower)					
Location	**Start**	**End**	**Treatment**	**Score (1-30)**	**Cost Estimate**
South Los Altos - East of Miramonte Avenue					
St Joseph Ave at Stonehaven Dr			Traffic Calming Study	13	$20,000
Grant Rd	Oak Ave	Fremont Ave	Multi-Use Path	13	$270,088
Portland Ave	Carmel Terr	200' east of Carvo St	Sidewalk Gap Closure	13	$69,290
Foothill Expy at Arboretum Dr	--	--	Intersection Improvement	12	$117,910
Grant Rd	Eureka Ave	Miravelle Ave	Sidewalk Gap Closure	11	$21,372
Grant Rd	Portland Ave	Altamead Dr	Sidewalk Gap Closure	11	$59,540
Farndon Ave at Crist Dr	--	--	Intersection Improvement	9	$39,000
Oak Avenue	Grant Rd	Marinovich Way	Sidewalk Gap Closure, traffic calming	9	$44,311
Central Los Altos - Miramonte Ave to El Monte Ave					
Covington Rd	Miramonte Ave	Springer Rd	Multi-use Path	13	$426,400
Springer Rd	Berry Ave	Covington Rd	Sidewalk Gap Closure	13	$160,700
Cuesta Dr	Clark Ave	Campbell Ave	Sidewalk Gap Closure	12	$50,830
Springer Rd at Cuesta Dr	--	--	Intersection Improvement	11	$56,420
Dolores Ave at Fremont Ave	--	--	Intersection Improvement	11	$97,630
Springer Rd at Camellia Way	--	--	Traffic Calming Study	11	$20,000
El Monte Ave at Hawthorne Ave	--	--	Reconfiguration; also supports low performing bus stop	10	$81,510
Clark Ave	Cuesta Dr	El Monte Ave	Repair/expand sidewalk	9	$144,664
Springer Rd	Cuesta Dr	Todd St	Sidewalk Gap Closure	9	$573,170
El Monte Ave at Hawthorne Ave	--	--	Traffic Calming Study	9	$20,000
El Monte Ave at University Ave	--	--	Intersection Improvement	8	$202,020
S El Monte Ave	Woodstock Ln	Bay Tree Ln	Repair/expand sidewalk	7	$26,988
North Los Altos – Northwest of El Monte Ave					
San Antonio Rd at Almond Ave	--	--	Traffic Calming Study	13	$20,000
Marich Way	Distel Dr	Casita Way	Possible phasing, low cost walkway concept	13	$18,252
Sherwood Ave	San Antonio Rd	El Camino Real	Intermittent existing sidewalk; gap closure needed	13	$92,950
San Antonio Rd at Lyell St	--	--	Traffic Calming Study	13	$20,000
Almond Ave at Gordon Way	--	--	Traffic Calming Study	13	$20,000
Distel Dr	Marich Way	Distel Cir	Sidewalk Gap Closure	12	$37,180

Low Priority Projects (13 points or lower)					
Location	**Start**	**End**	**Treatment**	**Score (1-30)**	**Cost Estimate**
Casita Way	Jardin Way	Marich Way	Sidewalk Gap Closure	11	$280,410
Jordan Ave	Portola Ave	El Camino Real	Sidewalk Gap Closure	11	$63,650
Portola Ct	Jordan Ave	Delphi Cir	Sidewalk Gap Closure	11	$91,390
Panchita Way	Alvarado Way	Marich Way	Sidewalk Gap Closure	10	$123,110
Cuesta Dr	San Antonio Rd	Tyndall St	Repair/expand sidewalk	10	$91,130
Los Altos Ave	Mariposa Ave	Yerba Santa Ave	Sidewalk Gap Closure	9	$140,920
Delphi Cr	Portola Ct	Panchita Way	Sidewalk Gap Closure	8	$188,890
Los Altos Ave at W Edith Ave	--	--	Traffic Calming Study	8	$20,000
Downtown Los Altos					
State St at 2nd St	--	--	Analyze if a 4-way stop is warranted at this intersection.	12	$1,560

7.6. Climate Action & Emissions Summary

The Los Altos Pedestrian Master Plan recommends the implementation of several programs and projects to make Los Altos a pedestrian-friendly community. By implementing the proposed projects and programs, greenhouse gas reduction can result as more families will choose an active mode of travel rather than drive. This section summarizes the calculated climate and health impacts and the full impact analysis memo can be found in Appendix F: Benefit Impact Analysis. In the sections below, all of the primary inputs into each component of the impact analysis come from the five-year estimates of commute trip data from the U.S. Census Bureau.

The tables below offer baselines, low, mid, and high estimates of each type of benefit. The baseline was determined by current walk-commute mode share from the Census. Each type of benefit was then compared to selected peer cities - such as Santa Clara or Menlo Park - with similar infrastructure already in place and the walk and bike commute mode share for those cities. Future estimates were derived from over 50 multipliers in order to anticipate daily, monthly, and annual trip rates, trip distance, vehicle trips replaced, emission rates, physical activity rates, and other externalities linked to an increase in bicycling and walking trips and to a decrease in motor vehicle trips.

7.6.1 Health Benefits

The implementation of a well-designed, connected pedestrian network across Los Altos will encourage a shift from energy-intensive modes of transportation such as cars and truck to active modes of transportation such as walking. The impact analysis model evaluates and quantifies the estimated increase in walking trips, the estimated increase in hours of physical activity, and the annual savings resulting from reduced healthcare costs. In order to evaluate these health factors, the consultant team analyzed readily-available data inputs. Table 7-9 shows the annual health benefits for Los Altos.

Table 7-9: Annual Health Benefits

	Baseline	Low Estimate	Mid Estimate	High Estimate
Annual Walk Trips	1,532,000	1,903,000	**2,145,000**	2,301,000
Annual Miles Walked	1,009,000	1,111,000	**1,178,000**	1,221,000
Annual Hours of Physical Activity	336,000	370,000	**393,000**	407,000
Number of Residents Meeting CDC Recommended Number of Hours of Physical Activity	2,585	2,846	**3,023**	3,131
Physical Activity Need Met	15.7%	16.6%	**17.2%**	17.6%
Annual Healthcare Cost Savings	**$48,000**	**$60,000**	**$67,000**	**$72,000**

7.6.2 Environmental Benefits

While the causes of physical inactivity and pollution stem from many sources, the implementation of the recommended pedestrian projects in Los Altos will contribute to a shift from energy-intensive modes of transportation such as cars and trucks to active modes of transportation such as walking. The impact analysis model evaluates and quantifies the estimated increase in walking trips and the annual savings from reduced vehicle emissions. In order to evaluate these environmental factors, a number of readily-available data inputs were analyzed. Table 7-10 presents the annual environmental benefits of replacing motor vehicle trips with active transportation trips after the recommended projects and programs have been implanted.

Table 7-10: Annual Environmental Benefits

	Baseline	Low Estimate	Mid Estimate	High Estimate
CO2 Emission Reduced (lbs)	1,425,000	1,770,000	**1,995,000**	2,140,000
Other Vehicle Emissions Reduced (lbs)	16,000	20,000	**23,000**	25,000
Total Vehicle Emissions Reduced (lbs)	1,441,00	1,790,000	**2,018,000**	2,165,000
Total Vehicle Emission Costs Reduced	**$17,000**	**$21,000**	**$24,000**	**$26,000**

7.6.3 Transportation Benefits

The most readily-identifiable benefits of the recommended project list derive from their use as a connection between activity centers and residences. While no money may change hands, real savings can be estimated from the reduction costs associated with congestion, vehicle crashes, road maintenance, and household vehicle operations. Table 7-11 summarizes the annual transportation benefits for Los Altos.

Table 7-11: Annual Transportation Benefits

	Baseline	Low Estimate	Mid Estimate	High Estimate
Reduced Vehicle Miles Travelled	508,000	631,000	**711,000**	763,000
Reduced Traffic Congestion Costs	$36,000	$44,000	**$50,000**	53,000
Reduced Vehicle Collision Costs	$254,000	$315,000	**$356000**	$381,000
Reduce Road Maintenance costs	$76,000	$95,000	**$107,000**	$114,000
Household Vehicle Cost Savings	$290,000	$360,000	**$405,000**	$435,000
Total Vehicle Cost Savings	**$656,000**	**$814,000**	**$868,000**	**$983,000**

7.6.4 Total Benefits

If all of the projects on the Los Altos Pedestrian Master Plan recommended project list are implemented, the City could experience a total of $288,000 in health-, environmental-, and transportation-related benefits per year. Table 7-12 summarizes all calculated benefits.

Table 7-12: Total Additional Annual Benefits

	Low Estimate	Mid Estimate	High Estimate
Annual Health Benefits	$12,000	**$19,000**	$24,000
Annual Environmental Benefits	$4,000	**$7,000**	$9,000
Annual Transportation Benefits	$158,000	**$262,000**	$327,000
Total Annual Benefits	**$174,000**	**$288,000**	**$378,000**

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Appendix A. Pedestrian Design Guidelines

The following pedestrian design guidelines provide design requirements intended to create inviting, walkable environments for pedestrians.

The design guidelines presented in this appendix are a combination of minimum standards outlined by the California Highway Design Manual's design guidelines and the 2014 CA MUTCD. The minimum standards for pedestrian facilities used in combination with the design recommendations for issues specific to Los Altos should provide the foundation for a safe, functional, and inviting pedestrian network.

Additional design guidance and details can be found in the following documents:

- California Manual on Uniform Traffic Control Devices (2014)
  http://www.dot.ca.gov/hq/traffops/engineering/mutcd/
- Caltrans Highway Design Manual
  http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm
- Caltrans Design Information Bulletins
  http://www.dot.ca.gov/hq/oppd/dib/dibprq.htm
- Caltrans Standard Plans
  http://www.dot.ca.gov/hq/esc/oe/project_plans/HTM/06_plans_disclaim_US.htm

This appendix is not intended to replace existing state or national mandatory or advisory standards, nor the exercise of engineering judgment by licensed professionals.

A.1. Sidewalk Standards - Introduction

Discussion

Sidewalks form the backbone of the pedestrian transportation network. Good street and sidewalk design can foster healthier communities by improving public safety, enhancing mobility, reducing environmental impacts, and building community character.

Sidewalks consist of one or several zones which include through, planter/furniture, frontage, and parking lane/enhancement zones. The zones are named for the primary activity that occurs in the zone. The widths of sidewalks determine the types of pedestrian elements that can be installed and affect the pedestrian activities that occur there. In residential areas, sidewalks four to six feet wide are likely appropriate. In commercial settings with a mix of uses, wider sidewalks are sometimes essential for high pedestrian traffic and/or to accommodate amenities such as street furniture or newspaper stands. Streetscape elements can vary from a simple landscape strip in a residential setting to many elements such as street trees, pedestrian lighting with banners, and benches in areas with larger pedestrian traffic

Figure A-1 describes the recommended sidewalk zones for Los Altos by street clasification. where public-right-of-way is available. The presence and width of each zone along a given sidewalk depends on the adjoining roadway type and transportation needs, surrounding land uses, and community needs and desires.

Street Classification	Parking Lane/ Enhancement Zone	Furnishing Zone	Pedestrian Through Zone	Frontage Zone	Total
Local Streets	Varies	2 - 5 feet	4 - 6 feet	N/A	6 - 11 feet
Commercial Areas	Varies	4 - 6 feet	6 - 12 feet	2.5 - 10 feet	11 - 28 feet
Arterials and Collectors	Varies	2 - 6 feet	4 - 8 feet	2.5 - 5 feet	8 -19 feet

Figure A-1: Recommended sidewalk widths by street classification

A.2. Sidewalk Grade and Cross Slope

Sidewalk grade and cross slope affect user control, stability and endurance.

Design Summary

Grade

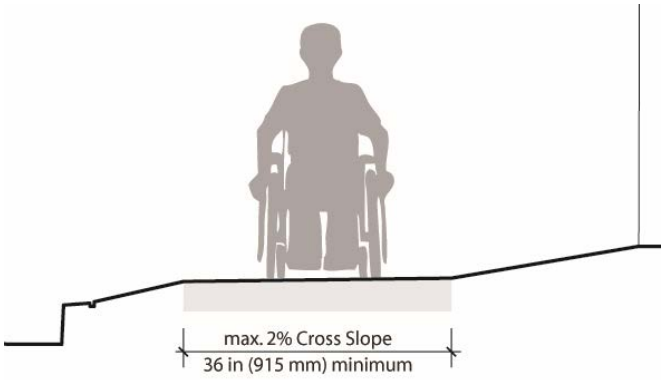
The grade of a sidewalk affects the issues of control, stability and endurance. Gentle grades are preferred to steep grades, allowing more people to go uphill, providing more control on the downhill, and minimizing loss of footing. The maximum grade of a sidewalk should be no more than 14 percent in any 2-foot section, while the running grade for a sidewalk should not exceed 5 percent.

The following terms apply to standards for grades:

- Grade is the slope parallel to the direction of travel.
- Running grade is the average grade along an entire continuous path.
- Maximum grade covers a section of the sidewalk that is larger than the running grade. It is measured over a two-foot section.
- Rate of change is the change of the grade over a distance of two feet.
- Counter slope is the grade running opposite to the running grade.

Cross Slope

- Cross-slope describes the angle of the sidewalk from the building line to the street, perpendicular to the direction of travel. All sidewalks require some cross-slope for drainage, but a cross-slope that is too great will present problems for people who use wheelchairs, walking aids, or who have difficulty walking but do not use aids. The maximum cross-slope should be no more than 2 percent (1:50) for compliance with ADA.
- If a greater slope is anticipated because of unusual topographic or existing conditions, the designer should maintain the preferred slope of 1:50 within the entire Through Passage Zone, if possible. This can be accomplished either by raising the curb so that the cross-slope of the entire sidewalk can be 1:50, or by placing the more steeply angled slope within the Furnishings Zone and/or the Frontage Zone.
- If the above measures are not sufficient and additional slope is required to match grades, the cross slope within the Through Passage Zone may be as much as 1:25, provided that a 3-ft wide portion within the Through Passage Zone remains at 1:50 cross slope.



Sidewalk cross slope should not exceed 2% to comply with ADA accessibility standards.

A.3. Sidewalk Materials

Sidewalks should be firm and stable, and resistant to slipping. Sidewalks are normally constructed out of Portland cement concrete. Although multi-use pathways may be constructed out of asphalt, asphalt is not suitable for sidewalk construction due to its shorter lifespan and higher maintenance costs.

Concrete is the most common surface for sidewalks; however, some sidewalks are designed using decorative materials, such as brick or cobblestone. Although these surfaces may improve the aesthetic quality of the sidewalk, they may also present challenges to people with mobility impairments. For example, tiles that are not spaced tightly together can create grooves that catch wheelchair casters.

Design Summary

Concrete

- Preferred material for use on standard sidewalks.
- Maintenance life: 75 years plus (with no tree root damage).

Concrete Pavers

- Acceptable material for use where aesthetic treatment is desired. May be best suited for the Furnishings Zone as streetscape accent where pedestrian through travel is not expected. Not recommended for use on sidewalk through-zone.
- Maintenance life: 20 years plus.

A.4. Sidewalk Furnishings

The furnishings zone is the area between the curb zone and the through passage zone, where pedestrians pass. The furnishings zone creates an important buffer between pedestrians and vehicle travel lanes by providing horizontal separation.

Design Summary

Width

A minimum width of 24 in (48 in if planting trees) is recommended (FHWA). On sidewalks of ten feet or greater, the furnishings zone width should be a minimum of four feet. A wider zone should be provided in areas with large planters and/or seating areas.

Transit Stop/Shelter Placement

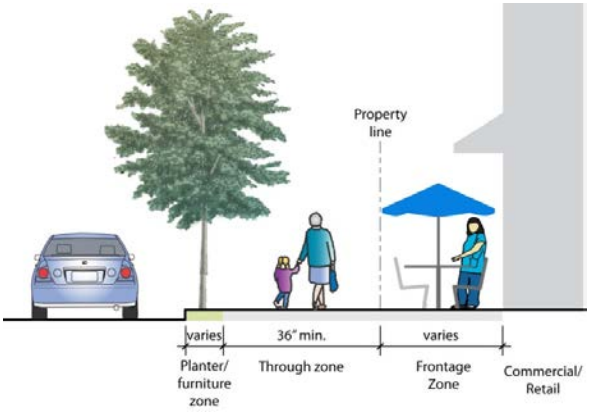
To discourage midblock crossings by pedestrians, bus stops at or near intersections are generally preferred to midblock crossings. An 8 foot by 5 foot landing pad must be provided. A continuous 8 foot pad or sidewalk the length of the bus stop, or at least from the front to rear bus doors, is recommended. At stops in areas without curbs, an 8 foot shoulder should be provided as a landing pad. Bus shelters should be provided where possible to provide visible, comfortable seating and waiting areas for pedestrians. Bus shelters must have a clear floor area of 2.5 feet by 4 feet, entirely within the perimeter of the shelter, connected by a pedestrian access route to the boarding area (AASHTO).

Street Trees and Plantings

Wherever the sidewalk is wide enough, the furnishings zone should include street trees. In order to maintain line of sight to stop signs or other traffic control devices at intersections, when planning for new trees, care should be taken not to plant street trees within vehicle sightlines of corners of any intersection.

Street Furniture and Amenities

Street furniture should be placed in the furnishings zone to maintain through passage zones for pedestrians and to provide a buffer between the sidewalk and the street.



Recommended Design

A.5. Rural Walkways

Recent design practices in providing safe pedestrian pathways in suburban-rural environments have demonstrated that dedicated pedestrian walkways need not be "traditional" concrete sidewalks with curb and gutter. Many treatments have successfully integrated soft surface trails, level asphalt pathways, planted bioswales and "green gutters" that help process stormwater run-off, and even low-cost berm-protected shoulders. The following are several examples of such treatments.

Berry Avenue	Los Altos, CA

The Berry Avenue multi-use path is one of three examples in Los Altos of a wide sidepath on a neighborhood roadway with a 3-4 foot natural buffer and a consistent, level asphalt surface. The path is also an example of a "one side of the roadway" path—there is no parallel path on the opposite side of Berry Avenue.

A.5.1. Rural Walkway – Decomposed Granite Path

West Fremont Avenue | Los Altos Hills, CA

As part of a Suggested Routes to School trail project, the Town of Los Altos Hills constructed a variety of trail surface and curb edge treatments to retain the rural character of the community along West Fremont Road. Notable elements include doweled woodblock curbing, drought-tolerant landscaping, and decomposed granite pathway surfacing.

A.5.2. Rual Walkway- Asphalt path

Springhill Road Pathway — Lafayette, CA

The City of Lafayette recently installed a pathway connecting homes along Springhill Road to Springhill Elementary School. The project underwent an extensive outreach process and redesign to accommodate opposition.

The asphalt pathway provides a safe route for students to walk to Springhill Elementary. A small vertical curb separates the roadway and the pedestrian pathway, and natural surfaces separate the pathway and property lines. Some segments of the pathway feature decorative pavers.

A.5.3. Rural Walkways – Asphalt Berm-Separated Walkway

Clark Avenue Asphalt Berm-Separated Walkway — Los Altos, CA

Clark Avenue is an important local roadway that links two collector arterials and provides access to multiple schools, including Los Altos High School. Although there is no rolled or vertical curb and gutter system, one side generally includes a paved shoulder with asphalt berm providing a low-cost, dedicated walkway area protected from traffic.

With additional attention to detail, this low-cost asphalt berm—installed as part of a traffic calming effort on Clark Avenue—may have also provided ADA access while improving safety for all users.

A.5.4. Rural Walkways – Green Streets

Logus Road Green Street — Milwaukie, OR

The Logus Road Green Street improvements were Milwaukie's first experiment with a "curbless" residential green street retrofit project. According to the project designers, Logus Road's "green gutter" system captures 20,000 square feet of run-off. Stormwater run-off is slowed, filtered, and infiltrated through the system of stormwater planters and pervious sidewalks. As shown in the images on the left, a slight vertical separation of the walkway is achieved via gentle cross slope within the landscaped "green gutter" system.

Green Street "Complete Street" Demonstration Project — Shoreline, WA

Combining a Community Development Block Grant and capital investment from the City of Shoreline, the Green Street "Complete Street" Demonstration Project used Low Impact Development (LID) design features to create both natural drainage solutions and safe access for pedestrians and bicyclists of all ages and abilities, while avoiding use of a concrete curb and gutter and retaining the street's rural character.

A.6. Curb Ramps

Discussion

Curb ramps are necessary for people who use wheelchairs to access sidewalks and crosswalks. ADA requires the installation of curb ramps in new sidewalks, as well as retrofitting existing sidewalks. Curb ramps may be placed at each end of the crosswalk (perpendicular curb ramps), or between crosswalks (diagonal curb ramps). The ramp may be formed by drawing the sidewalk down to meet the street level, or alternately building up a ramp to meet the sidewalk.

Design Summary

Orientation and Alignment

Perpendicular curb ramps should be used at large intersections with consideration for curb radius. Curb ramps should be aligned with crosswalks, unless they are installed as a retrofit and are in an area with low vehicular traffic.

Width

The minimum width of a curb ramp should be 36 inches, in accordance with Americans with Disabilities Act Accessibility Guidelines (ADAAG). Curb ramps should be designed to accommodate the level of use anticipated at specific locations, with sufficient width for the expected level of peak hour pedestrian volumes and other potential users.

Drainage

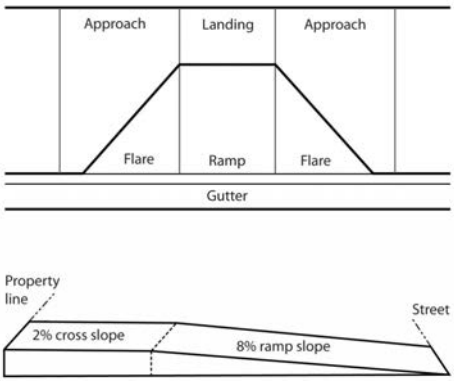
Adequate drainage should be provided to prevent flooding of curb ramps.

Detectable Warnings

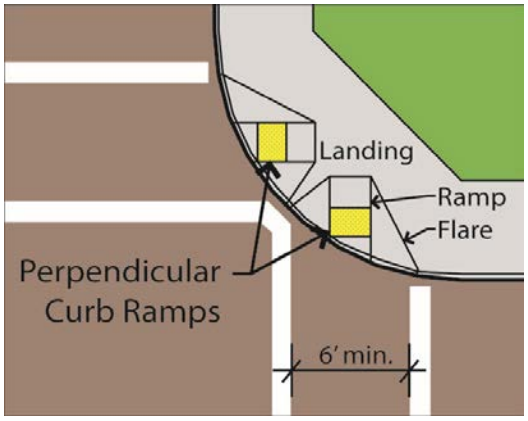
Tactile strips must be used to assist sight-impaired pedestrians in locating the curb ramp. Certain exemptions apply (see ADAAG Section 4.29 and the ADA Access Board Guidelines on Accessible Public Rights of Way).

Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 inches, a height of nominal 0.2 inches and a center-to-center spacing of nominal 2.35 inches and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light. The coefficient of friction of these plates should be at least 0.8 (ADAAG).

Design Example



Curb Ramp Elements



Perpendicular Curb Ramp

Parallel Curb Ramp

A.7. Curb Extensions

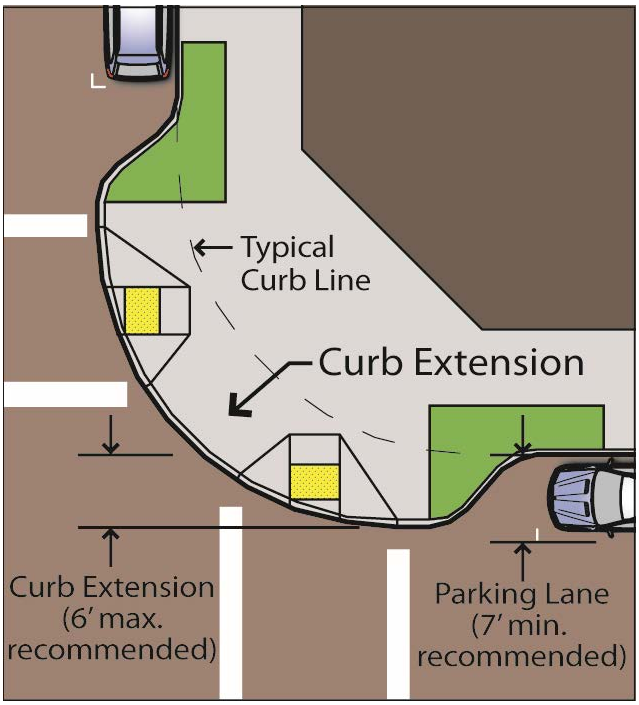
Discussion

Curb extensions are design elements that shorten pedestrian crossing distances and make the pedestrian more visible to roadway users. Curb extensions may be installed on one or both sides of a roadway. Curb extensions installed at alternating frequencies on both sides of a roadway create a "chicane" or "S" curve. Curb extension design should consider roadway drainage.

Design Summary

- Emergency vehicle operators should be consulted to ensure curb extensions do not negatively affect emergency response times.
- Curb extensions should be designed so they allow buses to complete turning movements and load and unload passengers safely.
- Mid-block installation where pedestrians cross should consider raised crosswalks.
- May be used where there is on-street parking.
- Placement shall not encroach into bike lanes.
- Placement may impact drainage, requiring storm drainage re-engineering.

Design Example



Curb extensions can be used in a variety of locations to calm traffic speeds.

A.8. Standard Crosswalks

Discussion

Crosswalk markings guide pedestrians across roadways by defining and delineating the path of travel. Crosswalk markings also alert motorists and bicyclists of a pedestrian crossing point across roadways not controlled by highway traffic signals or STOP signs. There are a several types of crosswalk markings, including standard (or transverse) markings. Crosswalks may be placed at intersections and at mid-block locations.

The following factors should be considered when determining whether to mark a crosswalk at a particular location:

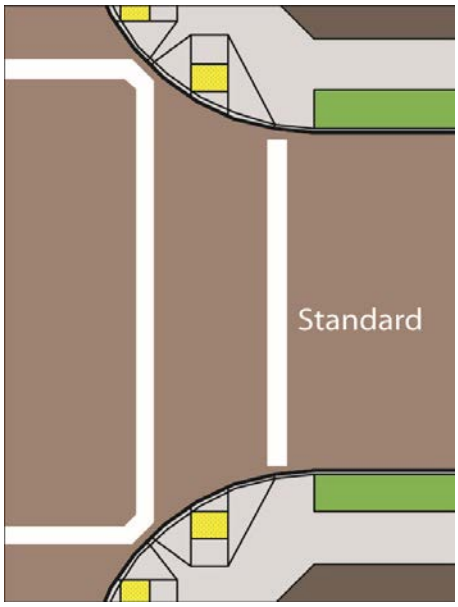
- Vehicular approach speeds from both directions.
- Vehicular volume and density.
- Vehicular turning movements.
- Pedestrian volumes.
- Roadway width.
- Day and night visibility by both pedestrians and motorists.
- Channelization is desirable to clarify pedestrian routes for sighted or sight impaired pedestrians.
- Discouragement of pedestrian use of undesirable routes.
- Consistency with markings at adjacent intersections or within the same intersection.

Motorists generally do not expect mid-block pedestrian crossings. Mid-block crossings are discouraged unless, in the opinion of the engineer, there is strong justification in favor of installation. Particular attention should be given to roadways with two or more traffic lanes in one direction as a pedestrian may be hidden from view by a vehicle yielding the right-of-way to a pedestrian.

Design Summary

- Standard crosswalk lines shall consist of solid white lines not less than 12 inches or greater than 24 inches in width.
- The gap between the lines should not be less than 6 feet.
- Marked crosswalks in a roadway contiguous to a school building or school grounds must be yellow.

Design Example



Standard crosswalk.

A.9. High Visibility Crosswalks

Discussion

There are a number of types of high visibility crosswalks. This Plan recommends continental crosswalks as the City's preferred type. High visibility crosswalks should be used where there is existing or anticipated high pedestrian activity, where slower pedestrians are expected, at uncontrolled crossings, and where a high number of pedestrian-related collisions have occurred.

Installation of high visibility crosswalks should be prioritized at the following location types:

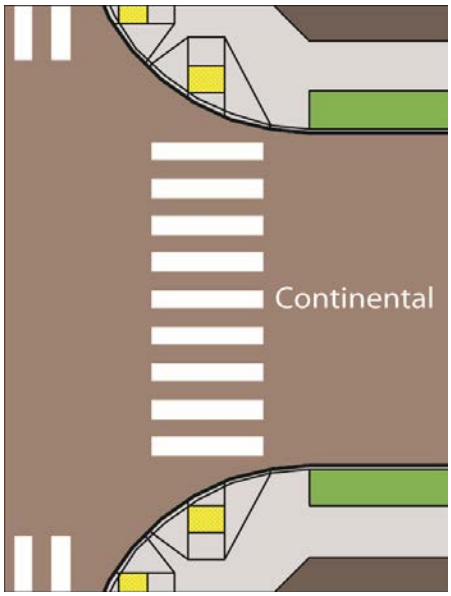
- Senior living facilities and senior centers (within 1/8 mile)
- Adjacent to school buildings and grounds
- Retail corridors
- High pedestrian related collision areas
- Uncontrolled crossings

Retail corridors are places where there is existing and anticipated high pedestrian activity. The majority of pedestrian related collisions occurred Downtown (on State Street) and along El Camino Real and San Antonio Road. The recommended locations for high visibility crosswalks are based on the collision data.

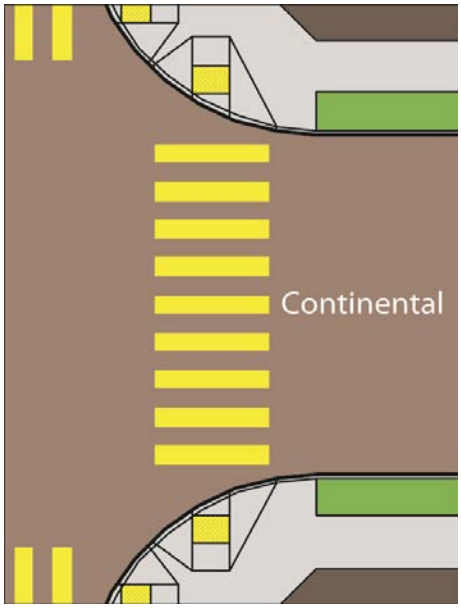
Design Summary

- Continental crosswalk markings are recommended for crosswalks within 1/8 mile of senior living and senior centers, adjacent to school buildings and grounds, retail corridors, high pedestrian related collision areas, at uncontrolled crossings.
- Marked crosswalk in a roadway contiguous to a school building or school grounds be yellow.
- Markings should be no less than six feet wide
- All marked crosswalks at uncontrolled locations have high visibility striping.

Design Example



High visibility continental crosswalk.



High visibility school area continental crosswalk.

A.10. Advance Stop Bars and Advance Yield Lines

Discussion

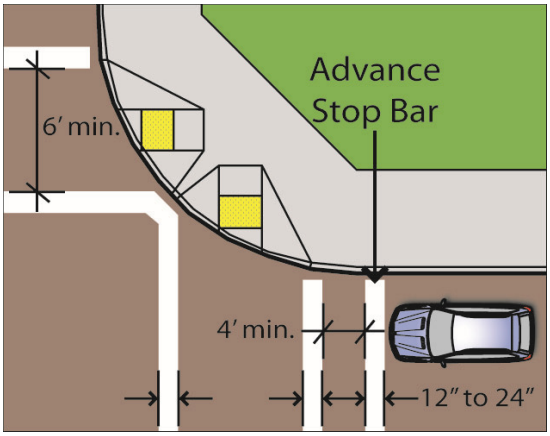
Advance stop bars and advance yield lines should be considered at crosswalks where additional space between crosswalks and stopped motorists is desired. Advance stop bars and advance yield lines increase pedestrian visibility by stopping motor vehicles in advance of marked crosswalks.

Advance stop bars consist of solid white lines extending across the approach lanes to indicate where vehicles should stop. Advance yield lines consist of a row of solid white isosceles triangles pointing toward approaching vehicles extending across approach lanes to indicate where vehicles should yield to pedestrians at uncontrolled locations. Advance yield lines should not place motorists in a position where sight lines are obstructed.

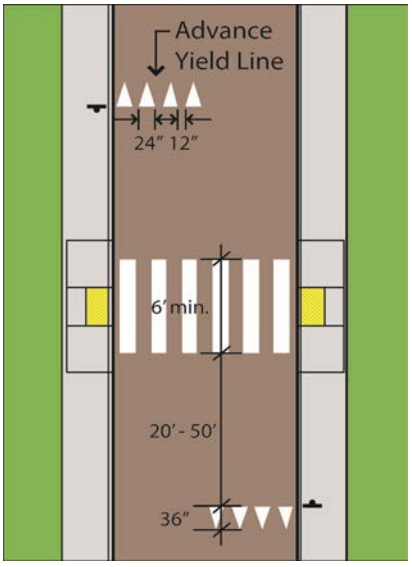
Design Summary

- Advance stop bars should be installed at all controlled intersections.
- Advance yield lines should be installed at all mid-block uncontrolled marked crossings.
- If used, advance stop bars and advance yield lines should be placed a minimum of 4 feet in advance of the nearest crosswalk line at controlled intersections, except for advance yield lines at mid-block crosswalks. In the absence of a marked crosswalk, the advance stop bars and advance yield lines should be placed at the desired stopping or yielding point, but should not be placed more than 30 feet or less than 4 feet from the nearest edge of the intersecting traveled way.
- At an unsignalized mid-block crosswalk, advance yield lines should be placed adjacent to the Yield Here to Pedestrians sign located 20 to 50 feet in advance of the nearest crosswalk line, and parking should be prohibited in the area between the advance yield line and the crosswalk.
- Advance stop bars at mid-block signalized locations should be placed at least 40 feet in advance of the nearest signal indication.

Design Example



Advance stop bars should be installed at least four feet in advance of a crosswalk at controlled intersections.



Advance yield lines should be installed 20-50 feet in advance of an uncontrolled crosswalk.

A.11. Uncontrolled, Mid-Block Crossing Placement and Design

Discussion

The National MUTCD requires yield lines and "Yield Here to Pedestrians" signs at all uncontrolled crossings of a multi-lane roadway. Yield lines are not required by the CA MUTCD but are permitted. The National MUTCD includes a trail crossing sign (W11-15 and W11-15P), which may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path.

The table at the end of A.11 is a summary for implementing at-grade roadway crossings. The number one (1) indicates a ladder style crosswalk with appropriate signage is warranted. (1/1+) indicates the crossing warrants enhanced treatments such as flashing beacons, or in-pavement flashers. (1+/3) indicates Pedestrian Light Control Activated (Pelican), Puffin, or Hawk signals should be considered.

Design Summary

Placement

Mid-block crosswalks should be installed where there is a significant demand for crossing and no nearby existing crosswalks.

Advance Yield Lines

See Section A.15.

Warning Signs

The Pedestrian Warning (W11-2) sign alerts the road user to unexpected entries into the roadway by pedestrians, and other crossing activities that might cause conflicts.

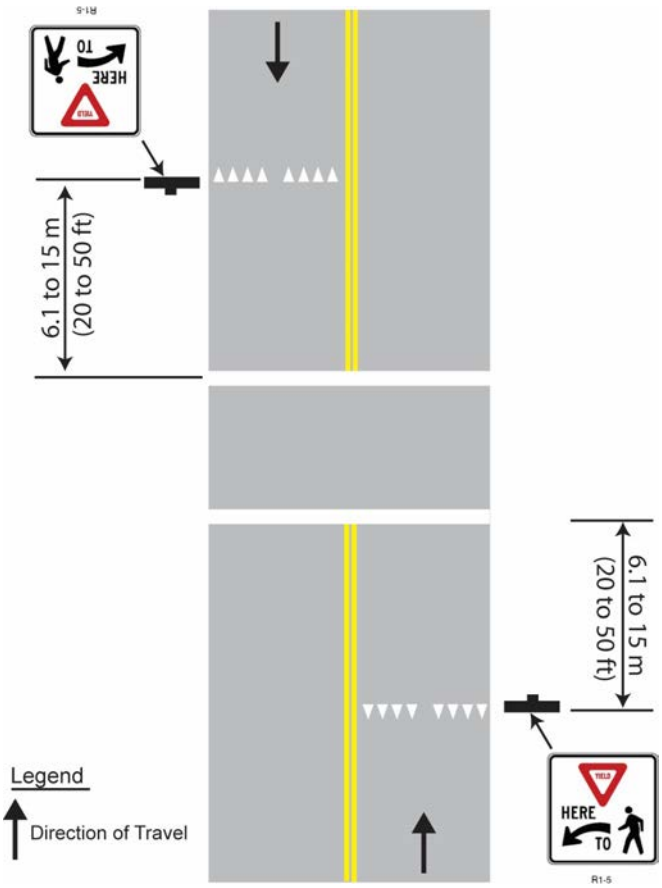
Pavement Markings

A high-visibility crosswalk should be used. Warning markings on the path and roadway should be installed.

Other Treatments

See table on the following page to determine if treatments such as raised median refuges, flashing beacons, or in-pavement flashers should be used.

Design Example



Source: California MUTCD, Figure 3B-15

CA MUTCD Regulatory Signs

Design Example

Recommended Design (continued)

CA MUTCD Warning Signs (W11-2 and W16-7p)

CA MUTCD School Signs

Guidance

- Caltrans Highway Design Manual
- MUTCD – California Supplement, Part 2
- FHWA Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations

Cost

$3,500 (thermoplastic for crosswalk and yield lines, two advance warning signs, two warning signs at crosswalk, two curb ramps)

Treatment Type by ADT and Speed Limits

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT < 9,000			Vehicle ADT (> 9,000 to 12,000)			Vehicle ADT >12,000 to 15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	<30 MPH	35 MPH	40 MPH	<30 MPH	35 MPH	40 MPH	<30 MPH	35 MPH	40 MPH	<30 MPH	35 MPH	40 MPH
2 Lanes	1	1	1/1+	1	1	1/1+	1	1	1+/3	1	1/1+	1+/3
3 Lanes	1	1	1/1+	1	1/1+	1/1+	1/1+	1/1+	1+/3	1/1+	1+/3	1+/3
Multi-Lane (4 or more lanes) with raised median***	1	1	1/1+	1	1/1+	1+/3	1/1+	1/1+	1+/3	1+/3	1+/3	1+/3
Multi-Lane (4 or more lanes) without raised median	1	1/1+	1+/3	1/1+	1/1+	1+/3	1+/3	1+/3	1+/3	1+/3	1+/3	1+/3

*General Notes: Crosswalks should not be installed at locations that could present an increased risk to bicyclists and pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossing safer, nor will they necessarily result in more vehicles stopping for bicyclists and pedestrians. Whether or not marked crosswalks are installed, it is important to consider other facility enhancements (e.g. raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding which treatment to use. For each trail-road way crossing, an engineering study is needed to determine the proper location. For each engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, etc. may be needed at other sites.
**Where the speed limit exceeds 40 MPH (64.4 km/h), marked crosswalks alone should not be used at unsignalized locations.
***The raised median or crossing island must be at least 4 ft (1.2 m) wide and 6 ft (1.8 m long) to adequately serve as a refuge area for pedestrians in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines. A two-way center turn lane is not considered a median.
1 = Type 1 Crossings. Ladder-style crosswalks with appropriate signage should be used.
1/1+ = With the higher volumes and speeds, enhanced treatments should be used, including marked ladder style crosswalks, median refuge, flashing beacons, and/or in-pavement flashers. Ensure there are sufficient gaps through signal timing, as well as sight distance.
1+/3 = Carefully analyze signal warrants using a combination of Warrant 2 or 5 (depending on school presence) and equivalent adult units (EAU) factoring. Make sure to project usage based on future potential demand. Consider Pelican or Hawk signals in lieu of full signals. For those intersections not meeting warrants or where engineering judgment or cost recommends against signalization, implement Type 1 enhanced crosswalk markings with marked ladder style crosswalks, median refuge, flashing beacons, and/or in-pavement flashers. Ensure there are sufficient gaps through signal timing, as well as sight distance.

A.12. Pedestrian Refuge Island

Discussion

Pedestrian refuge islands are raised islands in the middle of the roadway that create a protected space where people may safely pause or wait while crossing a street. Pedestrian refuge islands should be placed at wide multi-lane roadways. Depending on the signal timing, median islands should be considered when the crossing distance exceeds 60 feet, but can be used at intersections with shorter crossing distances where a need has been recognized.

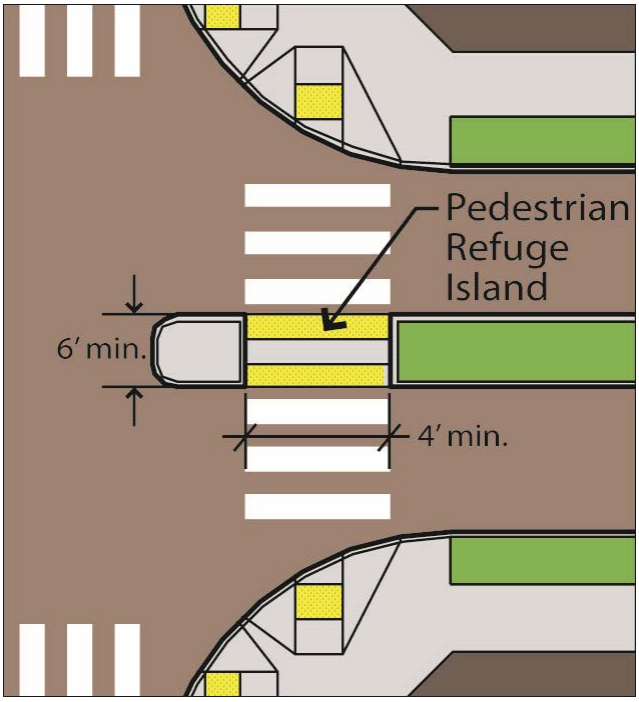
Median "noses" provide additional protection for pedestrians crossing at intersections. Median noses can also prevent vehicles from encroaching into the refuge area when making left turns. However, median noses may not be feasible to install due potential to turning movement restrictions. The CA MUTCD, Caltrans Highway Design Manual, and the ADA Access Board Guidelines do not have any requirement for median noses to be installed at intersection refuge islands. Pedestrian warning signs should be installed in advance of the crosswalk.

Design Summary

ADA Access Board Guidelines on Accessible Public Rights of Way has a section on median islands. The following guidelines are applicable:

- Medians and pedestrian refuge islands in crosswalks shall contain a pedestrian access route, including passing space connecting to each crosswalk.
- Medians and pedestrian refuge islands shall be 6.0 ft minimum in length in the direction of pedestrian travel, wide enough to allow a sense of safety for pedestrians crossing the street.
- Ramped up and cut-through refuge islands should be permitted. Factors to consider include slope, drainage and width of the island. Median curb ramps can add difficulty to crossing for some users.
- Medians and refuge islands should have detectable warnings, with detectable warnings at cut-through islands separated by a 2-foot minimum length of walkway without detectable warnings.

Design Example



Pedestrian Refuge Islands

Median "nose"

A.13. Guidelines for Regulatory Signage

Discussion

Caltrans categorizes signs into regulatory, warning, and school signs. Regulatory signs inform road users of selected traffic laws or regulations and indicate the applicability of the legal requirements. Pedestrian regulatory signs govern pedestrian and motorist movements, such as "Yield Here to Pedestrians." The signs to the right provide examples of regulatory signs.

Design Summary

- Regulatory signs shall be installed at or near where the regulations apply.
- Yield Here to Pedestrians signs should be installed at advance yield lines.
- In-street Yield to Pedestrian signs should be considered at non-controlled crosswalks where motorists frequently violate pedestrian right of way.
- In-street Yield to Pedestrian signs should be considered at non-controlled crosswalks where motorists frequently violate pedestrian right of way.

Design Example

Design Example (continued)

R9-3a

R9-3b

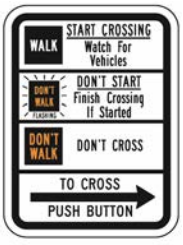
R10-1

R10-2a

R10-3

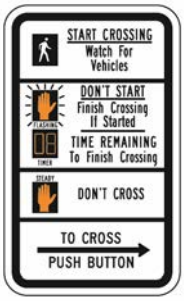
R10-3a

R10-3b



R10-3c

R10-3d



R10-3e

R10-4

R10-4a

R10-4b

A.14. Guidelines for Warning Signage

Discussion

Caltrans categorizes signs into regulatory, warning, and school signs. Warning signs call attention to unexpected conditions on or adjacent to a highway or street. Warning signs alert road users to conditions that might call for a reduction of speed or an action in the interest of safety and efficient traffic operations. Pedestrian warning signs should be have a fluorescent yellow green background to call the attention from motorists. The signs to the right provide examples of warning signs.

Design Summary

- Pedestrian warning signs should accompany all non-controlled crosswalks.
- The use of warning signs shall be based on an engineering study or on engineering judgment.

Design Example

Fluorescent yellow green warning sign
(W11-2 and W16-7p)

A.15. Guidelines for School Signage

Discussion

Caltrans categorizes signs into regulatory, warning, and school signs. School signs call attention to school area traffic controls. The signs to the right provide examples of school signs.

Design Summary

- The signs used for school area traffic control shall be retro-reflectorized or illuminated.
- Signs should be placed in positions where they will convey their messages most effectively without restricting lateral clearance or sight distances. Sign placement should consider highway design, alignment, vehicle speed, and roadside development.
- The School Crosswalk Warning Assembly B(CA) or E(CA) shall be posted at all yellow school crosswalks that are not controlled by a STOP (R1-1) sign, a YIELD (R1-2) sign or a traffic signal.
- The School Crosswalk Warning Assembly B (CA) or E(CA) shall not be used at marked crosswalks other than those adjacent to schools and those on established school pedestrian routes.

Design Example

A.16. Guidelines for Signalized Pedestrian Crossing

Discussion

Pedestrian pushbuttons should be used at any signalized intersection without a dedicated pedestrian phase. Push buttons allow pedestrians to actuate a walk phase.

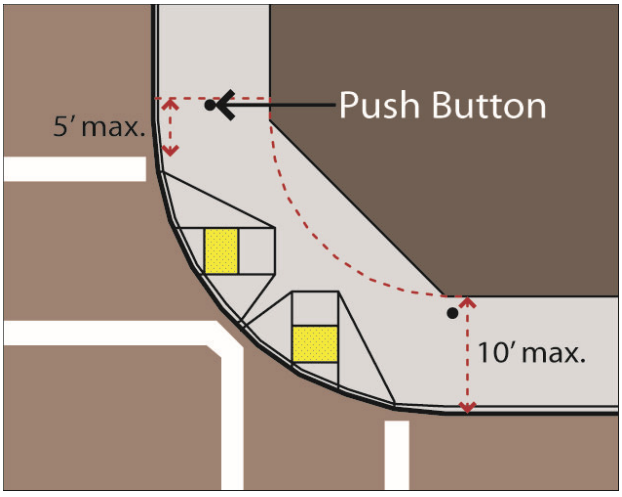
All new and modified traffic signals should include accessible pushbuttons that are large and vibrate during a walk phase for visually impaired pedestrians.

Design Summary

- Push buttons should be located within five feet outside of the transverse crosswalk line extended.
- Push button location should be adjacent to an all-weather surface to facilitate accessibility.
- Push buttons should be installed within 10 feet of the curb unless impractical.

Design Example

Pedestrian Push Button



Push button placement

A.17. Crossing Beacons

Discussion

Beacons enhance uncontrolled crosswalks by using devices that call attention to pedestrians. There are three types of pedestrian activated crossing beacons recommended in this Plan: the pedestrian hybrid beacon, the rectangular rapid flash beacon and in-roadway warning lights. All three devices are dark when not activated.

- Pedestrian hybrid beacons, also known as a HAWK (High intensity Activated crossWalK) Signal. It includes three signal sections, two red circular indications above one yellow circular indication (see upper photo). When activated, the signal flashes yellow to inform drivers to stop. The signal then becomes solid yellow followed by a duel solid red. It then flashes alternating red flashing as a pedestrian signal head flashes DON'T WALK. HAWK signals are experimental in California. Pedestrian hybrid beacons are FHWA approved and incorporated in the 2012 CA MUTCD.
- Rectangular rapid flashing beacons are mounted adjacent to the roadway (see lower photo). The beacon lights are rectangular LED lights installed below a pedestrian crosswalk sign that flash in an alternating pattern when activated. Caltrans has received approval from the Federal Highway Administration (FHWA) for use of RRFBs on a blanket basis at uncontrolled pedestrian and school crosswalk locations in California, including State highways and all local jurisdictions' roadways.
- In-Roadway Warning Lights are LEDs installed in the roadway surface at marked crosswalks with applicable warning signs. They stand less than 3/4 inch above the roadway surface and display a flashing yellow light when actuated.

Design Summary

- Crossing beacons should be installed at all uncontrolled arterial pedestrian crossing locations, with high number of pedestrian crossing desire lines.
- Crosswalk warning beacons should be actuated to maximize yield to pedestrian compliance.

Recommended Design

Pedestrian Hybrid Beacon (HAWK)

Rectangular Rapid Flashing Beacon

A.18. Signal Timing

Discussion

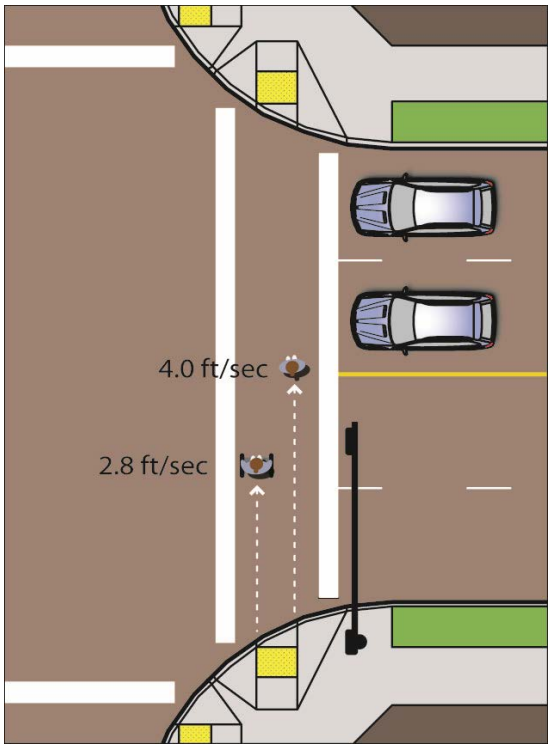
Pedestrian speed determines the duration of a pedestrian phase. CAMUTCD standard pedestrian speed for calculating pedestrian phasing is 4.0 feet per second. The following recommended speeds incorporate current and draft MUTCD recommendations and accommodate slow moving pedestrians such as children, seniors and people with disabilities:

- **Citywide Signal Timing.** The Draft CAMUTCD and the National MUTCD recommend a standard signal crossing time of 3.5 feet per second as a pedestrian speed to accommodate slow moving pedestrians.
- **Signal Timing Near Senior Living Facilities and Schools.** The US Department of Transportation (US DOT) and the Federal Highway Administration (FHWA) recommend in Older Driver Highway Design Handbook a signal timing of 2.8 feet per second to accommodate older pedestrians. The FHWA and the Metropolitan Transportation Commission recommend also recommend a slower crossing rate where concentrations of children are expected.

El Camino Real is a community identified barrier and collision data shows it is the corridor with the most pedestrian related collisions in the City. Signal timing modification to 3.5 feet per second should be expedited at the following intersections: San Antonio Road at El Camino Real, Main Street at 1st Street, Foothill Expressway at Springer Road, Fremont Avenue at Springer Road, and Foothill Expressway at Grant Road.

Countdown pedestrian heads display the remaining time of a pedestrian phase, informing crossing pedestrians. Countdown heads are most applicable at multi-lane arterial roadways where pedestrians have a long distance to cross. If a median is provided, pedestrians may rest and wait for the next pedestrian phase to cross the remaining roadway.

Design Example



Standard pedestrian timing should be derived from 3.5 feet per second pedestrian speed.

Design Summary

- A pedestrian speed of 3.5 feet per second should be used as the standard pedestrian crossing speed (except as specified below).
- Signal timing within an eighth of a mile (660 feet) of all senior centers, senior living facilities and schools should be 2.8 feet per second.
- Countdown heads should be installed at multi-lane arterial roadway intersections.
- Countdown head should incorporate audible instructions.

A.19. Leading Pedestrian Interval

Discussion

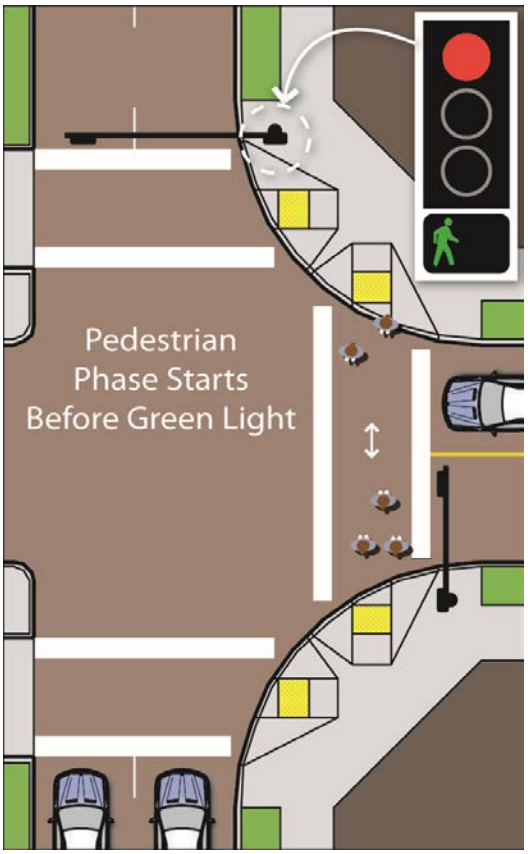
Leading pedestrian intervals provide a pedestrian phase two to four seconds in advance of a green light in the same direction. LPIs increase pedestrian visibility by permitting pedestrians to enter the crosswalk and motorist sight lines before motorists enter the intersection. Without LPIs, pedestrians are at greater risk of motor vehicle collision because they may enter the intersection at the same time as motorists and assume turning motorists can see them.

LPIs are recommended from San Antonio Road at El Camino Real, Main Street at 1st Street, Foothill Expressway at Springer Road, and Fremont Avenue at Springer Road. An LPI along El Camino Real will require coordination with Caltrans.

Design Summary

- LPIs should provide two to four seconds of pedestrian phasing before a green light for parallel traffic.
- LPIs should be considered where improved motorist visibility of pedestrians is needed.

Design Example



Leading Pedestrian Interval

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Appendix B. Relevant Plans & Policies

This appendix provides an overview of planning and policy efforts relevant to the Los Altos Pedestrian Master Plan (PMP). The recommendations of the PMP will be consistent with and build upon these local, regional, and state planning efforts and policies.

B.1 Local Plans and Policies

Los Altos General Plan (2002)

Within the *Los Altos General Plan*, adopted in 2002, the Circulation Element of the General Plan addresses all modes of transportation in the City. **Table B-1** lists the policies in the Circulation Element which support pedestrian transportation and direct city investments to pedestrian facilities and suggests where recommendations from this plan may be incorporated into a future revised Circulation Element.

Table B-1: Select Circulation Element Policies

Policy Number	Policy	Plan Relationship/Recommendation
Policy 4.2	Provide for safe and convenient pedestrian connections to and between Downtown, other commercial districts, neighborhoods and major activity centers within the City, as well as with surrounding jurisdictions.	This policy supports PMP development. The PMP includes recommendations for pedestrian districts and design guidelines that can be used to help guide development review. This policy could be strengthened slightly by revising to "Make integrated land use and transportation decisions that help reduce average trip distances and support walking, biking, and public transit."
Policy 4.3	Work with the school districts and community organizations to create a Safe Routes to School program to help ensure students are able to safely walk and bicycle to and from school.	This policy supports the PMP development, with an emphasis on prioritization of gap closures and traffic separation near schools, and school-focused education, encouragement, and enforcement recommendations.
Policy 4.4	Provide trails, sidewalks or separated pathways in areas where needed to provide safe bicycle and pedestrian access to schools.	Direct support for PMP work plan, with emphasis on addressing top safety concerns and issues.
Policy 4.5	Consider separated bicycle and pedestrian pathways along arterial and collector roadways.	Bicycle Transportation Plan facility recommendations will be reviewed for consistency/potential conflicts with pedestrian priorities. Separate bicycle and pedestrian pathways will be considered along these classified roadways.
Policy 4.6	Pursue potential rights-of-way such as Santa Clara Valley Water District and other utility easements for bicycle and pedestrian trail development.	PMP will prioritize these potentially available rights-of-way and identify barriers/challenges to implementation.

Policy Number	Policy	Plan Relationship/Recommendation
Policy 4.7	Establish priorities for bicycle and pedestrian improvements commensurate with the volume of vehicular traffic and include those priorities when funding transportation related projects.	Potentially conflicting policy statement that may need clarification. To the extent that high volume corridors are in high demand by pedestrians, or represent substantial barriers to walking, they will be prioritized. At the same time, lower traffic volume streets with good connectivity may represent greater opportunities for pedestrian improvements that encourage walking and greater safety.
Policy 4.8	Work with neighboring cities and other jurisdictions to provide safe and adequate pedestrian and bicyclist crossings along major roadways to minimize impediments caused by vehicular traffic, especially along major roadways such as El Camino Real, Foothill Expressway, and San Antonio Road.	Supports identification of specific inter-jurisdictional coordination opportunities and challenges within the PMP. Also, Plan recommendations that affect other jurisdictions will be circulated for external agency/city review.

Additionally, the *Los Altos General Plan* identifies implementation policies for a number of elements related to pedestrian transportation. These are listed in **Table B-2**.

Table B-2: Selected Implementation Policies

Policy Number	Implementation Policy	Responsible Agency
C 5: Neighborhood Traffic Management Program	Continue to implement the Neighborhood Traffic Management Program to reduce vehicle speeds where appropriate and control traffic volumes on local streets.	Public Works
C 11: Neighborhood Street Lighting	Examine nighttime accident rates and complaints in order to selectively locate street lighting.	Public Works
C 12: Street Design Standards	Revise and/or adopt street design standards, focused on pedestrian and bicycle safety, landscaping, traffic calming and neighborhood character. If requested by the Santa Clara Valley Transportation Authority, consider requiring (and require developers to provide) bus loading areas or turnouts for buses.	Public Works
C 24: Safe Routes to School	Coordinate with the school districts and other entities to develop "Suggested Route to School Plans" for all public and private schools in the City and for schools serving students living in Los Altos. Plans shall identify all pedestrian and bicycle facilities, and traffic control devices for residents to determine the most appropriate travel route. The plans shall also identify existing easements for sidewalks.	Public Works, Police Department
C 25: Improve Pedestrian Circulation and Safety	Increase priority of pedestrian safety projects (i.e., pedestrian street crossings, sidewalks or pathways) as part of the Capital Improvement Program. Review the need to install sidewalks or paths and crosswalks on all City streets within one-half mile of all public schools within the City. Paths should also be provided to enhance access to schools in other jurisdictions that serve students residing in Los Altos.	Public Works, Police Department

Pedestrian Safety Assessment Report (Technology Transfer Program of the Institute of Transportation Studies at the University of California, Berkeley (2011)

The Pedestrian Safety Assessment Report is an independent study of pedestrian safety, performed in 2011 and funded by the California Office of Traffic Safety through the National Highway Traffic Safety Administration. The report identifies general recommendations for improved pedestrian safety in Los Altos and provides specific analysis and recommendations for the area around Egan Junior High School. As such, the document offers an important overview of pedestrian safety issues in Los Altos. It also serves as a useful precursor to an eventual city-wide Suggested Routes to School plan.

One of the report's great contributions is its thorough evaluation of the City's existing efforts in pedestrian planning. This benchmarking analysis reviews the City's efforts by identifying Key Strengths (areas where Los Altos exceeds national best practices), Enhancement Areas (areas where Los Altos meets best practices), and Opportunity Areas (where Los Altos may not meet best practices). This report is being reviewed as part of the development of the Pedestrian Master Plan. Key recommendations are incorporated into the recommendations of this Plan.

Climate Action Plan (2013)

The central goal of the Los Altos Climate Action Plan is to reduce greenhouse gas emissions at the municipal level. One of the chief recommendations made in the Plan is to reduce automobile trips by improving non-motorized transportation. The CAP recommends the following actions relevant to this Pedestrian Master Plan:

- Develop and fully implement a pedestrian master plan with a specific focus on local vehicle trip reduction by 2020.
- Support a rotating car-free day program at local schools and as part of other local events to raise awareness about school commute alternatives.
- Continue to pursue and implement Safe Routes to School projects.
- Continue to implement the City's Complete Streets policy and traffic calming plans and projects.
- Encourage City employees to use non-motorized transportation, such as walking or bicycling, when conducting off-site City business (e.g., for trips up to a quarter or a half mile).

BPAC List - Priority Intersections for Bike and Pedestrian Safety (2013)

The Bicycle and Pedestrian Advisory Commission maintains a list of intersections identified as priorities for bicycle and pedestrian safety in Los Altos. This document provides a comprehensive list of issues that have been identified in previous plans, such as the Blach Neighborhood Traffic Study, brought to the City's attention through the BPAC through public comment at city council meetings, and through residents' letters to the mayor.

This list will be incorporated into the Needs Analysis of this Plan; recommendations put forth in this plan will address relevant issues included in this list.

City of Los Altos ADA Self-Evaluation and Transition Plan (Draft) (2013)

In 2013, the City of Los Altos initiated an ADA Self-Evaluation and Transition Plan to bring Los Altos into compliance with the requirements of Title II of the Americans with Disabilities Act. The plan is intended to provide a framework for the continuous improvement of City facilities for people with disabilities. As such, the

plan identifies priorities and time lines for barrier removal in public facilities (**Table B-3**) and pedestrian right-of-way (PROW) improvements.

Table B-3: Schedule and Priorities for Barrier Removal in Public Facilities

Time Frame	1-3 Years	4-6 Years	7-10 Years	11-12 Years	Total Estimated Cost
City Parks	Shoup Park Rosita Park Grant Park	Heritage Oaks Park Marymeade Park	Montclaire Park Community Plaza	McKenzie Park Redwood Grove Village Park	$330,425
Civic Center Campus	Hillview Community Center Hillview Park	City Hall Police Station	Civic Center Path of Travel and Parking	Youth Center	$857,325
Public/City Buildings	Blach Gym Egan Gym	Grant Park Center	Garden House San Antonio Club	Underground Teen Center	$493,625
County-Operated Facilities	Main Library	Woodland Library	Los Altos Fire Station	Loyola Fire Station	$93,500
Privately-Operated Facilities	History Museum	History House	Neutra House	Bus Barn Theater	$68,350
Total Estimated Cost	$557,975	$667,950	$286,550	$330,750	$1,843,225

The ADA Transition Plan also identified the City's prioritization strategy for implementing projects that improve pedestrian rights-of-way. This strategy will prioritize PROW projects that impact government offices and facilities first, followed by projects that improve access to bus stops and transportation facilities, places of public accommodation (such as commercial and business areas), facilities containing employers, and then other areas, such as residential neighborhood and underdeveloped regions of the city.

The Plan identified two types of facilities that will be addressed for PROW improvements. These include downtown Los Altos parking lots and the PROW adjacent to city facilities and public schools. The timeline for these improvements is a 15-year period.

Table B-4: Pedestrian Rights-of-Way Improvements

Facility	Total Estimated Cost
Downtown Parking Lots	$154,500
Pedestrian ROW adjacent to City Facilities and Schools	$861,525
	$1,076,025

Los Altos Parks Plan (2011)

The Los Altos Parks Plan lays out the vision for recreational and open space in Los Altos. The recommendations of the Parks Plan implement the goals of the Los Altos General Plan related to the maintenance, enhancement,

and development of parks, trails, and open space in Los Altos. A selection of the Parks Plan recommended actions are listed in **Table B-5** below. Where relevant, the Pedestrian Master Plan will incorporate these recommended actions.

Table B-5: Selected Parks Plan Policies

Goal 2.1: Develop and promote a pathway system within the City, which also connects to open space and trails in surrounding areas (GP- Goal 5).	
Policy	Action
Policy 2.1.1: Connect Los Altos neighborhoods with 1) commercial districts; 2) schools; and 3) City park and recreational facilities. Ensure that all residential neighborhoods have adequate and direct pedestrian and cyclist linkages with these destination and facilities.	Develop perimeter walking paths and loops, where feasible, in existing and new parks. When necessary, provide pathways accessible by emergency vehicles and services. Limit access to such paths with the use of locked, removable bollards.
	Explore a pathway between Redwood Grove and Shoup Park.
	Continue to maintain a pathway between the southern end of Redwood Grove and Manressa Lane.
	Explore opportunities to develop trails through open space easements.
	Monitor the 1986 agreement for the 10-acre open space conservation easement on the Jesuit Retreat property as a pedestrian pathway.
	Develop, where possible, bikeways connecting schools and parks
Policy 2.1.2: Connect to surrounding local and regional trails and open space.	Work with other Los Altos area communities such as Los Altos Hills, Mountain View, Sunnyvale, and Cupertino; Cupertino Union School District (CUSD); Los Altos School District (LASD); Mountain View-Los Altos Union High School District (MVLA); Mid Peninsula Regional Open Space District; Santa Clara Valley Water District (SCVWD); to provide trail connections throughout Los Altos.
	Pending discussions with Sunnyvale, Cupertino and Mountain View support the development of the Los Altos portion of the Stevens Creek Trail.
	Maintain established link between Fremont Avenue, Los Altos Hills with Redwood Grove.
	Explore the potential for developing a trail connection to Rancho San Antonio County Park and Open Space Preserve from Los Altos through Los Altos Hills and/or Cupertino.
	Continue to explore opportunities for development of trails in Los Altos along creeks including: Adobe, Permanente, Stevens and Hale.
Goal 2.2: Support the community's strong desire for safe access to pathways and trails.	
Policy	Action
Policy 2.2.1: Consider the needs of all types of trail and pathway	Where feasible and possible, provide safe access to pathways and trails, for, but not limited to: cyclists and pedestrians.
Policy 2.2.2: Support the "Safe Routes to Schools" effort	Develop where possible, shared paths, trails and sidewalks connecting schools to parks. Coordinate locations with Safe Routes to Schools and Los Altos Bicycle Transportation Master Plan.
	Provide trail, pathway and bikeway signage throughout Los Altos

Neighborhood Traffic Management Program (NTMP)

The Los Altos Neighborhood Traffic Management Program, last updated in 2013, is a set of policies and guidelines for addressing neighborhood concerns about excessive speed on local streets. The Program identifies appropriate traffic calming treatments for Los Altos, when and where the treatments may be best implemented to address problems, and how the implemented treatments will be funded.

Table B-6: Level of Approval Required for Traffic Management Devices

Level of Approval	Traffic Management Device
Staff level approval	Speed Limits and Warning Signs
	Stop Signs (Must meet standard warrants)
	Painted Islands and Striping
City Council	Street Trees
	Radar Speed Signs
	Crosswalk Flashing Devices
City Council and Potentially Environmental Review	Traffic Signals
	Speed Humps and Tables
	Chokers and Bulb-Outs
	Neighborhood Traffic Circles

In general, traffic calming can create a better pedestrian environment, and any implementation of traffic management devices would serve the goals of the Pedestrian Master Plan. Specific devices, such as bulb-outs at intersections, may directly benefit pedestrian mobility by shortening the crossing distance at intersections.

The Neighborhood Traffic Management Program stipulates that 50 percent of the cost of installing permanent traffic calming devices and 100 percent of the cost of installing temporary traffic calming devices must be borne by residents.

Los Altos Bicycle Transportation Plan (2011)

In 2011, the City of Los Altos adopted a Bicycle Transportation Plan to address bicycle transportation needs and recommendations. Many of the policies adopted in this plan mutually benefit pedestrian mobility in Los Altos, such as the recommendation to provide safe bicycle and pedestrian access to schools and to incorporate risk avoidance into elementary school education. At the same time, street treatments for bicycles can at times conflict with street treatments for pedestrians, particularly at intersections. The Bicycle Transportation Plan includes multiuse paths, which are included in the pedestrian plan.

Blach School Neighborhood Traffic Study (2011)

In spring 2010, the City initiated a study to review the traffic patterns and volumes around Blach Intermediate School to identify ways of improving bicycle and pedestrian access, enhance bicyclist and pedestrian safety, and reduce traffic congestion. The analysis included vehicle turning movements, speeds and volumes, as well as bicycle and pedestrian volumes. Issues identified include bicycle/pedestrian/vehicle conflict on Covington Road at the school parking lot entrance.

High priority recommendations adopted by the City Council that pertain to pedestrian mobility included a 2-phase traffic signal, completed crosswalk, advanced stop bars, and corner bulb-outs at Covington Road and Miramonte Avenue, and relocating the stop bar on Buckingham Drive at Portland Avenue to behind the pedestrian crossing.

Medium priority improvements include a sidewalk extension on Miramonte Avenue from Eastwood Drive to Covington Road, bulb-outs on Miramonte Avenue at Portland Avenue, sidewalk widening at the west side of the Blach Intermediate School parking lot, enhancing the crosswalk on Altamead Drive at Miramonte School, advanced stop bars at Covington Road and Grant Road, and installing a high visibility crosswalk and extending the median at Portland Avenue and Runnymead Drive.

Collector Traffic Calming Plan (2011)

The City of Los Altos Collector Traffic Calming Plan identifies roadways in Los Altos where common speeds exceed the posted speed limit and recommends traffic calming devices to reduce traffic speeds on collector roadways. Apart from the general safety improvements for pedestrians created by lower vehicular speeds, some of the traffic devices recommended in the Collector Traffic Calming Plan offer added safety benefits for pedestrian transportation, such as raised intersections, curb extensions, and crosswalk striping.

Table B-7: Priority Intersections Identified by Collector Traffic Calming Plan

Rank	Intersection
1	Miramonte Avenue at Portland Avenue
1	San Antonio Avenue at W. Portola Avenue
3	Miramonte Avenue at Covington Road
4	Los Altos Avenue at West Edith Avenue
4	Los Altos Avenue at Pine
4	St. Joseph Avenue at Stonehaven
4	Springer Road at El Monte Avenue
8	Almond Avenue at N. Gordon
9	El Monte Avenue at Hawthorne Avenue
10	Los Altos Avenue at W. Portola Avenue
10	San Antonio Road at Almond Avenue
10	San Antonio Road at Lyell
10	Springer Road at Cuesta Drive

Capital Improvement Program

As part of the Capital Improvement Program, the City maintains a five-year budget of projects slated for construction. Among this project list are several pedestrian-related projects that the City has planned to construct over the next five years, totaling $2.43 million. These projects, listed below, have been have been incorporated into this Plan's recommendations.

- Neighborhood Pathways ($222,000)
- Carmel Terrace, Class I Pathway Design ($85,000)
- Carmel Terrace, Class I Pathway Construction ($280,000)
- Covington Road (south side), Covington Class I Pathway Design ($75,000)
- Covington Road (south side), Covington Class I Pathway Construction ($201,000)
- Miramonte Avenue from Mountain View to Foothill Expressway Class I Pathway ($1,656,000)[9]
- Portland Avenue, Class I Pathway ($346,000)
- Springer Road – Berry Avenue, Class I Pathway ($576,000)

Stevens Creek Trail Feasibility Study (2014)

Planning efforts continue for the Stevens Creek Trail, an effort initially envisioned in 1961. The trail, which follows Stevens Creek, will eventually link the Bay Trail to the Ridge Trail and provides an important north-south link for bicyclists and pedestrians living in the communities of Mountain View, Sunnyvale, Los Altos, and Cupertino.

Completed portions of the trail currently extend south from the Bay Trail to the Dale/Heatherstone Overpass. The next portions of the trail will be aligned through Los Altos city boundaries, with a trail extension crossing Fremont Avenue and a later segment crossing Homestead Road and Highway 280.

A community meeting was held in June 2013 to discuss potential alignments for Los Altos. Potential alignments connecting the trail between Mountain View High School and Fremont Avenue include routes along the Stevens Creek Corridor; Bernardo Avenue and Truman Avenue; and along Mary Avenue. Potential alignments connecting the trail from Fremont Avenue to Homestead Road include the length of Fallen Leaf Lane, and a route combining access along Belleville and Bedford Avenues in Los Altos. Parallel alignments in Sunnyvale being considered include Bernardo, Helena, Samedra, and Mary Avenues.

Downtown Design Plan (1995)

The Downtown Design Plan, last updated in 1995, laid out a design vision for maintaining the village-like feel of downtown Los Altos while also providing a foundation for pedestrian-centered activity and economic vitality. Many of the goals of this plan have been fulfilled—the storefronts in Downtown are pedestrian-oriented, with wide sidewalks and decorative pavers marking crosswalks. Community-serving retail uses form a "service commercial perimeter that serves residents without competing. Temporary facilities such as the State Street Green fulfill the goal of "[providing] additional public outdoor plazas and eating areas, visible from the street, to enhance the ambiance of the downtown." Other goals, such as "[creating] strong pedestrian linkages to the Civic and residential areas adjacent the Downtown," however, need additional implementation. This Pedestrian Master Plan's focus on linking residential and neighborhood commercial zones addresses this unmet goal.

Sherwood Oaks Specific Plan (2008)

The Sherwood Oaks Specific Plan was adopted in 2008 with the goal of revitalizing Sherwood Gateway and preserving the surrounding neighborhood's residential character. Notably, the plan lays out specific goals related to pedestrian access to the commercial center, including requiring minimum 5' sidewalks. Other relevant goals, policies and actions related to pedestrian mobility are listed in Table B-8: Sherwood Gateway Specific Plan Relevant Policies.

Table B-8: Sherwood Gateway Specific Plan Relevant Policies

Goal	Policy	Action
Provide the Sherwood Gateway with a system of streets, pedestrian paths and parking areas sufficient to meet the needs of the proposed uses, merchants, residents, employees and visitors.	Create a safe intersection at San Antonio Road and Loucks Avenue accommodating both vehicular and pedestrian traffic.	A comprehensive traffic study shall be prepared to evaluate both existing conditions and planned land uses, and address issues such as traffic circulation, traffic safety, pedestrian safety, bicycle safety and enhancements to the appearance of the streetscape landscaping.

Goal	Policy	Action
		Business and property owner meetings shall be conducted to review, evaluate, and recommend potential solutions to parking issues.
		Provide traffic calming design features (e.g., wide median, enhanced paving, neck down at curb line, traffic signal, etc.).
		Provide pedestrian safety devices (e.g., pedestrian lighting, crosswalk with built-in lighting, reflectors, striping, enhanced paving, etc.).
		Work with City police to more regularly enforce traffic violations.
		Develop a signage program that reminds motorists of pedestrians: "Slow down! This is our town."
	Policy 4: Provide a safe pedestrian environment which reduces conflict between pedestrian and vehicular movements	Provide a network of convenient pedestrian pathways throughout the Sherwood Gateway area.
		Provide safe pedestrian crossings at intersections.
		Consider implementation of speed reduction measures (e.g., speed tables) in internal circulation and parking areas.
		Review the appropriateness of guidance strips (paving blocks with raised tactile surfaces) at all crossings.
		Require minimum sidewalk width of 5 feet.
Develop the Sherwood Gateway as a unified and improved neighborhood of retail shopping and services, restaurants, offices and residential components.	Policy 3: Maintain a safe neighborhood by reducing any disruptive and negative impact of traffic movements and high traffic speeds through the Sherwood Gateway.	Post penalties for neighborhood speeding and other traffic violations.
		Install signage indicating "Children at Play."
		Use traffic calming measures where appropriate.
	Policy 4: Create an attractive pedestrian environment within the Sherwood Gateway.	Install dedicated pedestrian ways throughout the Sherwood Gateway area.

Goal	Policy	Action
		Introduce pedestrian amenities, such as street trees, wide sidewalks, benches, and lighting to encourage more pedestrian activity.
		Allow for outside dining, cottage-scale restaurants, and other pedestrian-oriented uses that attract pedestrians.

Suggested Routes to School (2008)

In 2008, Suggested Routes to School were developed for Almond, Blach, Covington, Gardner Bullis, Loyola, Montclaire, Oak, Santa Rita, and Springer Schools.

City of Los Altos Design Guidelines

Design guidelines for new residential construction from the Planning Division of Los Altos do not have specific requirements regarding sidewalks. One exception is the Neighborhood Compatibility Checklist. Applicants completing the design review of single family residential remodel, addition, or new construction projects must complete the checklist. Included in the checklist is a question about whether there are any frequently used or typical landscaping features (including "big trees, front lawns, sidewalks, curbs, landscape to street edge, etc.") on the street of the proposed home.

The City of Los Altos Shoulder Paving Policy[1] also addresses landscaping adjacent to streets. Because landscaping can be a significant impediment to pedestrians on residential streets, such policy documents are a relevant consideration for this Plan.

Los Altos Municipal Code

The Los Altos Municipal Code outlines few policies related to pedestrians and no specific regulations of sidewalks. Municipal Code 8.12.010 allows city engineers to designate, establish and maintain crosswalks where they deem a hazard to pedestrians crossing the roadway, so long as the crosswalks are on blocks longer than 400 feet in length.

B.2 Regional Plans and Policies

While Los Altos planning efforts cannot extend past jurisdictional boundaries, the impacts of pedestrian improvements in Los Altos will benefit residents of many communities. Likewise, this Plan must be mindful of and incorporate where possible neighboring communities' planning efforts relating to pedestrian mobility. With a shared roadway network and jurisdictional crossover among school districts, inter-jurisdictional

[1] http://www.losaltosca.gov/sites/default/files/fileattachments/Public%20Works/page/418/su-20.pdf.

coordination between Los Altos and its neighbors is essential for the efficient and coordinated implementation of improved pedestrian facilities.

Mountain View Pedestrian Master Plan (2013)

Adopted in 2013, the Mountain View Pedestrian Master Plan establishes the goals and visions for pedestrian transportation in the City of Mountain View. Among the facility improvement recommendations made in the plan are projects and policies that could impact Los Altos. One project is the extension of Stevens Creek Trail to Mountain View High School, where many Los Altos students attend high school. The extension has been studied but is not currently funded. Further discussions with neighboring cities, including Los Altos, on future extensions of the Trail are planned or currently underway.

Additionally, Goal 4 of the Pedestrian Master Plan addresses Safe Routes to Schools, codifying the City's commitment to ensuring safe and convenient pedestrian access to schools for all children. The policies that implement this goal include pursuing funding for Safe Routes to Schools programs, ensuring that pedestrian safety improvements include projects that enhance safe access to school, planning and construction of school-accessible trailheads and/or neighborhood access points. Because students from Los Altos often attend school in Mountain View, these policies are important for pedestrian transportation of Los Altos and will complement local efforts at creating safe walking environments for Los Altos students.

Palo Alto Bicycle and Pedestrian Master Plan

Just as planning efforts in Los Altos should be mindful of adopted plans in Mountain View, the relevant recommendations for southern Palo Alto in the recently adopted Bicycle and Pedestrian Master Plan should also be incorporated into this Pedestrian Master Plan. These recommendations focus on improving pedestrian and bicycle access on El Camino Real. Apart from the multi-use path leading to Terman Middle School, El Camino Real is the main pedestrian access point into Palo Alto for Los Altos residents. Attending to the pedestrian environment, particularly at the intersection of Los Altos Avenue and El Camino Real, and completing the sidewalk gap on San Antonio Road south of El Camino Real, would address the pedestrian safety and access goals of both Palo Alto and Los Altos.

Palo Alto Safe Routes to School Plans

Similar to the Bicycle and Pedestrian Master Plan, the key recommendations within Palo Alto's Safe Routes to School Plans that are relevant to Los Altos include those considerations of students living near the Monroe Park neighborhood. Middle school-aged students in this neighborhood cross El Camino Real to get to Los Altos Avenue and then walk or bike north toward Terman Middle School along the multi-use path. As such, pedestrian safety improvements on El Camino Real were identified as a priority.

Plan Bay Area (2013)

Adopted by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) in 2013, this long-range transportation and land use/housing plan addresses the requirements set forth in Senate Bill 375 (See 1.3 State Policies and Plans), including the requirement that each Metropolitan Planning Organization adopt a Sustainable Communities Strategy. The plan identifies regionally significant transportation projects for the next 20 years and directs investment into Priority Development Areas across the Bay Area. Priority Development Areas are areas identified by local communities and ABAG/MTC as

targets for sustainable transportation investments and housing development to produce walkable, bikable, and livable communities.

The length of El Camino Real has been designated a Planned Development Area by the Valley Transportation Authority. This is the sole area within Los Altos with this designation. With the approval of the City of Los Altos and MTC/ABAG, the area could become a priority development area and thereby be eligible to receive additional regional funding for transportation projects.

Valley Transportation Authority Bus Rapid Transit

The Santa Clara County Transportation Authority (VTA) is currently in the planning process for determining Bus Rapid Transit along El Camino Real from Palo Alto to Santa Clara. The plan is currently in the environmental analysis phase, estimated for completion in the spring/summer of 2014.

Of the alternatives being considered, only one (the Long Dedicated Lane to Palo Alto Alternative) recommends dedicated center bus lanes on El Camino Real through the Los Altos city limits. Other alternatives recommend mixed flow lanes through Los Altos, meaning that there would be no center-median bus stations and dedicated lanes.

Crossing treatments recommended on El Camino Real in this plan will be consistent with the VTA's Pedestrian Technical Guidelines and selected alternative for BRT on El Camino Real.

The planning phase for the project will be completed in September 2014, with final design in September 2016. Construction is slated to conclude August 2018, with the first day of service in September 2018.

Grand Boulevard Initiative Multimodal Corridor Plan (2010)

The Grand Boulevard Initiative Multimodal Corridor Plan(GBI) was adopted in 2010 by the Grand Boulevard Task Force, a consortium of representatives of 19 cities along the corridor (Atherton, Belmont, Burlingame, Colma, Daly City, Hillsborough, Los Altos, Menlo Park, Millbrae, Mountain View, Palo Alto, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, Santa Clara, South San Francisco and Sunnyvale), San Mateo and Santa Clara Counties, and the San Mateo County Transit District. The Task Force was organized to facilitate the development of El Camino Real as a corridor that connects communities north and south of each other and integrates communities located on either side of the boulevard.

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 Cities of Los Altos and Mountain View have both amended zoning ordinances to comply with the GBI by allowing high-density housing and mixed-use development in the San Antonio Shopping Center area. The increase in housing density and mix of uses will likely attract more pedestrians to the area.

Goals specific to pedestrian transportation within the GBI include decreasing the distances between signalized crossings, providing sidewalks on both sides of El Camino for the length of the corridor, installing pedestrian-oriented lighting for improved pedestrian safety at night, and signalized mid-block pedestrian crossings on longer blocks or where demand warrants signalization.

GBI is an ongoing planning effort that includes coordinated meetings between regional and local agencies. The website below provides the latest information regarding GBI.

Online resource: http://www.grandboulevard.net/

B.3 State Plans and Policies

Since 2006, three legislative bills that support bicycle facility development in California have been signed into law: Global Warming Solutions, Complete Streets and Sustainable Communities.

Assembly Bill 32: Global Warming Solutions (2006)

The Global Warming Solutions Act (AB 32), signed into law in 2006, laid out specific actions to reduce emissions, including increasing motor vehicle and ship yard efficiency and other strategies involving refrigerants, landfills and consumer products. The goal of AB 32 is for California to reach 1990 greenhouse gas emission levels by 2020.

Assembly Bill 1358: Complete Streets (2008)

Beginning January 1, 2011, all California Cities and Counties must include accommodation for all street users (pedestrians, bicyclists, transit riders, motorists, children, persons with disabilities, and elderly persons) in circulation element updates, as required by the Complete Streets Act (AB 1358).

Senate Bill 375: Sustainable Communities (2009)

The Sustainable Communities Act (SB 375) links land use planning with greenhouse gas emissions, requiring metropolitan planning organizations to develop land use plans to meet emission reduction goals set by the State Air Resources Board. In the Bay Area, the Metropolitan Transportation Commission has addressed the Sustainable Communities Strategy through various mechanisms within PlanBayArea, the long-range housing/land use and transportation plan for the nine county region.

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Appendix C. Pedestrian Suitability Index

This technical memorandum presents the methods and key findings of Alta Planning+Design's application of its Pedestrian Suitability Index (PSI) for Los Altos. PSI measures the relationship between supply (the pedestrian network) and demand (pedestrian activity) by quantifying factors that support or hinder pedestrian movement. The purpose of PSI is to identify areas for improvement and to prioritize potential pedestrian projects. PSI results in a composite Supply and Demand Typologies Model that can be used to identify geographic patterns of suppply and demand highs and lows. The Supply and Demand Typologies Model is a matrix of possible model-based pedestrian improvement recommendations.

PSI helps define citywide variation in pedestrian demand and variation in the quality of the pedestrian experience along the existing pedestrian network. The analysis serves as the basis for understanding and visualizing suitability and is an integral part of the Los Altos Pedestrian Master Plan.

PSI provides the following benefits:

- Quantify factors that impact pedestrian activity, objectively identifying areas where pedestrians are most likely to want to be
- Provide for a geographically informed project list
- Identify pedestrian network gaps and corridors as potential projects
- Guide community leaders and the public on one aspect of the project prioritization process

C.1. Development of PSI

Introduction

The analytical methods in the PSI provide an objective, data-driven process of identifying network gaps as potential projects and identifying areas of high pedestrian activity. PSI provides a general understanding of expected activity in the pedestrian environment by combining categories representative of where people **live, work, play, access transit, and go to school** into a composite sketch of citywide demand. Los Altos' specific land use and transportation factors, such as the Downtown and neighborhood commercial nodes, are considered as well as demographic factors that are correlated with high pedestrian trip generation, such as a high percentage of zero vehicle households.

PSI also combines a variety of roadway and sidewalk characteristic categories to provide a general understanding of the quality of the pedestrian environment. The remainder of this section serves to describe the use of GIS data for this model, which in the end develops a composite sketch for both demand and supply.

PSI Demand Analysis Development

PSI's Demand Analysis demands a consistent unit of distance to generate logical patterns. It is for this reason that all scores are given a location on the corner of each census block. Census blocks closely represent the street network, with their corners approximating where foot traffic is prevalent. This method is based on the "Low-Stress Bicycling and Network Connectivity" report (Mineta Transportation Institute, May 2012).

C.2. PSI Supply Analysis Development

PSI's Supply Analysis also relies on spatial consistency. Sidewalks and roadway crossings were analyzed separately, as their quality scores are determined by different features.

Demand Analysis Scoring Method

Scores reflect relative impact on walking to and from adjacent census block corners. As such, scores are represented as density patterns of census block corners within a 1/4 mile of each other. Subsequently, the scores are effectively a combination of two factors: **distance decay** – greater distances yield lower scores for features over 1/4 mile away from other features; and **spatial density** – the effect of closely clustered features yields higher scores. Scores will increase in high feature density areas and if those features are close together. Scores will decrease in low feature density areas and if features are further apart. In essence, the score is the intersection of distance and density.

Categories are scored on a scale of 1 – 5, based on density and proximity. Scores are assigned weighted multipliers to reflect the relative influence categories have on pedestrian activity. The feature weighting method is discussed in the following section.

Because empirical work has shown that some demographic and land use characteristics are more correlated with pedestrian activity than others, the features are weighted for the analysis. For Los Altos, feature weights were reviewed and adjusted based upon local knowledge and consideration of plan priorities. Feature weights are used in calculating both the composite demand and supply scores.

Demand Analysis Application

The following equation describes how each demand category is calculated based on scores and weights where:

Category Score **= (MaxF / 5) * FW**

MaxF = Maximum Density Value per Feature

5 = Constant Normalizing Value

FW = Feature Weights

For the PSI supply analysis, scores are summed in a cross-tab fashion. Scores are assigned based on variation in sidewalk and crossing qualitative features and summed.

The purpose of the demand analysis is to identify areas where pedestrians are likely to be to justify improvement projects, if warranted by the relative quality of the supply. The figures below illustrate and describe how the weighted features contribute to the variation in overall demand.

PSI Demand – Where People Live

Where people live includes 2010 census block level population density information. These locations represent potential trip origin locations. More trips can be made in areas with higher population density if conditions are right.

This category is a function of the number of residents and number of assisted living houses per PSI Point within a 1/4 mile of each other. As for all maps, the areas shaded more deeply in blue represent higher demand areas relative to other colors on the ramp.

PSI Demand – Where People Work

Where people work mainly represents trip ends, for people working in Los Altos regardless of residency. Its basis is 2010 total employment by census block. Depending on the type of job, this category can represent both trip attractors (i.e., retail stores or cafes) and trip generators (i.e., office parks and office buildings) in terms of base employment population. It is therefore also used in the **where people play** category by overlaying with specific job types, such as retail.

This category accounts for the number of employees per PSI Point within a 1/4 mile of each other.

PSI Demand – Where People Play

Where people play is a combination of varied land use types and destinations. Overlays such as retail corridors and parks as well as destinations like churches, social services, post offices, hotels, libraries and hospitals all contribute to this category. While hospitals and post offices are not exactly where one would expect to "play," these civic amenities are still destinations of importance reflected in this category due to the temporary nature of the visit.

This category accounts for both the number of destinations per PSI Point as well as the size of each overlay. PSI Points are scored using overlay acreage per block (the ratio of land use type acreage to Census block acres).

PSI Demand – Where People Access Transit

Where people access transit accounts for the number of Valley Transportation Authority (VTA) bus stops and total boardings at those stops per PSI Point within a 1/4 mile of each other.

PSI Demand – Where People Learn

Where people learn is an important category in the city due to the city's prioritization of Suggested Routes to School. This category is a function of the number of school per PSI Point within a 1/4 mile of each other. Note: as with each category in the PSI Demand Analysis, schools are assessed using block corners as opposed to block centroids. Therefore, each corner of a block where a school is located is credited with having the presence of a school. In some cases, this results in the Learn demand appearing slightly offset from the center of the school location.

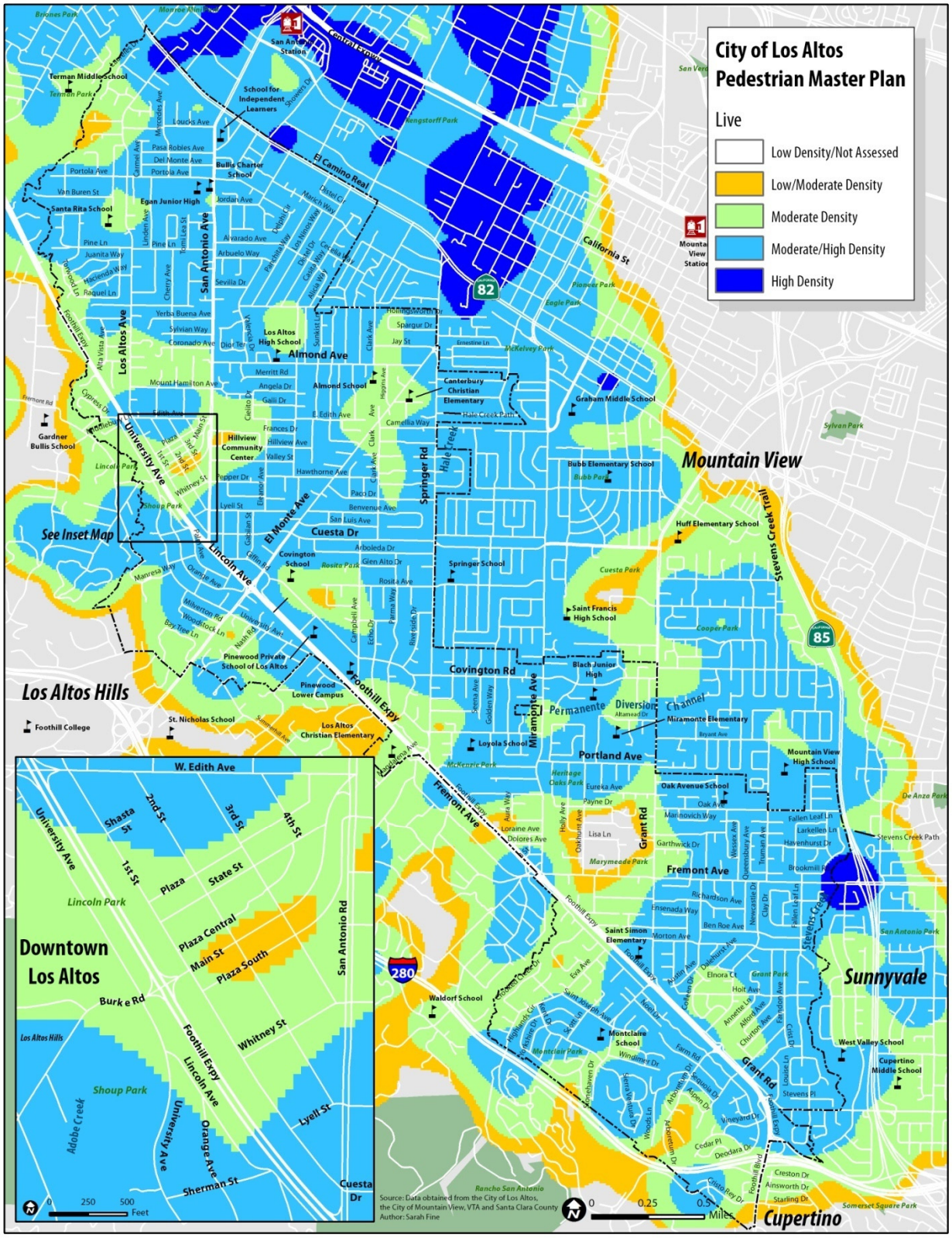

Figure C-1: Where people live

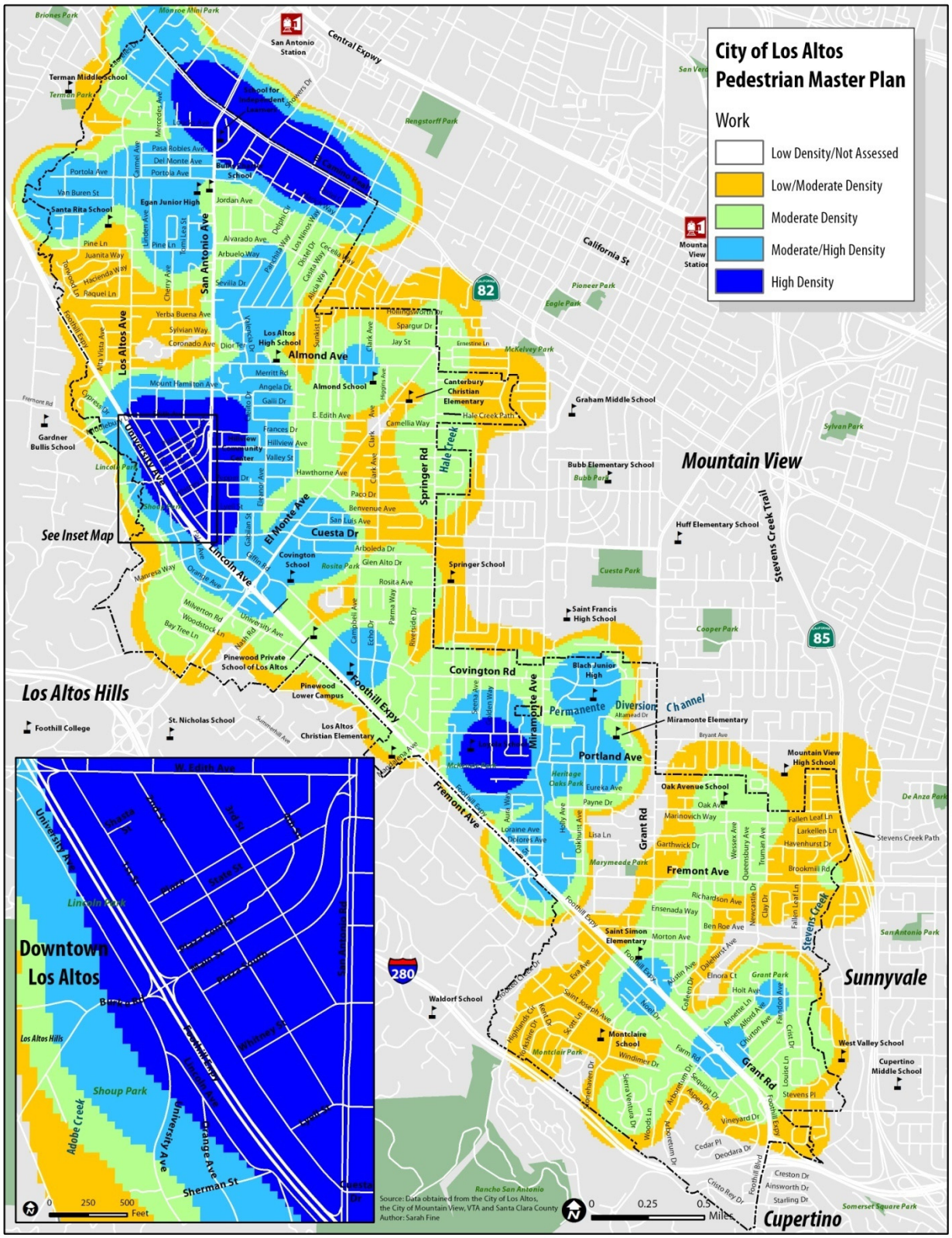

Figure C-2: Where people work

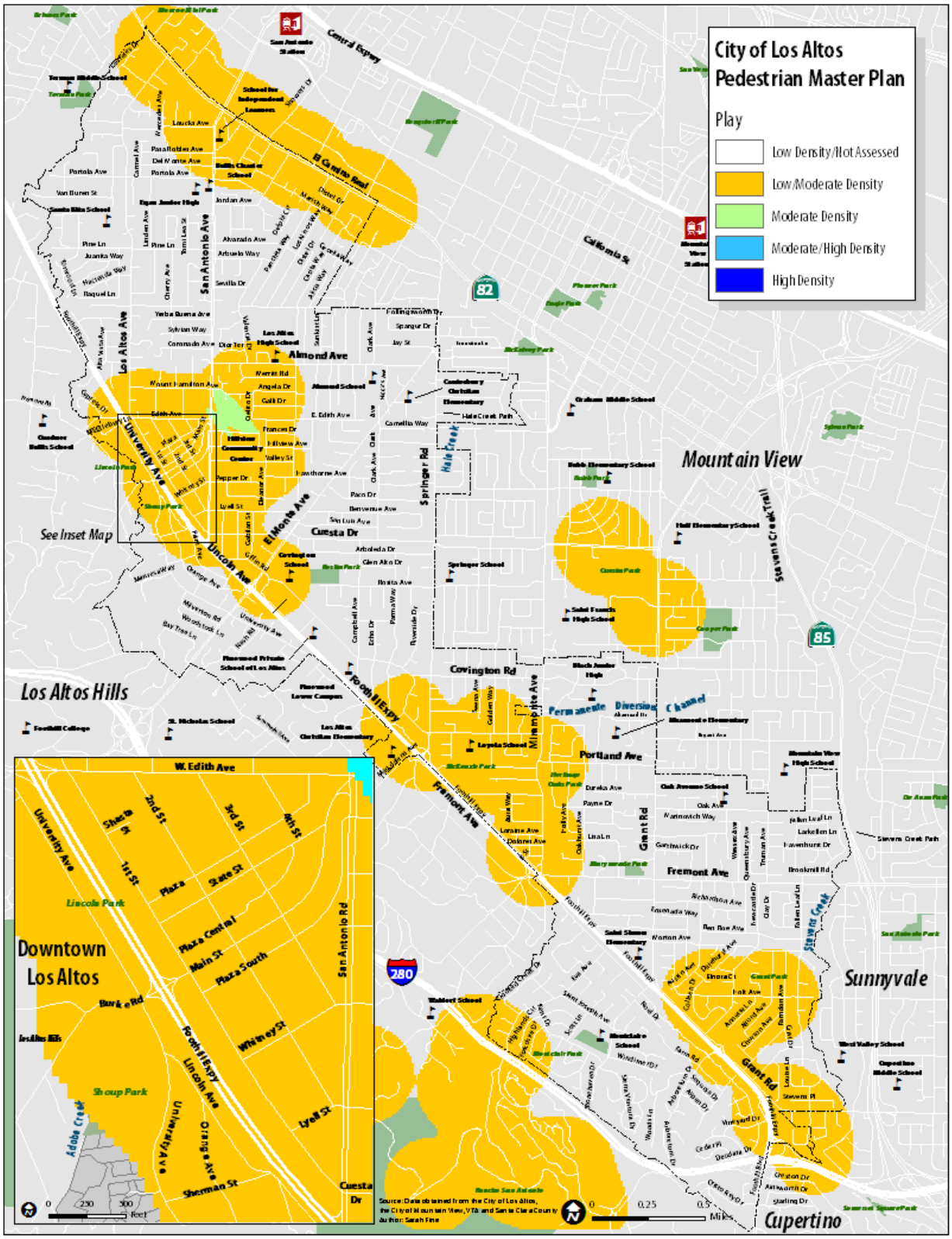

Figure C-3: Where people play

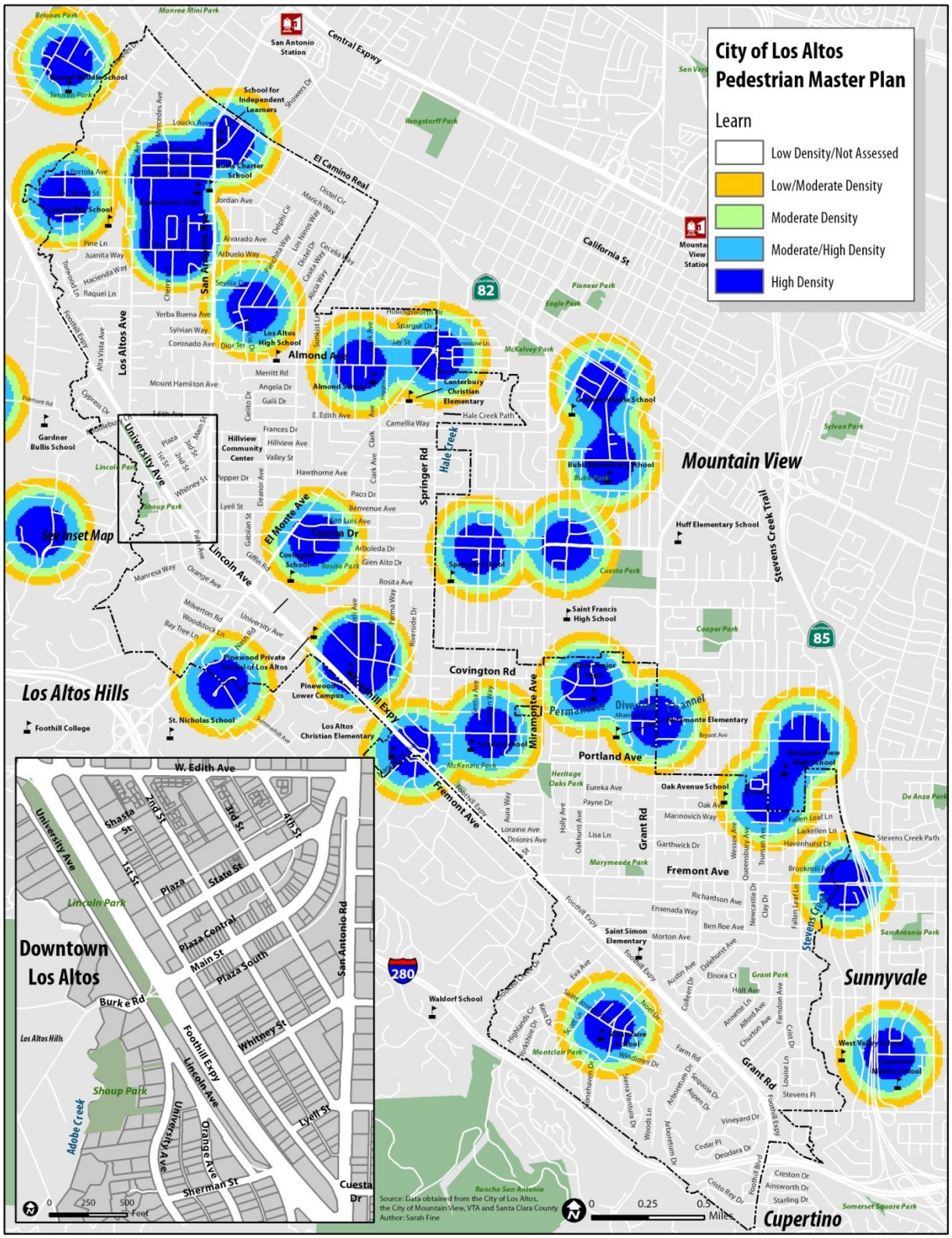

Figure C-4: Where people learn

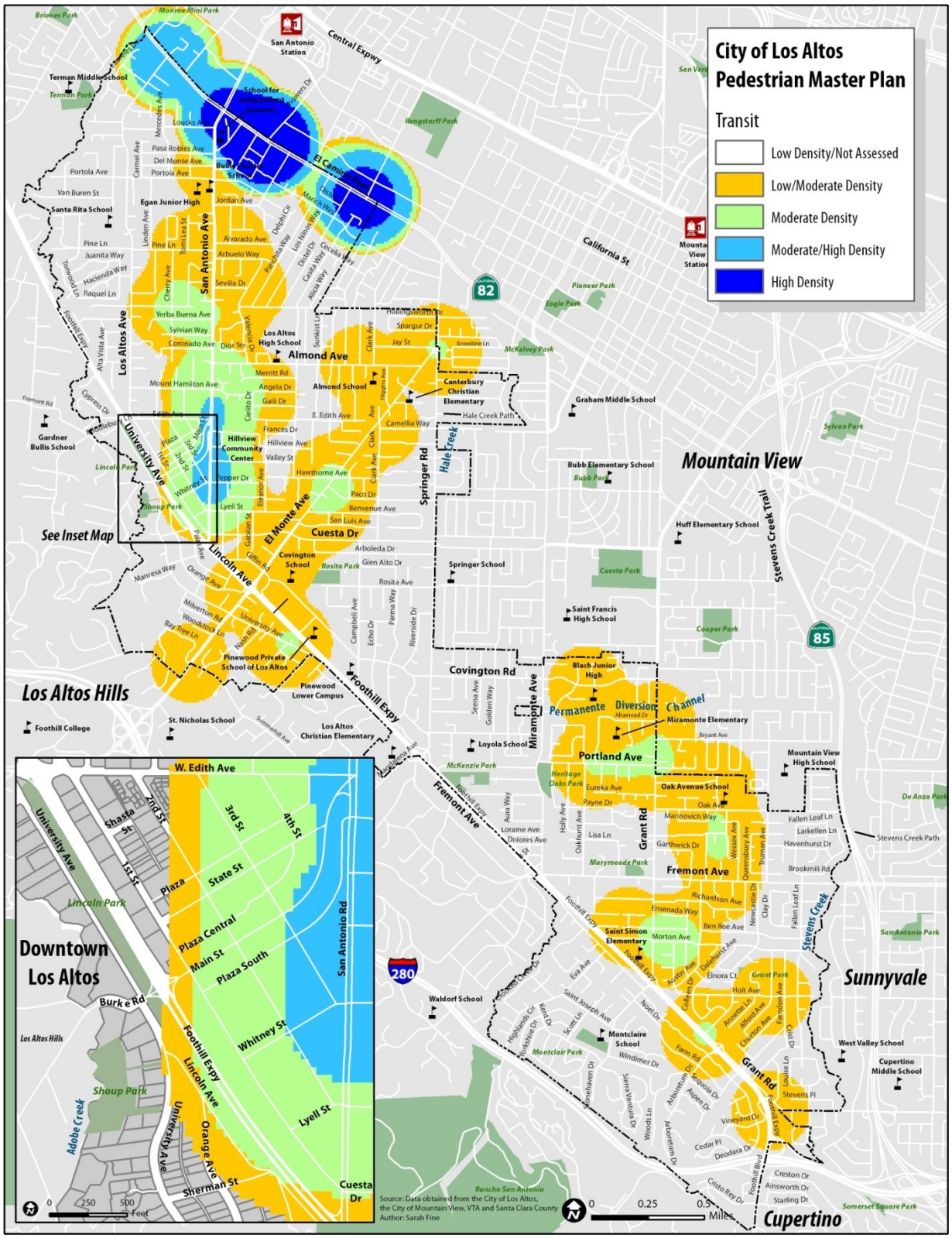

Figure C-5: Where people access transit

PSI Demand – Composite Model

After independently processing the features, the composite model is created and grouped into three demand classes using breaks in the data values. Areas that yielded highest demand include the confluence of retail land uses, school grounds, high employment, and multi-family housing. Areas largely dominated by single-family homes, although representing potential trip generators, represent the lowest demand areas.

The following three figures demonstrate three variations in the way the **Live + Learn + Work + Play + Transit** data can be organized. In the first map (**Figure C-6**), each of the five categories receives equal weight. In the next map (**Figure C-7**), school, park, and retail land uses are most heavily weighted. In **Figure C-8**, population density and proximity to schools are the features most heavily weighted.

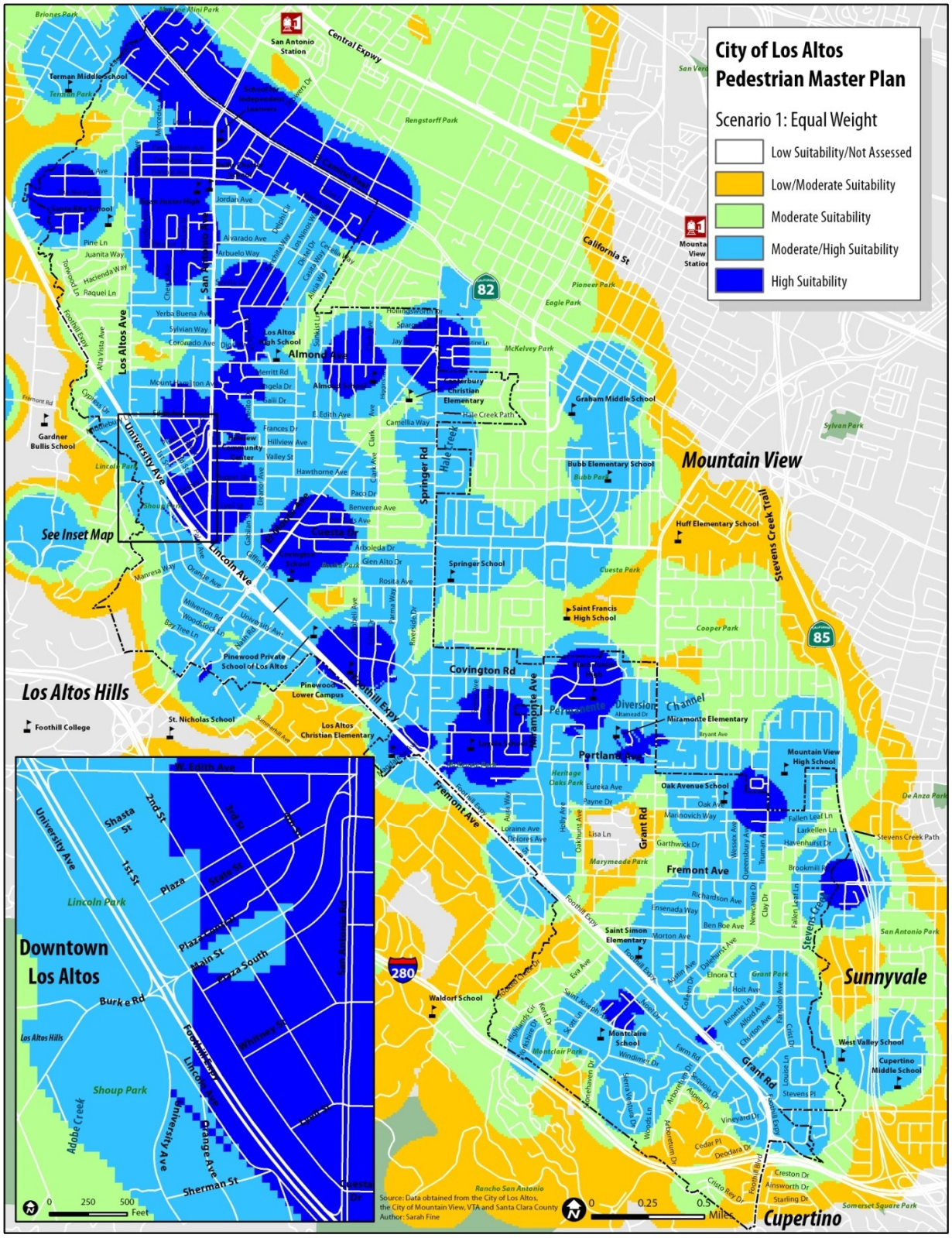

Figure C-6: Equal weight

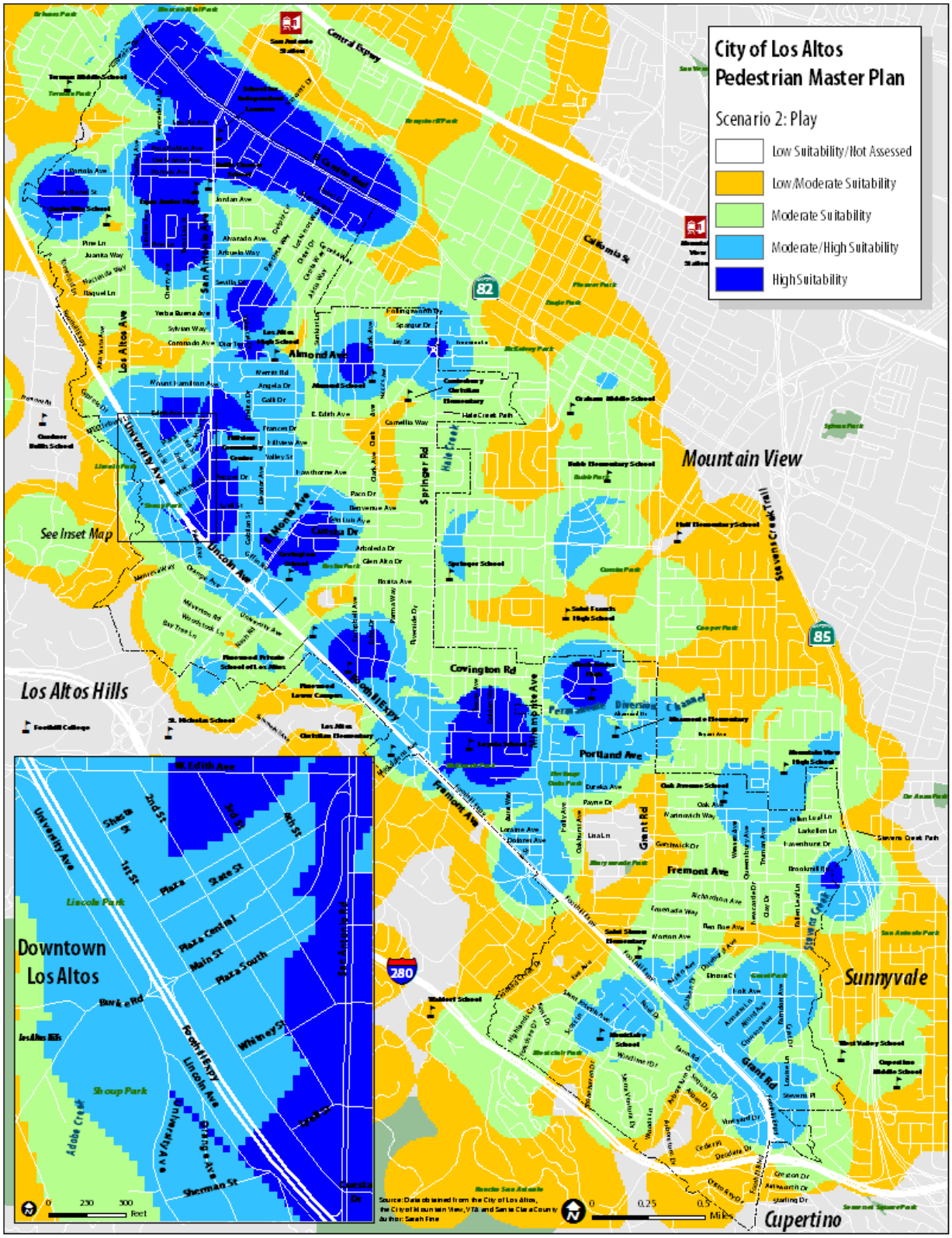

Figure C-7: Learn & play

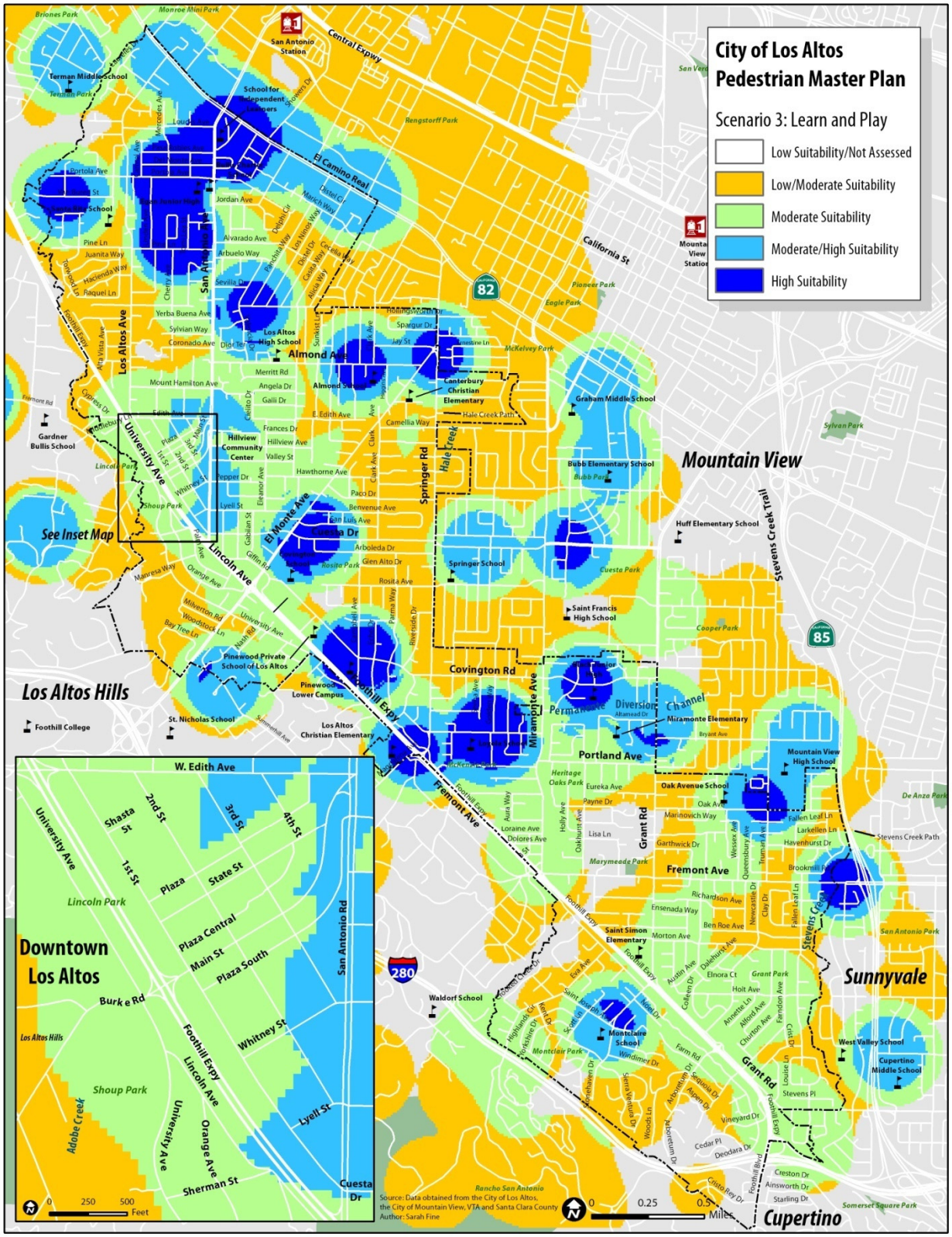

Figure C-8: Live & learn

C.3. Utilization of PSI – Supply Analysis

Along the Roadway: Walkway Suitability Scoring Methodology

Scores in PSI's Supply Analysis are based on roadway, sidewalks, walkways, and crossing characteristics that are perceived to have an impact on pedestrian safety, comfort and ease of movement. The purpose of the supply analysis is to determine if improvement projects are warranted given the existing conditions.

Walkways and sidewalks are scored using width, speed limit, truck or transit route data, whether the walkway has a bus shelter, and whether there are street lights present along the walkway.

Sidewalk/Walkway Width

Width is an important indicator of a sidewalk or walkway's readiness to accommodate volumes of foot traffic. In most places, sidewalks of 5-12 feet are high quality as they accommodate the regular demand of two people walking side by side easily. For Los Altos, pedestrian cut-throughs are also considered of similar quality to the 5-12' sidewalk due to their location off-street and value as a neighborhood connector.

Category	Width	Score
Walkway Width	› 12'	55 (50+5 bonus points)
	5-12'	50
	‹ 5'	25
	No Sidewalk	0

Posted Speed Limit

Speed limit also impacts the pedestrian environment. Streets with low speeds, regardless of a sidewalk buffer, generally create a more pleasant pedestrian experience than streets with cars passing by at high speeds.

Category	Speed Limit	Score
Posted Speed Limit	</= 25	25
	30 - 35 MPH	15
	› 35 MPH	10

Bus Shelter

Most bus stops in Los Altos are comprised of a route sign and a bench. Some bus stops also include a shelter with a covered roof, and this extra amenity is important for transit riders but also any pedestrians who may be passing by and need a break from the weather.

Category	Bus Shelter Presence	Score
Bus Shelter	Presence of bus shelter	5
	Absence of bus shelter	0

Truck / Transit Route

With the added element of noise pollution, streets with truck or transit routes are considered less comfortable and attractive.

Category	Truck Route Presence	Score
Truck / Transit Route	Absence of truck / transit route	0
	Presence of truck / transit route	-5

Lighting

Street lighting adds to the suitability of a walkway by providing visibility for pedestrians at night.

Category	Light Presence	Score
Lighting	Presence of street light	5
	Absence of street light	0

Walkway Suitability Results

Results are determined by summing the scores of each category, to a maximum possible score of 80. Once calculated, walkway suitability scores are grouped into five suitability classes using geometrical interval breaks in the data values.

Category	Score	Class
Walkway Suitability	0-21	Low Suitability
	22-45	Low / Moderate Suitability
	46-61	Moderate Suitability
	62-72	Moderate / High Suitability
	73-80	High Suitability

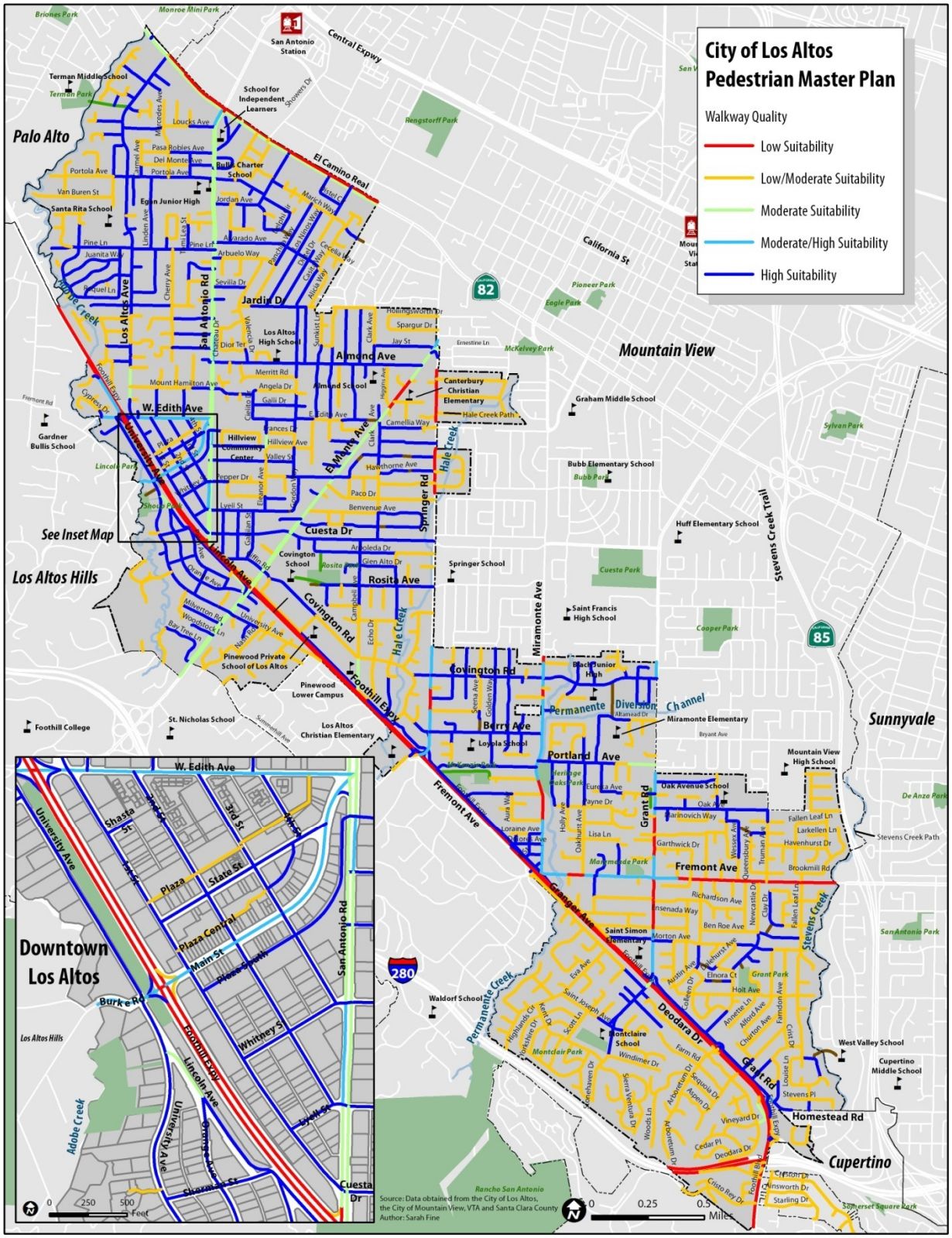

Figure C-9: Walkway quality

Across the Roadway: Crossing Suitability Scoring Methodology

Crossing locations are scored through the analysis of traffic control devices, crosswalks, access ramps, raised medians, rapid flashing beacons/in-pavement flashers, and posted speed limit. Scores are assigned to each leg of the crossing. As such, a single intersection could potentially have a variety of suitability scores assigned to each crossing leg.

Traffic Control Devices

Traffic control devices are scored based on the type of device or lack thereof. Traffic signals are thought to provide the most safety for pedestrians, followed by all-way stop signs and then two-way stops.

Category	Device Type	Score
Traffic Control Devices	Traffic signal	50
	All-way stop	40
	Two-way stop	25
	Uncontrolled	-25

Traffic Calming Devices

When a traffic signal is not present, traffic calming devices such as in-pavement flashers, provide cues to vehicle traffic that a pedestrian crossing is ahead. Other traffic calming devices, such as bulb-outs at crosswalks, reduce the distance that a pedestrian must travel to cross the roadway.

Category	Device Type	Score
Traffic Control Devices	Speed humps	5
	Speed feedback sign	5
	In-pavement flashers	5
	Raised crosswalk	5
	Bulb-outs	5

Crosswalks

In California, unless explicitly posted, all intersections are legal crosswalks. For this analysis, scores are assigned based on whether these crossings are marked with any type of crosswalk.

Category	Crossing Type	Score
Crosswalks	Marked	25
	Unmarked	-25

Curb Ramps

Scores in this category are based on the presence or absence of curb ramps per crossing leg. For instance, an intersection with 3 of 4 ramps would receive a score of 75 out of 100 possible.

Category	Ramp Inventory	Score
Curb Ramps	Presence of curb ramps	25
	Absence of curb ramps	-25

Posted Speed Limit

Speed limit also impacts the pedestrian environment while crossing the street. Shorter stopping distance and lower injury collision rates on slower streets make low speed street crossings attractive. This becomes increasingly important as pedestrians enter an intersection with wide turning radii where turns can be made at higher speeds.

Category	RFB Inventory	Score
Posted Speed Limit	Crosses Road > 35 MPH	-10
	Crosses Road @ 30 - 35 MPH	-5
	Crosses Road </= 25 MPH	0

Composite Crossing Score

Results are determined by summing the scores of each category, up to a maximum possible score of 105. Once calculated, crossing suitability scores are grouped into five classes using breaks in the data values. The crossings with the lowest scores are less desirable and will be considered as locations to improve the pedestrian experience.

Category	Score	Class
Crossing Suitability	-35 to - 22	Low Suitability
	-21 to -15	Low / Moderate Suitability
	-14 to -1	Moderate Suitability
	0 to 23	Moderate / High Suitability
	24 to 70	High Suitability

C.4. Supply and Demand Typology Model

Variation in demand (Live+Work+Play+Learn+Transit) and supply (Along the Roadway and Across the Roadway) are combined into the Supply and Demand Typology Model. A summary of possible pedestrian improvement options is summarized below.

- Areas with **high demand** for walking and **high supply** of suitable infrastructure can benefit from innovative programs and capital projects that further support walking and closure of key gaps. In some cases further 'ground truthing' of high suitability may be required, but overall these areas should

represent cost-effective opportunities for improvements and can be considered high priorities for investment.

- Areas with **high demand** and **low supply** of suitable infrastructure can benefit from infrastructure improvements to improve walking conditions. These areas may require wider sidewalks or new walkways to accommodate high levels of demand, the calming of traffic, or marked crossings. They should also be considered high priority areas for investment.
- Areas with **low demand** for walking and **high supply** of suitable infrastructure can benefit from programs to encourage walking, and land use changes or development to increase the density of attractors and generators. These areas may be considered medium priority for investment.
- Areas with **low demand** for walking and **low supply** of suitable infrastructure can benefit from basic infrastructure improvements. These areas should be low-priority for investments, except in cases where connectivity of neighborhoods or key routes serving high demand areas are identified.

Figure C-10 illustrates the combination of the supply model with Demand Scenario 3: Learn and Play. Because the demand scenario weighted school and parks more heavily than residential density and job density, the areas surrounding schools and parks are identified as areas with high demand for pedestrian facilities (signified by dark blue and red lines). Many of these roadways in high demand already have some pedestrian facilities (dark blue) that may need maintenance or other updating. Areas with low supply (red) are possible focus areas for pedestrian improvements.

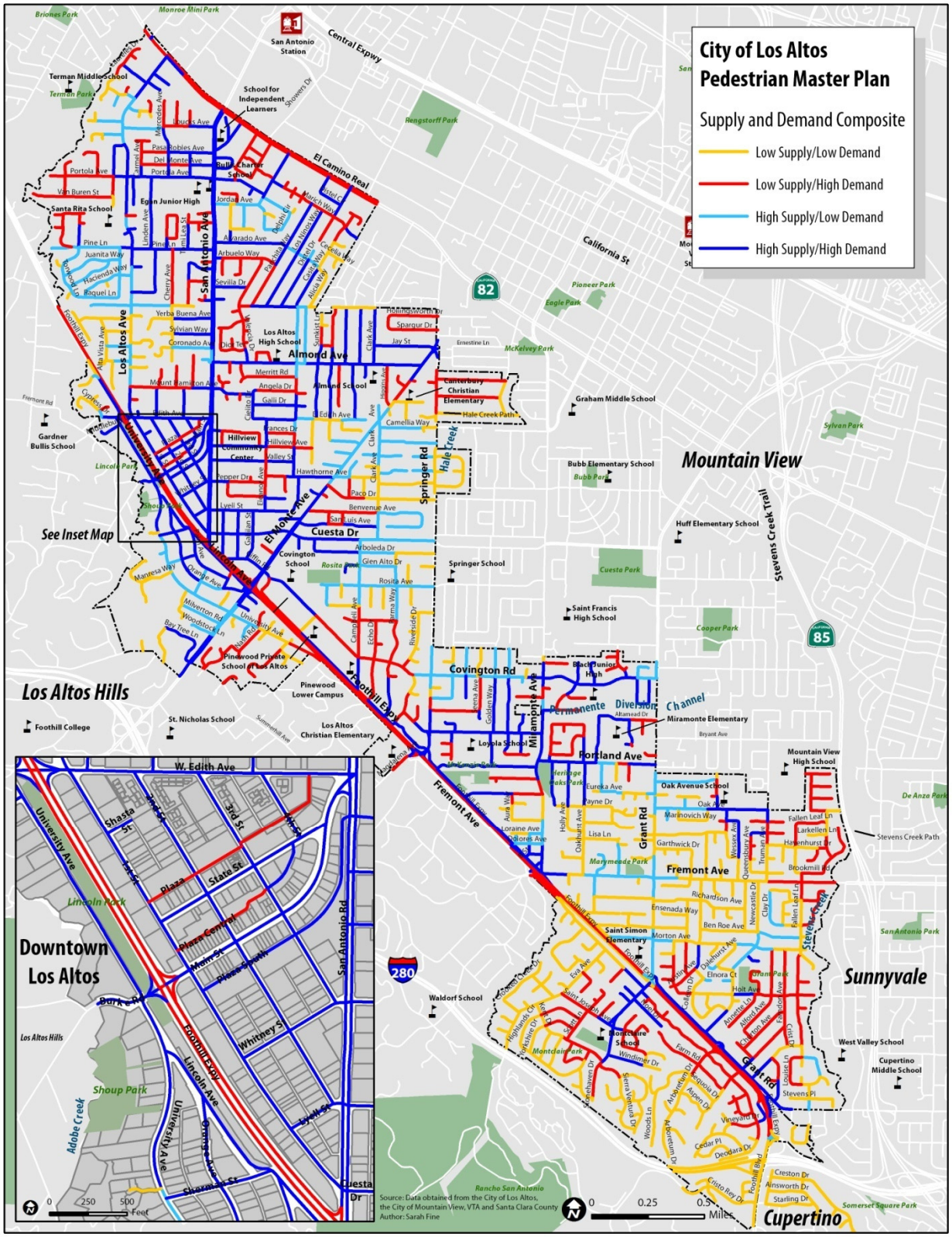

Figure C-10: Supply and demand composite

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Appendix D. Funding Sources

This chapter provides information on potential funding sources for bicycle, pedestrian and trail improvements. Federal, state, and local government agencies invest billions of dollars every year in the nation's transportation system. Only a fraction of that funding is used in development projects, policy development, and planning to improve conditions for pedestrians and bicyclists. Even though appropriate funds are limited, they are available. To support agency efforts to find outside funding sources to implement improvements along the proposed trail corridors, a summary by source type is provided below.

D.1 Federal Sources

D.1.1 Moving Ahead for Progress in the Twenty-First Century (MAP-21)

The largest source of federal funding for bicycle and pedestrian projects is the USDOT Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012. SAFETEA-LU contained dedicated programs including Transportation Enhancements, Safe Routes to School, and Recreational Trails, all commonly tapped sources of funding to make non-motorized improvements nationwide. MAP-21 combines these programs into a single source called the 'Transportation Alternatives Program (TAP).

More information: http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm

MAP-21 authorizes funding for federal surface transportation programs including highways and transit for the 27 month period between July 2012 and September 2014. It is not possible to guarantee the continued availability of any listed MAP-21 programs or to predict their future funding levels or policy guidance. Nevertheless, many bicycle and pedestrian transportation improvements programs have been included in some form since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 and thus may continue to provide capital for active transportation projects and programs.

In California, federal monies are administered through the California Department of Transportation (Caltrans). Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs are discussed on the following pages.

More information: http://www.fhwa.dot.gov/map21/summaryinfo.cfm

Transportation Alternatives

Transportation Alternatives Program (TAP) is a new funding source under MAP-21 that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements (TE), Safe Routes to School

(SR2S and SRTS), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and complete street projects including sidewalks, bikeways, multi-use paths, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Suggested Routes to School, despite the fact that TAP does not provide a guaranteed set-aside for this activity as SAFETEA-LU did. MAP-21 provides $85.0 million nationally for the RTP.

Eligible activities under TAP include:

1. **Transportation Alternatives** as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including "on–road and off–road trail facilities for pedestrians, bicyclists, and other active forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety–related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is a new eligible activity.

   More information: http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

2. **Recreational Trails Program (RTP).** TAP funds may be used to develop and maintain recreational trails and trail-related facilities for both active and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other active and motorized uses. These funds are available for both paved and unpaved trails but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

   RTP funds may be used for:

   - Maintenance and restoration of existing trails
   - Purchase and lease of trail construction and maintenance equipment
   - Construction of new trails, including unpaved trails
   - Acquisition or easements of property for trails
   - State administrative costs related to this program (limited to seven percent of a state's funds)
   - Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a state's funds)

   Under MAP-21, dedicated funding for the RTP continues at FY2009 levels – roughly $85.0 million annually. California will receive $5,756,189 in RTP funds per federal fiscal year through FY2014.

   More information:
   http://www.fhwa.dot.gov/environment/recreational_trails/funding/apportionments_obligations/recfunds_2009.cfm

3. **Safe Routes to School.** There are two separate Safe Routes to School programs administered by Caltrans. There is the federal program referred to as SRTS, and the state-legislated program referred to as SR2S. Both programs are intended to achieve the same basic goal of increasing the number of children walking and bicycling to school by making it safer for them to do so. All projects must be within two miles of primary or middle schools (K-8). The Safe Routes to School Program funds non-motorized facilities in conjunction with improving access to schools through the Caltrans Safe Routes to School Coordinator. Eligible projects may include:

- **Engineering improvements.** These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Physical improvements may also reduce motor vehicle traffic volumes around schools, establish safer and more accessible crossings, or construct walkways, trails or bikeways. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.

- **Education and Encouragement Efforts.** These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits, and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).

- **Enforcement Efforts.** These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian sting operations.

More information: http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

4. **Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.** At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

Average annual funds available through TAP over the life of MAP-21 equal $814.0 million nationally, which is based on a 2% set-aside of total MAP-21 authorizations. Projected MAP-21 apportionments for California total $3,546,492,430 for FY2013 and $3,576,886,247 for FY2014 (*http://www.fhwa.dot.gov/MAP21/funding.cfm*). The 2% set-aside for TAP funds in California will be about $71,000,000 for the next two fiscal cycles. State DOTs may elect to transfer up to 50% of TAP funds to other highway programs, so the amount listed above represents the maximum potential funding. TAP funds are typically allocated through MPOs and require a 20% local match.

Surface Transportation Program

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. 50% of each state's STP funds are sub-allocated geographically by population. These funds are funneled through Caltrans to the MPOs in the state. The remaining 50% may be spent in any area of the state.

More information: http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm

Highway Safety Improvement Program

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural Roads Program unless safety statistics demonstrate that fatalities are increasing on these roads. HSIP is a data-driven funding program, and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state's Strategic Highway Safety Plan.

More information: http://www.dot.ca.gov/hq/traffops/survey/SHSP/SHSP_Final_Draft_Print_Version.pdf

Pilot Transit-Oriented Development Planning

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing, the details of this program are not fully clear; although, the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to "facilitate multimodal connectivity and accessibility," and "increase access to transit hubs for pedestrian and bicycle traffic."

Transportation Investments Generating Economic Recovery

The Transportation Investment Generating Economic Recovery (TIGER Discretionary Grant Program) provides a unique opportunity for the U.S. Department of Transportation to invest in road, rail, transit and port projects that promise to achieve critical national objectives. The U.S. Congress has dedicated more than $4.1 billion to the program since inception: $1.5 billion for TIGER I, $600.0 million for TIGER II, $526.9 million for FY2011, $500.0 million for FY2012, $473.8 million for FY2013, and $600.0 million for the FY2014 round to fund projects that have a significant impact on the nation, a region or a metropolitan area. The TIGER Discretionary Grant Program's highly competitive process, galvanized by tremendous applicant interest, has allowed USDOT to fund 271 innovative capital projects throughout the nation. Each project is multi-modal, multi-jurisdictional or otherwise challenging to fund through existing programs. The TIGER Discretionary Grant Program enables USDOT to use a rigorous process to select projects with exceptional benefits, explore ways to deliver projects faster and save on construction costs, and make investments in the nation's infrastructure that make communities more livable and sustainable. Many awards have been made to construct bicycle and pedestrian infrastructure, including projects in Atlanta, GA, Birmingham, AL, Fresno, Indianapolis, IN, and Philadelphia, PA.

D.1.2 Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, provide more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure - "Provide more transportation choices: Develop

safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health." The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). MCOG and Caltrans should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

More information: http://www.epa.gov/smartgrowth/partnership/

D.1.3 Rivers, Trails, and Conservation Assistance Program

The Rivers, Trails and Conservation Assistance Program (RTCA) is the community assistance arm of the National Park Service. RTCA provides technical assistance to communities in order to preserve open space and develop trails. The assistance that RTCA provides is not for infrastructure, but rather building plans, engaging public participation, and identifying other sources of funding for conversation and outdoor recreation projects.

More information: http://www.nps.gov/pwro/rtca/who-we-are.htm

D.1.4 Community Development Block Grants

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may "use Community Development Block Grant funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grant funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs." Trails and greenway projects that enhance accessibility are the best fit for this funding source. CDBG funds could also be used to write ADA Transition Plans.

More information: www.hud.gov/cdbg

D.1.5 Community Transformation Grants

Community Transformation Grants administered through the Centers for Disease Control (CDC) support community–level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if such improvements benefit groups experiencing the greatest burden of chronic disease.

More information: http://www.cdc.gov/communitytransformation/

D.1.6 National Scenic Byways Program

The Federal Highway Administration (FHWA), part of the USDOT manages the National Scenic Byways Grant Program, which recognizes roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities by providing grants that support projects that manage and protect these roads and improve visitor facilities.

More information: http://www.fhwa.dot.gov/discretionary/2012nsbp.cfm

D.1.7 Federal Recovery Act State Fiscal Stabilization Funding

As part of the Federal Recovery Act of 2009, states will be receiving $53.6 billion in state fiscal stabilization funding. States must use 18.2% of their funding – or $9.7 billion – for public safety and government services. An eligible activity under this section is to provide funding to K-12 schools and institutions of higher education to make repairs, modernize, and make renovations to meet green building standards. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System, developed by the U.S. Green Building Council (USGBC), addresses green standards for schools that include bicycle and pedestrian facilities and access to schools. Another $5.0 billion is provided for the Energy Efficiency and Conservation Block Grant Program. This provides formula funding to cities, counties and states to undertake a range of energy efficiency activities. One eligible use of funding is for bicycle and pedestrian infrastructure.

More information: http://www2.ed.gov/policy/gen/leg/recovery/factsheet/stabilization-fund.html

http://www1.eere.energy.gov/wip/eecbg.html

D.2 State Sources

D.2.1 Active Transportation Program

With the consolidation of federal funding sources in MAP-21, the California State Legislature has moved to consolidate a number of state-funded programs centered on alternative transportation into a single program. The resulting Active Transportation Program (ATP) will consolidate the federal programs, Bicycle Transportation Account, the Safe Routes to Schools Program, and the Recreational Trails Program. The ATP's authorizing legislation (signed into law by the Governor on September 26, 2013) also includes placeholder language to allow the ATP to receive funding from the newly established Cap-and-Trade Program in the future. For the 2013/2014 fiscal cycle, approximately $130.0 million is anticipated for this program, of which $24.0 million will be earmarked specifically for Safe Routes to School projects. The call for projects is expected in spring 2014. The California Transportation Commission writes guidelines and allocates funds for the ATP, while the ATP will be administered by the Caltrans Division of Local Assistance. Goals of the ATP are currently defined as the following:

1) Increasing the proportion of trips accomplished by biking and walking;
2) Increasing safety and mobility for non-motorized users;
3) Advancing active transportation efforts of regional agencies to achieve the greenhouse gas reduction goals;
4) Enhancing public health;
5) Ensuring that disadvantaged communities fully share in the benefit of the program; and,
6) Providing a broad spectrum of projects to benefit many types of active transportation users.

More information: http://www.dot.ca.gov/hq/LocalPrograms/atp/index.html

D.2.2 State Highway Operations & Protection Program

The State Highway Operations and Protection Program (SHOPP) is a four year program that funds projects on the state highway system to maintain and preserve the asset. The program is primarily funded by federal highway trust funds. The federal funds that make up the SHOPP are National Highway Performance Program (NHPP), the Surface Transportation Program (STP), and the Highway Safety Improvement Program (HSIP). The new federal act, Moving Ahead for Progress in the 21st Century (MAP-21), requires that the states

implement targets based on performance measures that will be forthcoming. This will dictate how funds need to be programmed based on meeting the targets. The emphasis of the federal bill is to maintain and/or improve the current asset condition and to address the safety needs. The cycle includes identification of rehabilitation and reconstruction needs in the ten year plan, the estimation of available funding in the fund estimate, and finally a financially-constrained portfolio of projects in the four-year SHOPP. As required by statutes, the SHOPP is updated every two years. The SHOPP project funding process is internal to Caltrans. SHOPP projects are originally scoped through the ten year SHOPP plan process. The ten year SHOPP plan has a fiscally-constrained list of program areas that have specific estimated amounts of funding. The determination of the balance of funds for each of the areas is based on federal funding programs, priorities as agreed between the Caltrans and the CTC, and direction from the Caltrans SHOPP Executive Committee. The priorities are:

1. Collision reduction, major damage restoration, and mandates such as ADA and stormwater management
2. Pavement, bridge, roadside, and facility preservation
3. Mobility

There is clearly not enough funding to fund the SHOPP needs and thus each category has constrained funding.

More information: http://www.dot.ca.gov/hq/transprog/SHOPP/2014%20SHOPP/SHCC%20SHOPP%20issue%20paperpdf.pdf

D.2.3 Caltrans Planning Grants

Caltrans also administers the Transportation Planning Grant Program that funds projects to improve mobility. In the past year, Caltrans awarded $10.0 million in grant funding to 70 applicants, in two sub-categories: Environmental Justice grants and Community Based Transportation Plan grants.

More information: http://www.dot.ca.gov/hq/tpp/grants.html

Environmental Justice Grant Program

The Environmental Justice (EJ) Grant Program promotes the involvement of low-income, minority communities, and Native American tribal governments in the planning for transportation projects. EJ grants have a clear focus on transportation and community development issues to prevent or mitigate disproportionate, negative impacts while improving mobility, access, safety, and opportunities for affordable housing and economic development. Grants are available to cities, counties, transit districts, and tribal governments.

More information: http://www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_ej.html

Community Based Transportation Planning Grant Program

The Community Based Transportation Planning (CBTP) grant program promotes transportation and land use planning projects that encourage community involvement and partnership. These grants include community and key stakeholder input, collaboration, and consensus building through an active public engagement process. CBTP grants support livable and sustainable community concepts with a transportation or mobility objective to promote community identity and quality of life.

More information: http://www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_cbtp.html

D.2.4 Petroleum Violation Escrow Account

In the late 1970s, a series of federal court decisions against selected United States oil companies ordered refunds to the states for price overcharges on crude oil and refined petroleum products during a period of price control regulations. To qualify for Petroleum Violation Escrow Account (PVEA) funding, a project must save or reduce energy and provide a direct public benefit within a reasonable time frame. In the past, the PVEA has been used to fund programs based on public transportation, computerized bus routing and ride sharing, home weatherization, energy assistance and building energy audits, highway and bridge maintenance, and reducing airport user fees. In California, Caltrans Division of Local Assistance administers funds for transportation-related PVEA projects. PVEA funds do not require a match and can be used as match for additional federal funds.

More information: www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/g22state.pdf

D.2.5 Office of Traffic Safety Grants

The Office of Traffic Safety (OTS) distributes grants statewide to establish new traffic safety programs or fund ongoing safety programs. OTS grants are supported by federal funding under the National Highway Safety Act and MAP-21. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Eligible grantees are governmental agencies, state colleges, state universities, local city and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants. The California application deadline is January of each year. There is no maximum cap to the amount requested; however, all items in the proposal must be justified to meet the objectives of the proposal.

More information: http://www.ots.ca.gov/Grants/Apply/default.asp

D.2.6 Environmental Enhancement and Mitigation Funds

The Environmental Enhancement Mitigation Program (EEMP) provides grant opportunities for projects that indirectly mitigate environmental impacts of new transportation facilities. Projects should fall into one of the following three categories: highway landscaping and urban forestry, resource lands projects, or roadside recreation facilities. Funds are available for land acquisition and construction. The local Caltrans district must support the project. The average award amount is $250,000.

More information: http://www.dot.ca.gov/hq/LocalPrograms/EEM/homepage.htm

D.2.7 Land and Water Conservation Fund

The Land and Water Conservation Fund is a federal program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The fund is administered by the California State Parks Department. Cities, counties, and districts authorized to acquire and develop park and recreation space are eligible for grant funding. While non-profits are ineligible, they are allowed to apply in partnerships with

eligible agencies. Applicants must fund the project entirely and will be reimbursed for half of the cost. Up to $2.0 million was available in California in the 2012 round of grant funding.

More Information: http://www.parks.ca.gov/?Page_id=21360

D.2.8 California Strategic Growth Council

The Strategic Growth Council is a state agency that manages the Sustainable Communities Planning Grant and Incentives Program. The program provides grants for development and implementation of plans that lead to significant reductions in greenhouse gas emissions, improve air and water quality, promote public health, promote equity, increase housing affordability, increase infill and compact development, revitalize urban and community centers, protect natural resources and agricultural lands, reduce automobile usage and fuel consumption, improve infrastructure systems, promote water conservation, promote energy efficiency and conservation, and strengthen the economy.

The program is currently conducting workshops to update program guidelines. The anticipated application date is early 2014.

More information: http://sgc.ca.gov/planning_grants.html

D.2.9 Climate Ready Grant Program - California State Coastal Conservancy

Climate Ready grants are intended to encourage local governments and non-governmental organizations to advance planning and implementation of on-the-ground actions that reduce greenhouse gas emissions and lessen the impacts of climate change on California's coastal communities. The grant program makes eligible "development of multi-use trails with clearly identified greenhouse gas (GHG) reduction goals; (and) protecting and managing open space lands with clearly identified GHG reduction goals." A total of $1,500,000 is available on a competitive basis, with a minimum award of $50,000 and a maximum of $200,000. The size of awarded grants will be based on each project's needs, its overall benefits, and the extent of competing demands for funds. Applications were due August 28, 2013. It is not clear whether additional application solicitations will be made.

More information: http://scc.ca.gov/files/2013/07/Climate-Ready-grant-announcement-July-18_FINAL.pdf

D.3 Regional & Local Sources

D.3.1 One Bay Area Grant

The One Bay Area Grant (OBAG) program is run by the Metropolitan Transportation Commission (MTC). OBAG grants are derived from funding drawn from the federal Surface Transportation Program (STP), Transportation Alternatives (TA) program, and Congestion Mitigation and Air Quality Improvement (CMAQ) program. MTC will oversee $320 million of OBAG grant funding over a four-year period.

OBAG funding is administered jointly between MTC and the local Congestion Management Agency (CMA) for each county. The CMA for Santa Clara County is the Valley Transportation Authority (VTA). The six following categories of projects are eligible for OBAG funding: Local Street & Road Preservation, Bicycle & Pedestrian Improvements, Transportation for Livable Communities, Safe Routes to School, Priority Conservation Areas, and CMA Planning Activities.

OBAG funding, in an effort to integrate with the California climate law (SB 375), prioritizes funding in areas that are Priority Development Areas (PDAs) and for communities that accept housing allocations through the Regional Housing Needs Allocation (RHNA). Santa Clara County has been allocated $26 million out of the total $320 million OBAG program for the Bay Area.

More information: http://www.mtc.ca.gov/funding/onebayarea/

D.3.2 Transportation Fund for Clean Air

Administered by the Bay Area Air Quality Management District (BAAQMD), the Transportation Fund for Clean Air (TFCA) is a grant program funded by a $4 surcharge on motor vehicles registered in the Bay Area. This surcharge generates approximately $22 million per year in revenue. TFCA's goal is to implement the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions, and therefore improve air quality. Projects must be consistent with the 1988 California Clean Air Act and the Bay Area Ozone Strategy. Sixty percent of TFCA funds are awarded directly by the BAAQMD through a competitive grant program known as the Regional Fund. The remaining forty percent of TFCA funds are forwarded to the designated county congestion management agency and distributed by these through the Program Manager program. TFCA funds covers a wide range of project types, including bicycle facility improvements such as bike lanes, bicycle racks, and lockers; arterial management improvements to speed traffic flow on major arterials; and smart growth.

More information: www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources/TFCA.aspx and www.baaqmd.gov/tfca4pm

D.3.3 TDA Article 3

TDA Article 3 funds are state block grants awarded annually to local jurisdictions for transit and bicycle projects in California. Funds originate from the Local Transportation Fund (LTF), which is derived from one-quarter-cent of the general state sales tax. LTF funds are returned to each county based on sales tax revenues. Eligible bicycle projects include construction and engineering for capital projects, maintenance of bikeways, bicycle safety education programs (up to five percent of funds), and development of comprehensive bicycle facilities plans. A city or county may apply for funding to develop or update bicycle plans not more than once every five years. TDA funds may be used to meet local match requirements for federal funding sources.

Two percent of the total TDA apportionment is available for bicycle and pedestrian funding.

More information: www.mtc.ca.gov/funding/STA-TDA/

D.3.4 Developer Impact Fees

As a condition for development approval, municipalities can require developers to provide certain infrastructure improvements, which can include bikeway projects and walkways. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

D.3.5 Roadway Construction, Repair and Upgrade

Future road widening and construction projects are one means of providing improved pedestrian and bicycle facilities. To ensure that roadway construction projects provide these facilities where needed, it is important

that the review process includes input pertaining to consistency with the proposed system. In addition, California's 2008 Complete Streets Act and Caltrans's Deputy Directive 64 require that the needs of all roadway users be considered during "all phases of state highway projects, from planning to construction to maintenance and repair."

More information: http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html

D.3.6 Utility Projects

By monitoring the capital improvement plans of local utility companies, it may be possible to coordinate upcoming utility projects with the installation of bicycle and pedestrian infrastructure within the same area or corridor. Often times, the utility companies will mobilize the same type of forces required to construct bikeways and sidewalks, resulting in the potential for a significant cost savings. These types of joint projects require a great deal of coordination, a careful delineation of scope items and some type of agreement or memorandum of understanding, which may need to be approved by multiple governing bodies.

D.3.7 Cable Installation Projects

Cable television and telephone companies sometimes need new cable routes within public right-of-way. Recently, this has most commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of curb lanes, it may be possible to request reimbursement for affected bicycle facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide for new bikeway or pedestrian facilities following completion of the cable trenching, such as sharing the use of maintenance roads.

D.4 Private Sources

Private funding sources can be acquired by applying through the advocacy groups such as the League of American Bicyclists and the Bikes Belong Coalition. Most of the private funding comes from foundations seeking to enhance and improve bicycle facilities and advocacy. Grant applications will typically be through the advocacy groups as they leverage funding from federal, state and private sources. Following are several examples of private funding opportunities available.

D.4.1 PeopleForBikes Community Grant Program

PeopleForBikes (FKA Bikes Belong) is a coalition of bicycle suppliers and retailers that has awarded $2.5 million in grants and leveraged an additional $650.0 million since its inception in 1999. The program funds small corridor improvements, mountain bike trails, BMX parks, trails, and park access. PeopleForBikes also administers the Green Lane Project, which is a technical support and peer exchange program for U.S. cities working on the installation of protected bicycle lanes and cycle tracks. PeopleForBikes is funded through private donations.

More information: http://www.peopleforbikes.org/pages/community-grants

D.4.2 Bank of America Charitable Foundation, Inc.

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grant program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Program, and specifically the Program

Related Investments subcategory. This program targets low- and moderate-income communities and seeks to encourage entrepreneurial business development.

More information: http://www.bankofamerica.com/foundation

D.4.3 The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation was established as a national philanthropy in 1972, and today, it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- To assure that all Americans have access to basic health care at a reasonable cost
- To improve care and support for people with chronic health conditions
- To promote healthy communities and lifestyles
- To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

More information: http://www.rwjf.org/applications/

D.4.4 The Wal-Mart Foundation

The Wal-Mart Foundation offers a Local, State, and National Giving Program. The Local Giving Program awards grants of $250 to $5,000 through local Wal-Mart and Sam's Club Stores. Application opportunities are announced annually in February with a final deadline for applications in December. The State Giving Program provides grants of $25,000 to $250,000 to 501c3 nonprofits working within one of five focus areas: Hunger Relief & Nutrition, Education, Environmental Sustainability, Women's Economic Empowerment, or Workforce Development. The program has two application cycles per year: January through March and June through August. The Wal-Mart Foundation's National Giving Program awards grants of $250,000 and more, but does not accept unsolicited applications.

More information: http://foundation.walmart.com/apply-for-grants

D.4.5 The Kodak American Greenways Program

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants ($250 to $2,000) to stimulate the planning, design and development of greenways. These grants can be used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, and building trails. Grants cannot be used for academic research, institutional support, lobbying or political activities.

More information: http://www.conservationfund.org

D.4.6 Community Action for a Renewed Environment (CARE)

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to re-duce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By

providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between $90,000 and $275,000.

More information: http://www.epa.gov/care/

D.4.7 Corporate Donations

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bike and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

D.5 Other Sources

Local sales taxes, fees, and permits may be implemented as new funding sources for pedestrian and bicycle projects. However, any of these potential sources would require a local election. Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly multi use paths. For example, a local college design class may use such a multi-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of way for the route. A local construction company may donate or discount services beyond what the volunteers can do. A challenge grant program with local businesses may be a good source of local funding, in which the businesses can "adopt" a route or segment of one to help construct and maintain it.

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Appendix E. Suggested Routes to School Plan

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Introduction

The City of Los Altos coordinates with the Los Altos School District to encourage walking, biking, and carpooling to school through its Suggested Routes to School (SRTS) program. GreenTown Los Altos, a local initiative, organizes schools to participate in Walk or Wheel (WoW!) to School programs and the annual Drive Less/Greenest Schools Challenge. The City of Los Altos has actively improved pedestrian and bicyclist access to schools through successful SRTS funding applications and the provision of matching funds.

E.1.1. What is Safe Routes to School?

Safe Routes to School (SR2S) refers to a variety of multi-disciplinary programs aimed at both increasing the number of students walking and bicycling to school, and reducing the amount of vehicle trips associated with school travel. Such programs and projects improve traffic safety and air quality around school areas, and address childhood obesity and public health issues, through education, encouragement, increased law enforcement, and engineering measures. Safe Routes to School programs typically involve partnerships among municipalities, school districts, community members, parent volunteers, and law enforcement agencies. Los Altos has called this program "Suggested Routes to School" since the City first produced school maps in 2008. For this report, "Safe Routes to School" refers to national or statewide programs and their components that contribute to the "Suggested Routes to School" program in Los Altos.

SRTS benefits children:

- Increased physical fitness and cardiovascular health
- Increased ability to focus on school
- A sense of independence and confidence about their transportation and their neighborhood

SRTS benefits neighborhoods:

- Improved air quality as fewer children are driven to school
- Decreased crashes and congestion as fewer children are driven to school
- More community involvement as parents, teachers and neighbors get involved and put "eyes on the street"

SRTS benefits schools:

- Fewer discipline problems because children arrive "ready to learn"
- Fewer private cars arriving to drop off and pick up children
- Opportunities to integrate walking, bicycling and transportation topics into curriculum (e.g. "Walk & Bike Across America")
- Increased efficiency and safety during drop off and pick up times

More information is available on the Safe Routes to School National Partnership website:

http://saferoutespartnership.org/

E.1.2. Why is a Suggested Routes to School Program Important?

Although most students in the United States walked or biked to school before the 1980s, the number of students walking or bicycling to school since has sharply declined. National statistics[1] indicate that 42 percent of students between five and 18 years of age walked or bicycled to school in 1969 (with 87 percent walking or bicycling within a mile of school). This number fell to 16 percent of students

[1] *U.S. Centers for Disease Control and Prevention. Barriers to Children Walking to or from School United States 2004, Morbidity and Mortality Weekly Report September 30, 2005. Available: www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm. Accessed: December 28, 2007.*

walking or bicycling in 2001. This decline is due to a number of factors, including urban growth patterns and school siting requirements that encourage school development in outlying areas, budget cuts that force expanded enrollment boundaries, increased traffic, and parental concerns about safety.

The situation is self-perpetuating: as more parents drive their children to school, there is increased traffic at the school site, resulting in more parents becoming concerned about traffic and driving their children to school.

A comprehensive Safe Routes to School program addresses the reasons for reductions in walking and biking through a multi-pronged approach that uses education, encouragement, engineering and enforcement efforts to develop attitudes, behaviors, and physical infrastructure that improve the walking and biking environment. In its most advanced form, Safe Routes to School is also incorporated into City and school district policies/procedures and is highlighted as part of a larger vision for community sustainability.

E.1.3. Benefits of a Safe Routes to School Program

Safe Routes to School programs directly benefit schoolchildren, parents, and teachers by creating a safer travel environment near schools and reducing motor vehicle congestion (and related air pollution) at school drop-off and pick-up zones. Neighborhoods around schools also enjoy calmer streets and improved infrastructure. Students that choose to walk or bike to school are rewarded with the health benefits of a more active lifestyle, and a sense of responsibility and independence that come from being in charge of the way they travel. Others who carpool or take the bus more often can build stronger social bonds with fellow students and/or learn the basics of how to travel without their parents. All students can learn at an early age that walking, biking, and ridesharing can be safe, enjoyable and good for the environment.

A Safe Routes to School program helps integrate physical activity into the everyday routine of school students. Since the mid-1970s, the number of children who are overweight has roughly tripled from five percent to almost 17 percent. Health concerns related to sedentary lifestyles have become the focus of statewide and national efforts to reduce health risks associated with being overweight. Children who walk or bike to school have an overall higher activity level than those who are driven to school, even though the journey to school makes only a small contribution to activity levels.[2]

E.1.4. Suggested Routes to School Program Goals

School commuting is a major contributor to travel demand and greenhouse gas (GHG) emissions, and child/school zone safety is an important issue in the community. Through this Safe Routes to School (SRTS) effort, existing conditions were assessed and Suggested Routes to School maps and materials developed for eight elementary schools and two junior high schools. Traffic safety campaign materials to promote safe travel behavior are also being developed as a resource for ongoing school–based travel planning, programmatic, and funding efforts.

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[2] *Cooper A, Page A, Foster L, Qahwaji D. "Commuting to school: are children who walk more physically active?" American Journal of Preventive Medicine. 2003 November; 25(4):273-6.*
Cooper A, Andersen L, Wederkopp N, Page A, Frosberg K. "Physical activity levels of children who walk, cycle, or are driven to school" American Journal of Preventive Medicine, 2005 October; 29(3):179-184.

The goals of the SRTS effort in Los Altos are to:

1.) Develop and confirm Suggested Routes and provide updated maps with safety tips to promote safe travel habits for all modes and encourage walking and biking to school

2.) Identify potential improvement projects and strategies for incorporation into the City's Pedestrian Master Plan

3.) Prioritize corridors and customized messaging for a Traffic Safety Campaign focused on reducing vehicle speeding along routes to school

E.1.5. Schools Included

This report presents recommendations to improve bicyclist & pedestrian safety and access to ten schools:

- Almond Elementary
- Loyola Elementary
- Gardner Bullis Elementary
- Oak Avenue Elementary
- Springer Elementary
- Santa Rita Elementary
- Montclaire Elementary
- Covington Elementary
- Egan Junior High
- Blach Junior High

E.1.6. Methods

School site walking audits were conducted at eight elementary schools during the morning drop-off period. Los Altos City staff, BPAC members and volunteers, and the engineering consultants were present at each audit. The audits began with a discussion of current challenge areas and the types of issues observers should pay attention to. The team then observed student access and reviewed the area near each school for quality of sidewalks and pathways, curb ramps, signage, and other engineering elements, as well as behaviors of pedestrians, bicyclists, and drivers. During the audits, stakeholders confirmed their experiences of suggested routes to schools and identified updates to be made to the existing maps. Based on observations and public input, the project team developed a report of potential recommendations for each school. Previous assessments of the two junior high schools in the city were used as the basis for their recommendations in this Plan.

Student mode split was developed from student hand tallies conducted in two classrooms per grade at each school during Spring 2014. An online parent survey was also conducted to confirm student mode split, determine distance traveled to school, and obtain information regarding specific barriers and parental concerns. A total of 468 responses were received from parents at all ten schools included in this report. The summary of the parent survey results combined for all schools can be found in Section 2.

Collision data are from 2009-2011, from the Transportation Injury Mapping System (TIMS) SRTS mapping tool provided by the Safe Transportation Research and Education Center (SafeTREC) at the University of California, Berkeley.

Suggested Route Maps were developed based on existing maps created in 2008, walk audit evaluations, and input from the school community. In addition to suggested walking and biking routes, maps show crossing guard locations, marked crosswalks, traffic signals, bicycle parking, and estimated walking and biking times.

E.1.7. How to Use this Report

At the heart of every successful Safe Routes to School program is a coordinated effort by parent volunteers, school staff, school district officials, City staff, law enforcement, and other partners to support safe, sustainable student travel. This Plan provides comprehensive reference material to confirm travel issues, guide formal and informal initiatives, and assist ongoing coordination and implementation.

City staff can use this report to help document school travel routes and behaviors, existing roadway design deficiencies, and specific improvement opportunities. Engineering recommendations can be referenced when scoping new capital and maintenance projects, reviewing private development plans, applying for grant funds, and updating Citywide goals and policies. Non-infrastructure priorities/themes can be integrated into existing City programs and communication materials.

School District officials can use this report to consider and prioritize investments proposed on District property and integrate programs that educate and encourage students and parents into its routine business.

School staff can reference this document in parent and online communications to help increase awareness of and support for the program. Education and encouragement materials can be utilized for classroom learning modules, contests, and after-school enrichment.

Parents can use this report to understand and confirm (or clarify) the conditions at their children's school and to become familiar with the ways in which they can personally support program goals. In many cases, education and encouragement programs require participation from dedicated parent volunteers to carry out.

Police department staff can use this report to target enforcement efforts on identified school routes and at problem areas, and to complement potential education and encouragement campaigns. Police department input can also help improve the specific design features and prioritization of recommended projects aimed at addressing safety issues and promoting active travel.

E.2. Parent Survey

A parent survey was created and distributed online. While the ten schools in the report were targeted, responses were welcome from all Los Altos residents. A total of 468 responses were received, accounting for 784 children and over 7,000 trips per school week. Each school's share of the responses is shown below in **Figure E-1**. Of these, a total of 375 responses were received from the ten schools included in this report, accounting for 572 children and 5,426 trips per week. The following results are based on responses from these ten schools.

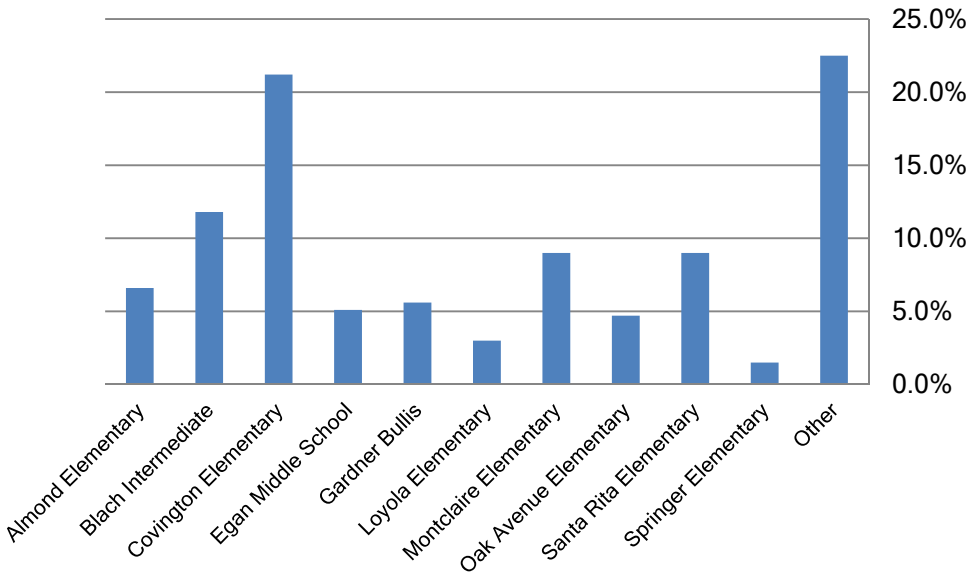


Figure E-1 School participation in parent survey

E.2.1. Student Travel Patterns

The survey asked parents how far their students must travel to school and how each child travels to and from school on most days. The majority of students (63 percent) live within one mile of school and another 27 percent live between one and two miles from school. This provides a great opportunity to increase walking and biking to schools in Los Altos as the vast majority of students surveyed live within walking or biking distance, shown in **Figure E-2.** The most frequent mode of travel to/from school is almost evenly split between single family vehicle and bicycling, at 36 percent and 34 percent respectively. The next most frequent mode of travel is walking, at 22 percent. It is important to compare parent survey data with student travel tally data, as parents self-selected to take the survey, but students in two classrooms of each grade level were tallied. Student travel tally data is shown in **Figure E-**. While this shows higher rates of single family vehicle trips and lower rates of bicycling, it is important to note that other modes are comparable and both evaluation methods show significantly higher rates of active transportation in Los Altos than in other comparable cities.

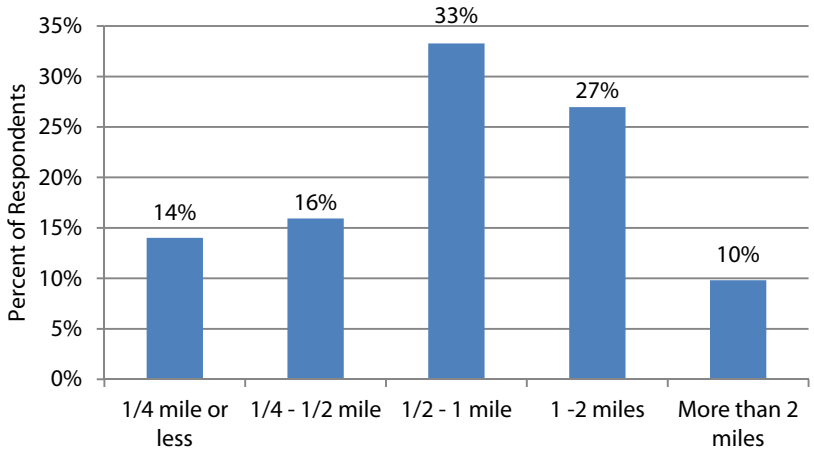


Figure E-2 Distance from school

E.2.2. Parent Concerns

Parents were asked to choose the issues that affect their decision to allow, or not allow, students to walk or bike to/from school. For this question, parents were asked to check their top three concerns. **Figure E-3** displays the most commonly noted issues that affect parents' decisions to allow, or not allow, their students to walk or bike to school. The top three issues noted were:

1. Speeding traffic along the route (200 responses)
2. Unsafe intersections and Too much traffic along the route (both received 196 responses)
3. Lack of sidewalks and/or paths (115 responses)

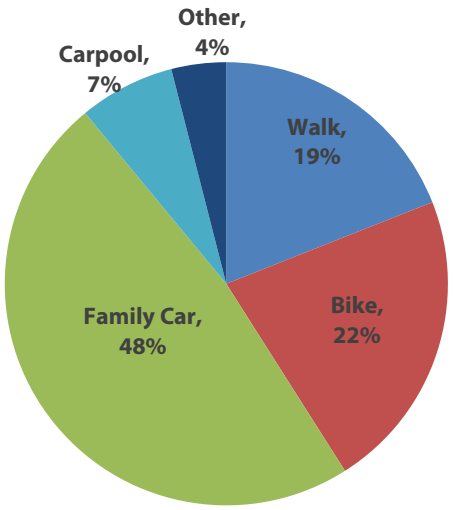


Figure E-3: Parent survey data

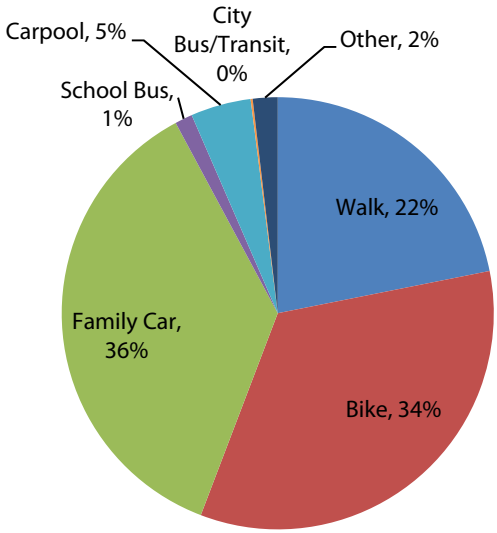


Figure E-4: Student travel tally data

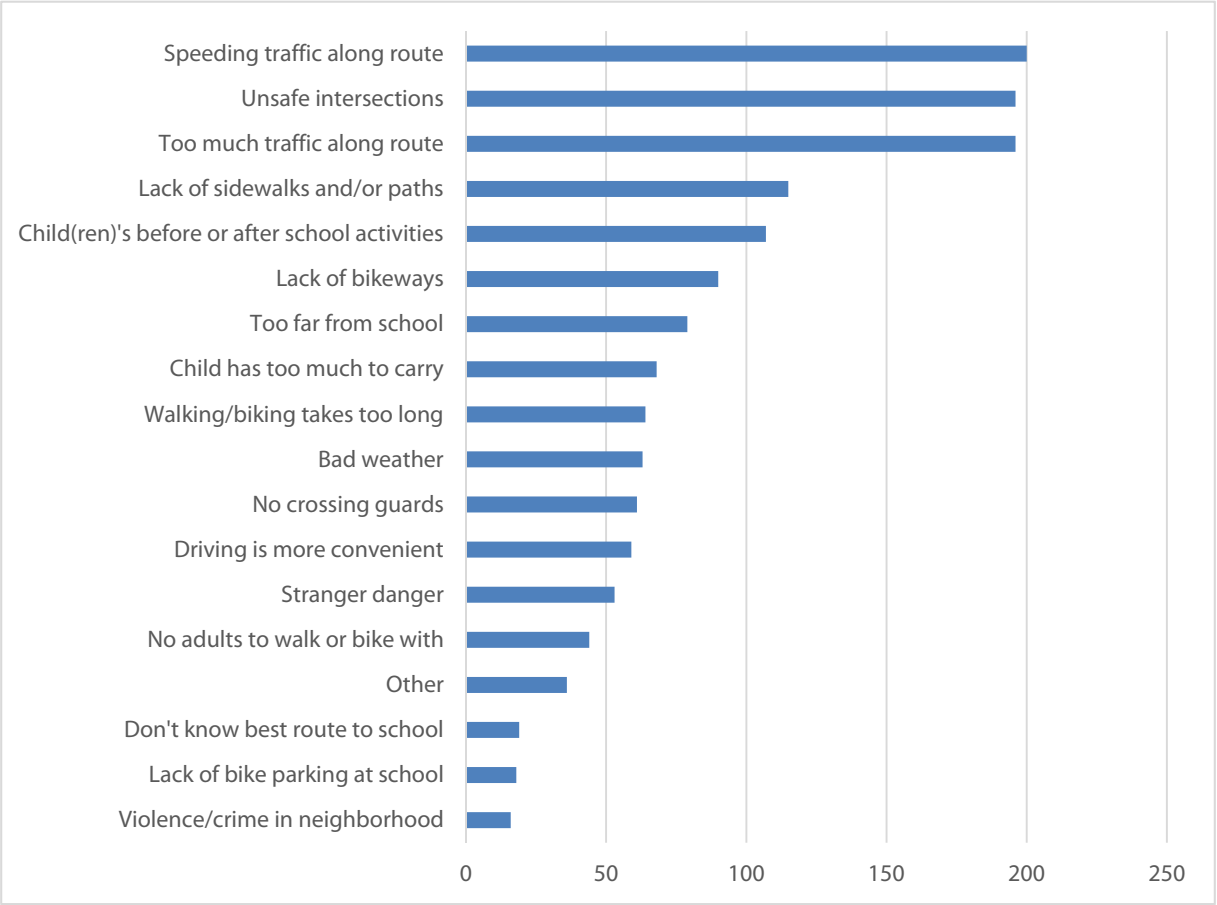


Figure E-3: Issues preventing walking or biking

Major Barriers affecting the Route to School

Parents were also asked about specific barriers affecting their child's route to school. The question asked if their child's commute required traveling across El Camino Real, Foothill Expressway, or some other major barrier. Approximately 53 percent of respondents indicated their child's commute did not require this, while 18 percent require crossing Foothill Expressway and 11 percent cross El Camino Real. Of the 'Other Major Barriers' noted, Cuesta Drive was mentioned most frequently, followed by El Monte Avenue, Grant Road, and San Antonio Road.

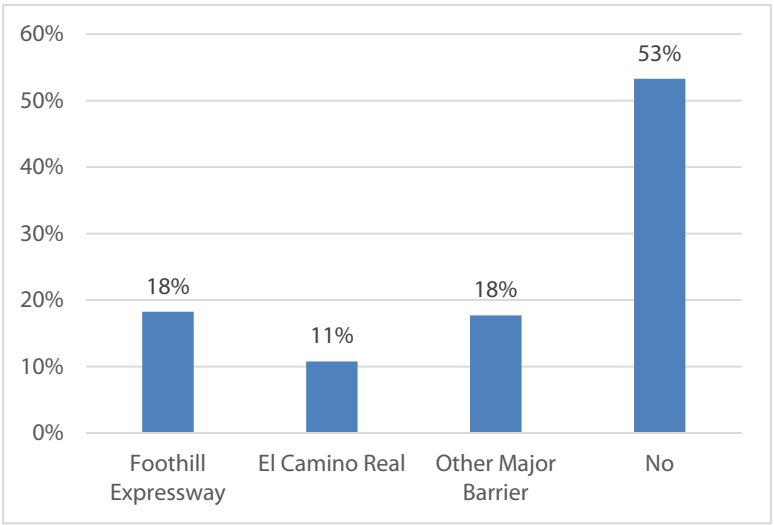


Figure E-4: Major barriers

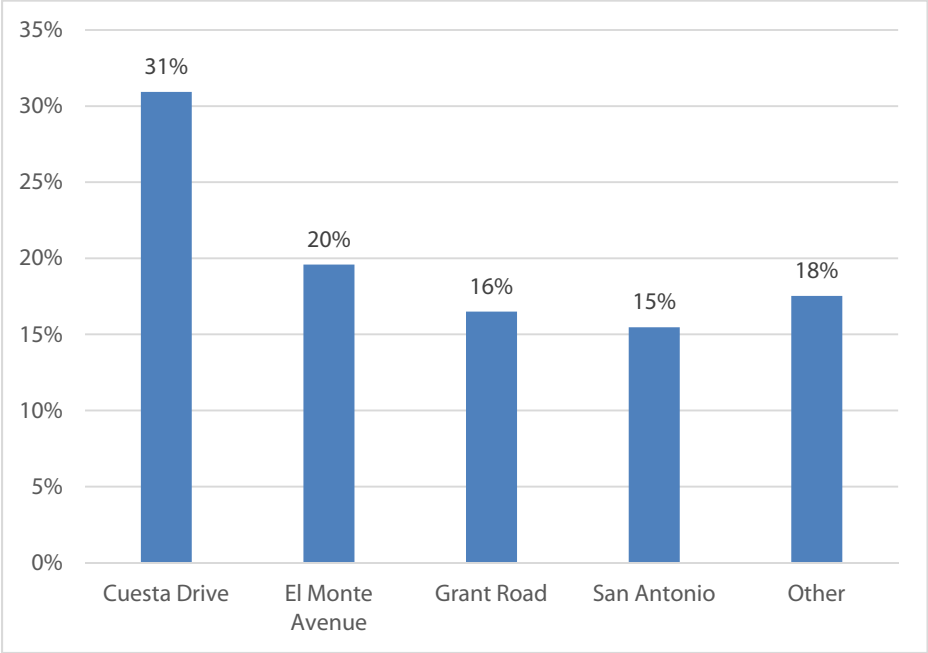


Figure E-5: Other major barriers

Effective Messaging

The survey also included a question regarding effective messaging to encourage families to walk, bike, carpool, or take transit. According to respondents, the most effective messages are those focusing on healthy lifestyles and a child's independence, as seen in **Figure E-6**. This input can play an important role in developing encouragement campaigns in Los Altos.

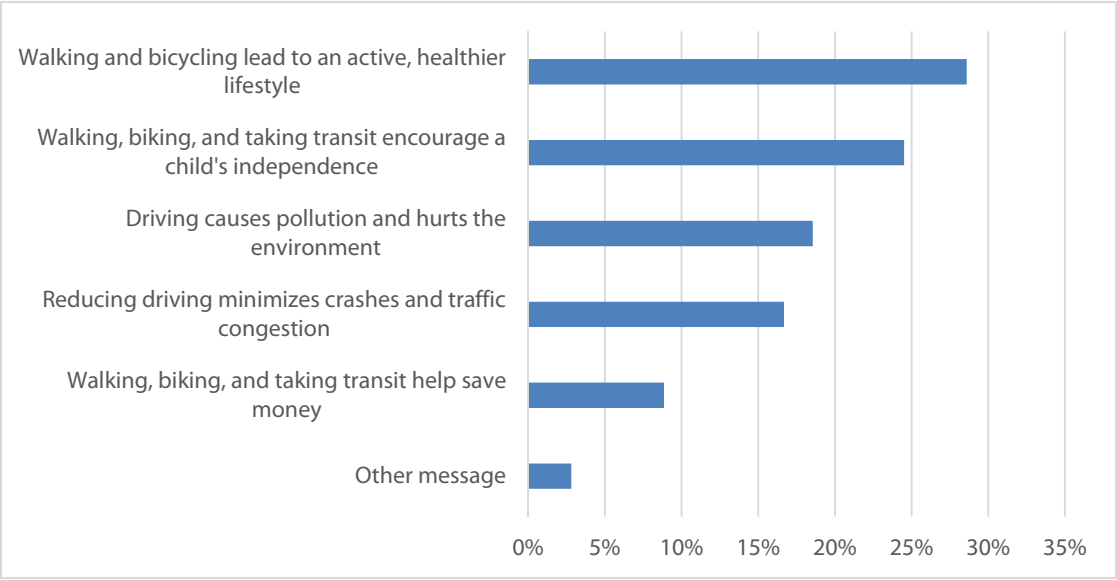


Figure E-6: Effective messaging

Recommended Infrastructure Improvements

The following section presents the recommended infrastructure improvements in school areas and the suggested walking and biking routes to school for all ten schools included in this Report. The recommendations are based on community, School District, and City Staff input gathered through:

- Walk audits at each of the elementary schools
- PTA/School Event Meetings
- Public surveys

Each school section contains a short description of the school environment, followed by a table listing reported or observed challenges and recommended improvements. The table is followed by a conceptual school improvement plan and Suggested Routes to School map.

E.2.3. Citywide Recommendations

Lowered Speed Limits

One way to address shared roadway safety is to reduce vehicle speeds, which is a considerable issue and concern for Los Altos residents, according to parent survey responses. In short, reducing vehicle speeds usually requires more than simply reducing speed limits, which at 25mph for most roadways is already reasonably low. For many of the City's collector arterial roadways, signage and markings have proven insufficient, and documented excessive speeding has created issues with legal enforcement. This is a primary reason the City has developed both a residential and collector arterial traffic calming program/plan.

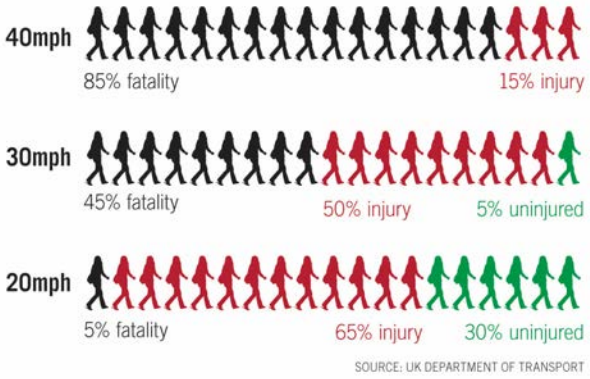


Figure E-7: Typical risk of non-motorized collision injury based on vehicle speed at impact

AB 321 – Reduced School Speed Limits

In 2008, Assembly Bill 321 went into effect in California. AB 321 expands coverage and reduces possible speed limits for conditional school speed zones. This law applies to residential streets with a total of no more than two vehicle travel lanes and an existing posted speed limit no greater than 30 mph. Speed limits within 500 feet of a school can be as low as 15 mph when children are present, and limits between 500 to 1,000 feet can be 25 mph – without the need for an approved Speed & Engineering Survey.[3] Previously, conditional school limits could not be less than 25 mph under most conditions and could not extend beyond 500 feet from a school.

Implementation of reduced school speed limits can occur on an individual site basis, but is recommended as a City-wide project due to the need for City Council resolution adopting such standards, and for tandem public education and outreach. While it remains that reduced speed limits are best combined with other traffic calming measures, AB321 offers an additional tool for promoting and enforcing lowered speed limits during times of peak use by vulnerable users.

[3] *Additional interpretation of the AB321's impacts is recommended to confirm enforcement issues.*

Recommendations

- Adopt a resolution allowing City Transportation staff to consider conditional speed limits of 15-20 mph on Suggested Routes to School corridors within 500 feet of school grounds, and 25mph conditional speed limits within 1,000 feet if applicable/advantageous for enforcement.
- Analyze 85th percentile speed limits for key school routes on local streets to supplement speed data for collector arterials

Increasing Connectivity to Schools

The current design review process for single-family residential development and reconstruction does not specifically address planned or prioritized walkway design.

Recommendations

- This Report recommends updating the current design review process to address providing logical connections to schools when developing or redeveloping in school zones.

Pedestrian Facilities near Schools

Pedestrian facilities in Los Altos vary significantly and provide a range of protection and comfort. There are currently gaps in the pedestrian network near schools in the City. Input from parents at two local schools called for sidewalks on all routes near schools, while others requested sidewalks and/or paths in specific locations. In addition, the lack of sidewalks and/or paths was identified as the third most frequent concern of parents when asked about issues that affect their decision to allow, or not allow, their students to walk or bike to/from school. Sidewalk and/or pathway recommendations have been identified for all ten schools included in this Report in order to address gaps in the network.

Recommendations

- This Report recommends adopting the following policy regarding the installation of sidewalks near schools:
    - Sidewalks and/or paths shall be installed on at least one side of existing streets on identified Suggested Routes to School.

Parking Restrictions near Schools

Parking near schools during drop-off and pick-up time can lead to increased congestion, illegal U-turns, and a lack of space for pedestrians and bicyclists traveling to school.

Recommendations

- This Report recommends adopting the parking restriction policy recommended in the Pedestrian Master Plan.

E.3. Almond Elementary School

E.3.1. School Characteristics

Almond Elementary School is a K-6 school, serving 510 students, located at 550 Almond Avenue in Los Altos. Based on student hand tallies collected spring 2014, 18 percent of students currently walk and 16 percent bike, while over half use the family vehicle. The school is located near several major streets, including San Antonio Road, El Monte Avenue, and Springer Road. Los Altos High School is located a few blocks from Almond Elementary, confounding traffic concerns at the school.

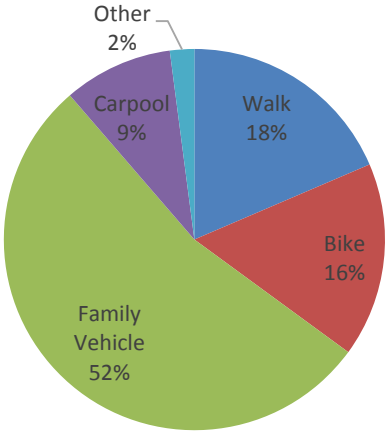


Figure E-8: Almond Elementary mode split, Spring 2014 hand tallies

E.3.2. Pedestrian/Bicycle Facilities and Access

Pedestrians and bicyclists can access the school via front and back entrances, and crossing guards assist with at the El Monte Avenue back entrance and on Almond Avenue between Verano and Clark. There is a high-visibility school crosswalk on Almond Avenue near the parking lot entrance, but it is at an uncontrolled location. There are several awkwardly aligned intersections near the back of the school on El Monte Avenue. While there is a crossing guard near the back entrance of the school, intersection improvements are needed. Pathway improvements are also needed on various routes leading to the school. Walk audit observations and recommended improvements can be found in **Table E-1**.

E.3.3. Reported Collisions

From 2009-2011, there were four collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
1	1	2	0

Figure E-9: Collisions involving pedestrians or bicyclists near Almond Elementary, 2009-2011

E.3.4. Existing SRTS Programs

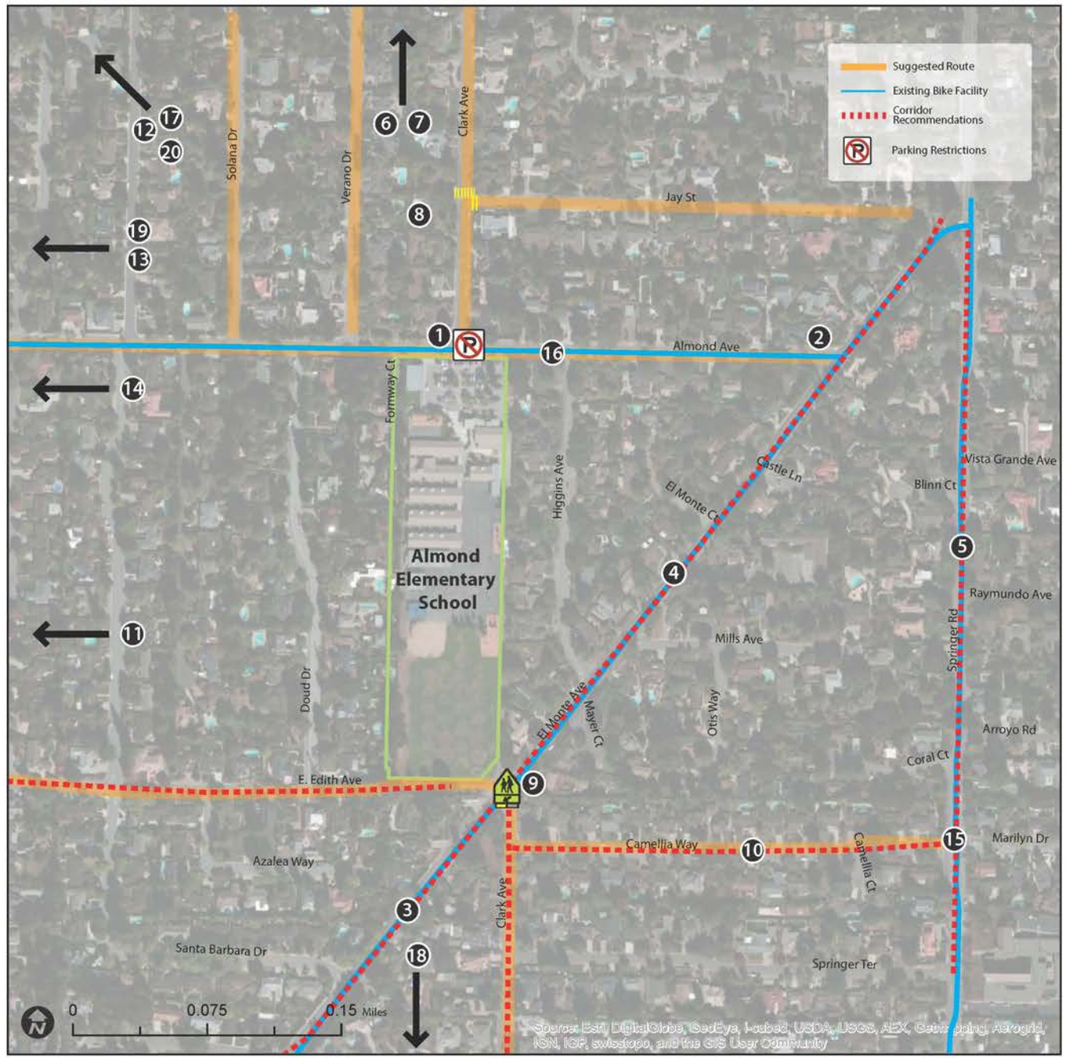
Almond Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the City, spanning from Earth Day to Bike to School Day. The school also has a Suggested Routes to School map (see **Figure E-11**), Figure E-11 and access to bike rodeos and school safety assemblies.

Table E-1: Almond Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Almond Avenue - School parking lot driveway entrance	• Parking adjacent to crosswalk impedes pedestrian visibility.	• Restrict parking adjacent to crosswalk.	City of Los Altos
2	El Monte Avenue at Almond Avenue	• Overgrown landscaping at northwest corner blocks pedestrian walkway area. • Southwest corner has wide turning radius. • School walking route with no marked crosswalk.	• Trim vegetation on northwest corner. • Reconstruct southwest corner to reduce turning radius. • Install marked crosswalk on north leg with potential enhancements such as median refuge island or actuated beacon. • Install KEEP CLEAR stencil in the intersection.	City of Los Altos
3	El Monte Avenue from Santa Barbara Drive to Clark Avenue	• Bike lane inner stripe on east side is inconsistently marked throughout the segment and parked vehicles block the bike lane. • Reported high speeds. • No pedestrian walkway on east side of roadway.	• Paint bike lane inner stripe. • Install speed feedback signs. • Review public ROW to evaluate feasibility of including pedestrian facility.	City of Los Altos
4	El Monte Avenue from Jay Street to Clark Avenue	• No pedestrian walkway on either side of the roadway.	• Review public ROW to evaluate feasibility of including pedestrian facility.	City of Los Altos
5	Springer Road from Jay Street to Springer Terrace	• Gaps in pedestrian walkway on east side. No pedestrian walkway on west side.	• Review public ROW to evaluate feasibility of including pedestrian facility.	City of Los Altos
6	Marich Way at connector to Karen Way	• Entrance to connector too narrow and blocked by a bollard.	• Widen connector entrance and remove bollard.	City of Los Altos
7	Jardin Drive from Alicia Way to Clark Avenue	• Inconsistent striping from rest of the corridor. Reported high speeds.	• Paint centerline, edge line, and Class II bike lane consistent with the adjacent segment west of Alicia Way.	City of Los Altos
8	Jay Street at North Clark Avenue	• Observed students turning left from Jay to Clark with no marked crosswalk and walking down Clark on the east side with gap in pedestrian path.	• Install marked crosswalk across Clark Ave. • Install yellow transverse crosswalk on east leg.	City of Los Altos
9	El Monte Avenue at Clark Way	• Existing high visibility crosswalk at uncontrolled location with reported noncompliance.	• Install Rapid Rectangular Flashing Beacon (RRFB).	City of Los Altos
10	Camellia Way from Clark Avenue to Springer Road	• Wide street with rolled curbs.	• Install a pedestrian walkway on the north side of the street.	City of Los Altos
11	N Gordon Way from Edith Avenue to Almond Avenue	• No pedestrian facilities.	• Install a pedestrian walkway on the east side of the street.	City of Los Altos

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
12	Casita Way from Jardin Drive to Marich Way	• No pedestrian facilities.	• Install a pedestrian walkway on the east side of the street.	City of Los Altos
13	Alicia Way from Almond Avenue to Jardin Drive	• No pedestrian facilities.	• Install a pedestrian walkway on the west side of the street.	City of Los Altos
14	Almond Avenue at N. Gordon Way	• Raised crosswalk at uncontrolled location on Almond and no marked crosswalk on Gordon.	• Install advance yield markings on Almond Ave approach. • Install yellow transverse crosswalk on Gordon Way. • Update SCHOOL XING signs on Almond Ave approach to Assembly B with down arrow.	City of Los Altos
15	Springer Road at Camellia Way	• Sweeping right turns onto Springer Road due to curb radii. Intersection has high visibility crosswalk at uncontrolled location on Springer.	• Install green street friendly curb extension.	City of Los Altos
16	Higgins Avenue at Almond Avenue	• Drivers park at the corner, making it difficult to cross.	• Paint red curb at both corners of Higgins Avenue.	City of Los Altos
17	Marich Way from Jordan Ave to Casita Way	• School walking and biking route.	• Install a pedestrian walkway as recommended in the Pedestrian Master Plan.	City of Los Altos
18	Hawthorne Ave at El Monte Ave	• Intersection is not aligned and has wide turning radii.	• Reconfigure curb radii at four corners per Pedestrian Master Plan.	City of Los Altos
19	San Antonio Road from Almond Avenue to El Camino Real	• Sidewalk damage due to tree roots, overgrown vegetation impedes walkway. • Community identified need for wider sidewalk.	• Repair sidewalk damage and consider widening sidewalk. • Trim vegetation.	City of Los Altos
20	Sherwood Avenue from San Antonio Road to El Camino Real	• Sidewalk gaps on the south side.	• Install sidewalk on the south side to close gaps.	City of Los Altos

Almond Elementary School



Improvement Recommendations

1. **Almond Avenue - School parking lot driveway entrance**
   a. Restrict parking adjacent to crosswalk.
2. **El Monte Avenue at Almond Avenue**
   a. Trim vegetation on northwest corner.
   b. Reconstruct southwest corner to reduce turning radius.
   c. Install marked crosswalk on north leg with potential enhancements such as median refuge island or actuated beacon.
   d. Install KEEP CLEAR stencil in the intersection.
3. **El Monte Avenue from Santa Barbara Drive to Clark Avenue**
   a. Paint bike lane inner stripe.
   b. Install speed feedback signs.
   c. Review public ROW to evaluate feasibility of including pedestrian facility.
4. **El Monte Avenue from Jay Street to Clark Avenue**
   a. Review public ROW to evaluate feasibility of including pedestrian facility.
5. **Springer Road from Jay Street to Springer Terrace**
   a. Review public ROW to evavluate feasibility of including pedestrian facility.
6. **Marich Way at connector to Karen Way**
   a. Widen connector entrance and remove bollard.
7. **Jardin Drive from Alicia Way to Clark Avenue**
   a. Paint centerline, edge line, and Class II bike lane.
8. **Jay Street at North Clark Avenue**
   a. Install marked crosswalk across Clark Ave.
   b. Install yellow transverse crosswalk on east leg.
9. **El Monte Avenue at Clark Way**
   a. Install Rapid Rectangular Flashing Beacon (RRFB)
10. **Camellia Way from Clark Avenue to Springer Road**
    a. Install a pedestrian walkway on the north side of the street.
11. **N Gordon Way from Edith Avenue to Almond Avenue**
    a. Install a pedestrian walkway on the east side of the street.
12. **Casita Way from Jardin Drive to Marich Way**
    a. Install a pedestrian walkway on the east side of the street.
13. **Alicia Way from Almond Avenue to Jardin Drive**
    a. Install a pedestrian walkway on the west side of the street.
14. **Almond Avenue at N. Gordon Way**
    a. Install advance yield markings on Almond Ave approach.
    b. Install yellow transverse crosswalk on Gordon Way.
    c. Update SCHOOL XING signs on Almond Ave approach to Assembly B with down arrow.
15. **Springer Road at Camellia Way**
    a. Install green street friendly curb extension.
16. **Higgins Avenue at Almond Avenue**
    a. Paint red curb at both corners of Higgins Avenue.
17. **Marich Way from Jordan Ave to Casita Way**
    a. Install a pedestrian walkway as recommended in the Pedestrian Master Plan.
18. **El Monte Ave at Hawthorne Ave**
    a. Reconfigure curb radii at four corners per Pedestrian Master Plan.
19. **San Antonio Road from Almond Ave to El Camino Real**
    a. Repair sidewalk damage and consider widening.
    b. Trim vegetation.
20. **Sherwood Ave from San Antonio Road to El Camino Real**
    a. Install sidewalk on south side to close gaps.

Figure E-10: Almond Elementary School improvement plan

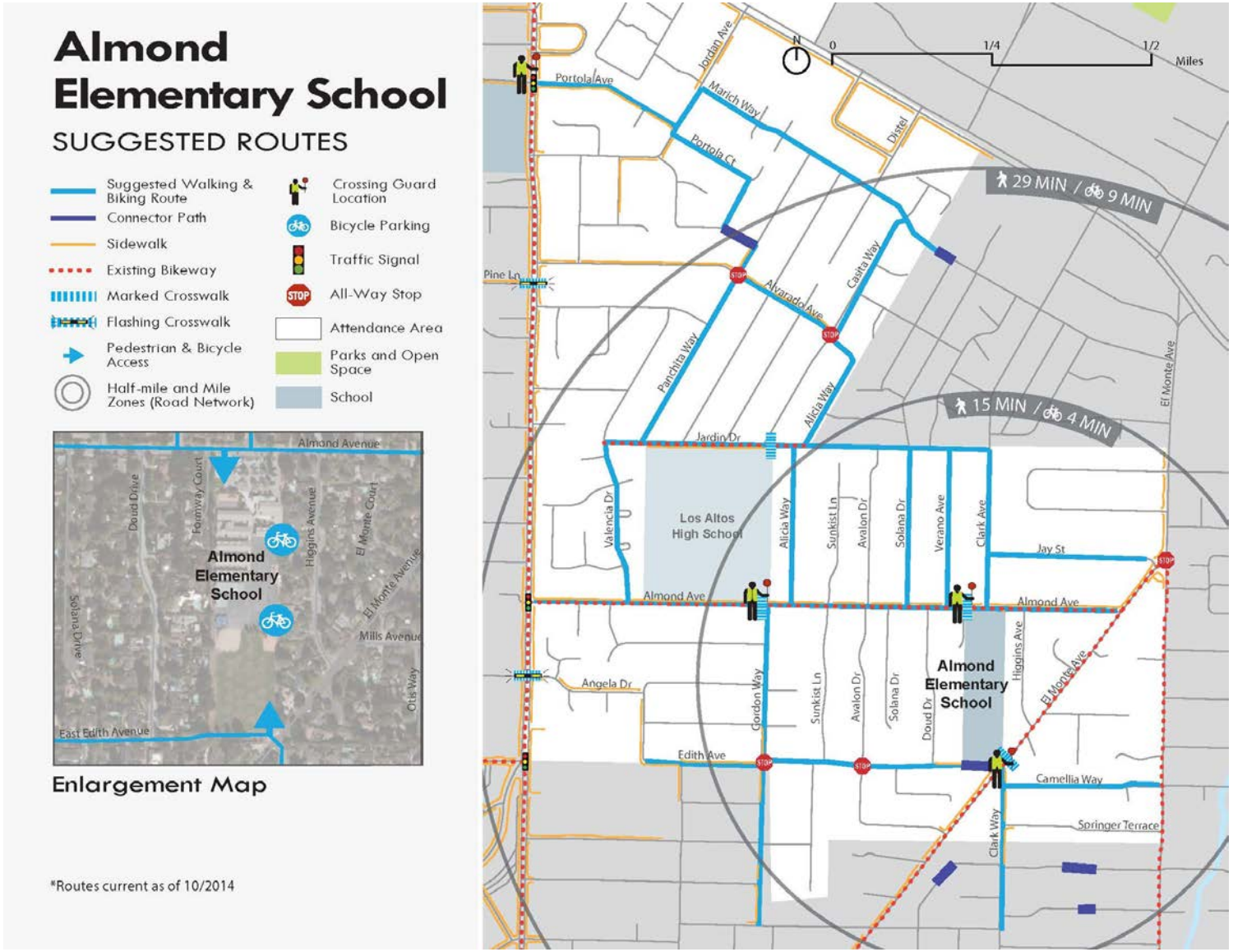


Figure E-11: Almond Elementary Suggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.

Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Almond Elementary School

Figure E-12: Almond Elementary Suggested Routes to School map, back

E.3. Loyola Elementary School

E.3.1. School Characteristics

Loyola Elementary School is a K-6 school, serving 542 students, located at 770 Berry Avenue in Los Altos. Based on student hand tallies collected spring 2014, 27 percent of students currently walk and 19 percent bike. The school is located near Foothill Expressway and its attendance boundaries extend across Foothill, on the west side of Loyola Elementary. There are several parks within walking distance, presenting the opportunity to establish park and walk sites for students who live too far from their school to walk or bicycle.

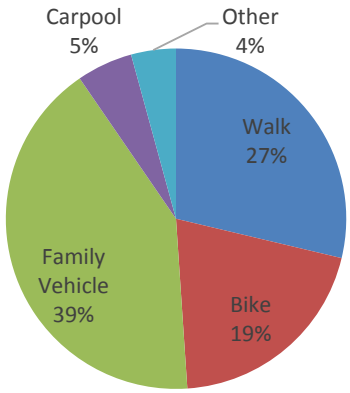


Figure E-13: Loyola Elementary mode split, Spring 2014 hand tallies

E.3.2. Pedestrian/Bicycle Facilities and Access

There is only one access point to the school, causing pedestrians and bicyclists to enter campus near vehicular traffic. There are high visibility school crosswalks on Berry Avenue along the school frontage, and marked crosswalks across the two parking lot driveways. Pathway and striping improvements are recommended on various routes leading to the school. Walk audit observations and recommended improvements can be found in **Table E-2**.

E.3.3. Reported Collisions

From 2009-2011, there were six collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
0	0	1	5

Figure E-14: Collisions involving pedestrians or bicyclists near Loyola Elementary, 2009-2011

E.3.4. Existing SRTS Programs

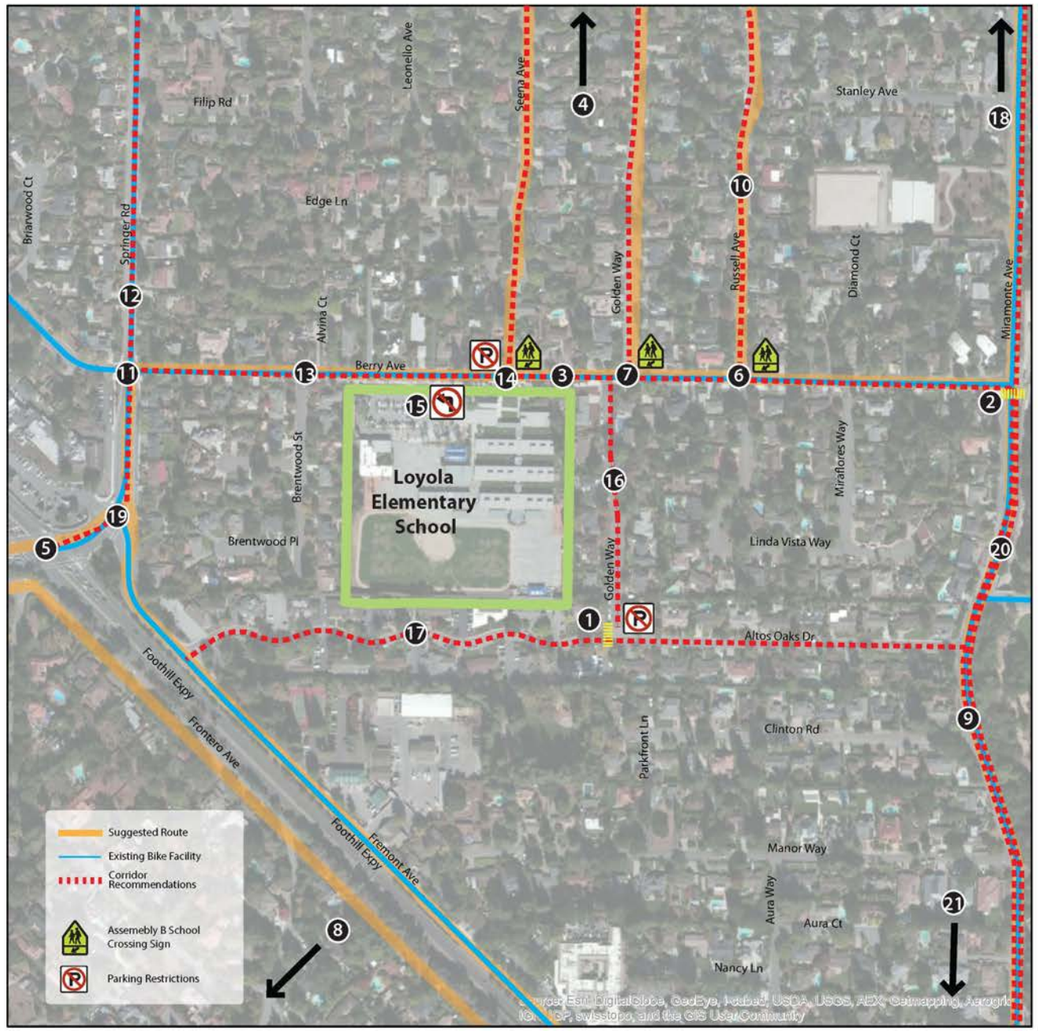
Loyola Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the City, spanning from Earth Day to Bike to School Day. Loyola was awarded as most improved after the 2013 contest. The school also has a Suggested Routes to School map (see **Figure E-11**) and access to bike rodeos and school safety assemblies.

Table E-2: Loyola Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Golden Way at Altos Oaks Drive	• Parents park in the intersection, forcing pedestrians into the street. • School walking route.	• Restrict parking at northeast and northwest corners as well as at the T of Golden Way. • Install high visibility crosswalk on west leg.	City of Los Altos
2	Berry Avenue at Miramonte Avenue	• Difficult to see north from westbound Berry due to fence and angled crosswalk.	• Realign southwest corner to align with northwest corner. • Install high visibility crosswalk on south leg of Miramonte Avenue, with potential enhancements such as a median refuge or actuated beacon	City of Los Altos
3	Berry Avenue from Springer Road to Miramonte Avenue	• Reported high speeds.	• Stripe centerline along segment.	City of Los Altos
4	Covington Road from Riverside Drive to Miramonte Avenue	• Limited pedestrian facilities.	• Review public ROW to evaluate feasibility of including pedestrian walkway.	City of Los Altos
5	Foothill Expressway at Magdalena Avenue/Springer Road	• Challenging for pedestrians and bicyclists coming from Magdalena through Fremont. • Non-standard pedestrian queuing area at convergence of 3 crosswalks.	• Stripe the bike lane through the intersection. • Install pedestrian refuge island. • Consider providing a crossing guard at this intersection.	City of Los Altos
6	Berry Ave at Russell Ave	• Key crossing area with two of four crossings uncontrolled.	• Update Berry Ave SCHOOL XING signs to Assembly B with down arrow.	City of Los Altos
7	Golden Way at Berry Avenue	• Truncated domes are missing. • Key crossing area with two of four crossings uncontrolled.	• Install truncated domes to bring ramps into ADA compliance. • Update Berry Ave SCHOOL XING signs to Assembly B.	City of Los Altos
8	Magdalena Avenue from Summerhill Avenue to I-280	• No stop sign south of Summerhill. • Wide road, reported high speeds.	• Conduct a stop warrant analysis at Hillview Road. • Conduct a road diet feasibility study for Magdalena Ave.	City of Los Altos
9	Miramonte Avenue from Berry Avenue to Loyola Drive	• Students bike on the wrong side of street (school side) due to high traffic.	• Install Class II bike lane per the Bicycle Transportation Plan.	City of Los Altos
10	Russell Avenue from Covington Road to Berry Avenue	• No pedestrian facilities.	• Install pedestrian walkway on west side of the street.	City of Los Altos

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
11	Springer Road at Berry Avenue	• Vehicle queues block traffic. • Truncated domes are missing on south leg curb ramps.	• Consider signal warrant analysis to improve traffic flow. • Install truncated domes on southeast and southwest corners.	City of Los Altos
12	Springer Road from Covington Road to Foothill Expressway	• Narrow/obstructed right-of-way, gaps in pedestrian facilities.	• Install sidewalks on both sides of the street.	City of Los Altos
13	Berry Avenue at Brentwood Street	• Community members expressed concern about bulbout at this intersection.	• Paint curb red.	City of Los Altos
14	Berry Avenue in front of the school	• Pedestrian visibility is obstructed by vehicles parked near the crosswalks.	• Prohibit parking adjacent to crosswalk on Berry Avenue. • Update Berry Ave SCHOOL XING signs to Assembly B. • Paint curb red.	City of Los Altos
15	Loyola Elementary Drop Off Loop	• Cars turning left onto Berry Ave during drop off and pick up add to the congestion and community safety concerns.	• Restrict left turns out of the Loyola Elementary drop off loop during drop off and pick up times.	Los Altos School District
16	Golden Way from Berry Ave to Altos Oaks Drive	• Students travel north on Golden Way but there are no pedestrian facilities.	• Review public ROW to evaluate feasibility of including pedestrian facility.	City of Los Altos
17	Altos Oaks Drive from Fremont Avenue to Miramonte Avenue	• No pedestrian facilities.	• Review public ROW to evaluate feasibility of including sidewalks on Altos Oaks.	City of Los Altos
18	Covington Road at Miramonte Avenue	• School walking route.	• Install curb extensions per Pedestrian Master Plan.	City of Los Altos
19	Springer Rd at Fremont Ave	• School walking route.	• Reconfigure northbound approach to Springer per Pedestrian Master Plan.	City of Los Altos
20	Miramonte Ave from Alegre Ave to Loraine Ave	• School walking route.	• Install multi-use path per Pedestrian Master Plan.	City of Los Altos
21	Loyola Drive/A Street at Frontero Ave/Granger Ave/Foothill Expressway ramps	• School walking route.	• Realign intersection for access to Loyola Corners per Pedestrian Master Plan.	City of Los Altos

Loyola Elementary School



Improvement Recommendations

1. **Golden Way at Altos Oaks Drive**
   a. Restrict parking at northeast and northwest corners.
   b. Install high visibility crosswalks on west leg.
2. **Berry Avenue at Miramonte Avenue**
   a. Realign southwest corner to align with northwest corner.
   b. Install high visibility crosswalk on south leg of Miramonte Avenue, with potential enhancements such as a median refuge or actuated beacon.
3. **Berry Avenue from Springer Road to Miramonte Avenue**
   a. Stripe centerline along segment.
4. **Covington Road from Riverside Drive to Miramonte Avenue**
   a. Review public ROW to evaluate feasibility of including pedestrian walkway.
5. **Foothill Expressway at Magdalena Avenue/Springer Road**
   a. Stripe the bike lane through the intersection.
   b. Install pedestrian refuge island.
   c. Consider providing a crossing guard at this intersection.
6. **Russell Avenue at Berry Avenue**
   a. Update Berry Ave SCHOOL XING signs to Assembly B with down arrow.
7. **Golden Way at Berry Avenue**
   a. Install truncated domes to bring ramps into ADA compliance.
   b. Update Berry Ave SCHOOL XING signs to Assembly B.
8. **Magdalena Avenue from Summerhill Avenue to I-280**
   a. Conduct a stop warrant analysis at Hillview Road.
   b. Conduct a road diet feasibility study for Magdalena.
9. **Miramonte Avenue from Berry Avenue to Loyola Drive**
   a. Install Class II bike lane per Bicycle Transportation Plan.
10. **Russell Avenue from Covington Road to Berry Avenue**
    a. Install a pedestrian walkway on the west side of the street.
11. **Springer Road at Berry Avenue**
    a. Consider signal warrant analysis to improve traffic flow.
    b. Install truncated domes on southeast and southwest corners.
12. **Springer Road from Covington Road to Foothill Expressway**
    a. Install sidewalks on both sides of the street.
13. **Berry Avenue at Brentwood Street**
    a. Paint curb red.
14. **Berry Avenue in front of the school**
    a. Prohibit parking adjacent to the crosswalk on Berry Avenue.
    b. Update Berry Ave SCHOOL XING signs to Assembly B with down arrow.
15. **Loyola Elementary Drop Off Loop**
    a. Restrict left turns out of the Loyola Elementary drop off loop.
16. **Golden Way from Berry Ave to Altos Oaks Drive**
    a. Review public ROW to evaluate feasibility of including pedestrian walkway.
17. **Altos Oaks Drive from Fremont Avenue to Miramonte Avenue**
    a. Review public ROW to evaluate feasibility of including sidewalks on Altos Oaks.
18. **Covington Road at Miramonte Avenue**
    a. Install curb extensions per Pedestrian Master Plan.
19. **Springer Rd at Fremont Ave**
    a. Reconfigure northbound approach to Springer.
20. **Miramonte Ave from Alegre Ave to Loraine Ave**
    a. Install multi-use path per Pedestrian Master Plan.
21. **Loyola Drive/A Street at Frontero Ave/Granger Ave/Foothill Expressway ramps**
    a. Realign intersection for access to Loyola Corners per Pedestrian Master Plan.

Figure E-15: Loyola Elementary School improvement plan

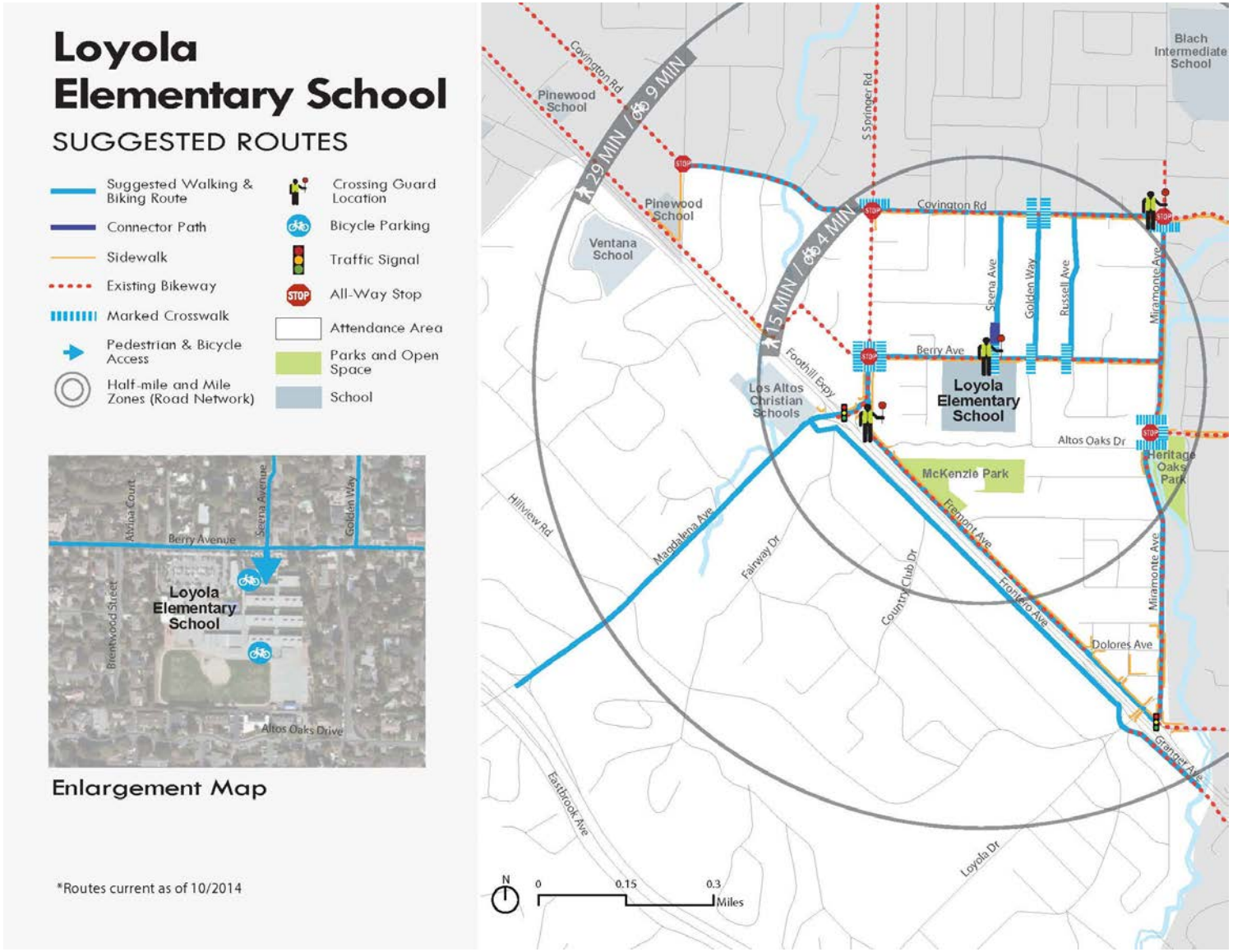


Figure E-16: Loyola Elementary Suggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.

Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Loyola Elementary School

Figure E-17: Loyola Elementary Suggested Routes to School map, back

E.4. Gardner Bullis Elementary School

E.4.1. School Characteristics

Gardner Bullis Elementary School is a K-6 school, serving 318 students, located at 25890 Fremont Road in Los Altos. Based on student hand tallies collected spring 2014, 13 percent of students currently walk and 10 percent bike. The school has a lower active transportation mode share than other elementary schools in the city as it is located in a hilly area on the border with Los Altos Hills. Park and walk sites can be an integral part of increasing walking to the school for students who live too far to walk.

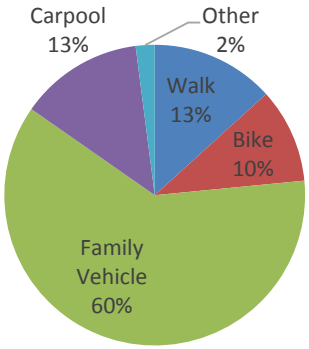


Figure E-18: Gardner Bullis Elementary mode split, Spring 2014 hand tallies

E.4.2. Pedestrian/Bicycle Facilities and Access

Gardner Bullis can be accessed by pedestrians and bicyclists through the front or back of the school, although the back access is difficult for bikes as it is unpaved and hilly. The majority of students come from east of the school, aided by a crossing guard at Edith Avenue and Foothill Expressway. Pathways on Fremont Road along the route to school switch between the north and south sides of the street, forcing students to cross, primarily at Campo Vista Lane. Pedestrians could benefit from clear instructions about where to walk and where to cross when coming from the east. There are high visibility school crosswalks marked to the east and west of the school parking lot, but not directly in front of the driveway. During the walk audit, the crosswalk to the west appeared to be hidden in the shade of large trees, but debriefing interviews indicated that it functioned well for the school. Additional walk audit observations and recommended improvements can be found in **Table E-3**.

E.4.3. Reported Collisions

From 2009-2011, there were two collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
0	0	0	2

Figure E-19: Collisions involving pedestrians or bicyclists near Gardner Bullis Elementary, 2009-2011

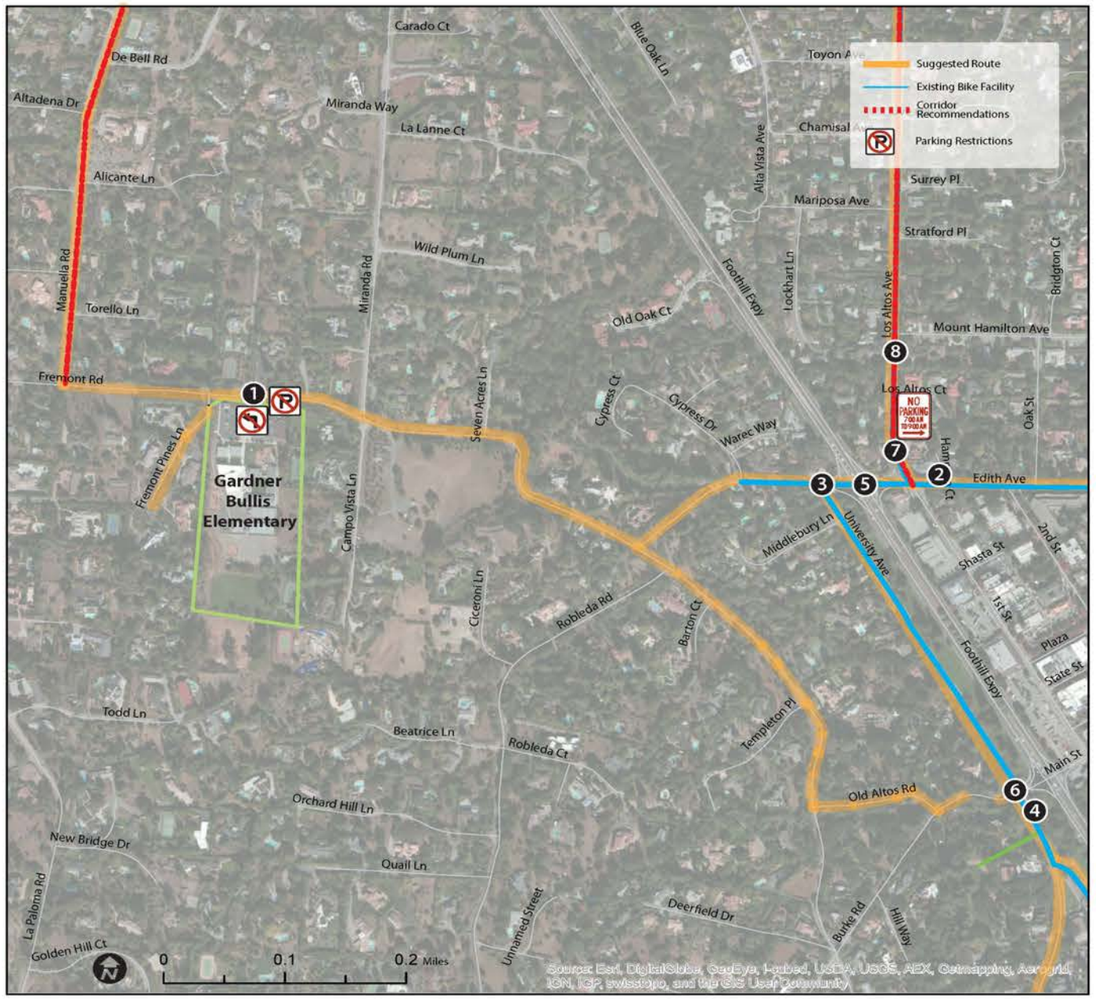
E.4.4. Existing SRTS Programs

Gardner Bullis Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. The school also has a Suggested Routes to School map (see **Figure E-21**) and access to bike rodeos and school safety assemblies.

Table E-3: Gardner Bullis Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Fremont Road - school parking lot	• Left turns out of parking lot are challenging and pose conflicts with turning movements into the parking lot. • Vehicles parked on the south side of Fremont just east of the parking lot entrance were observed making u turns to head west on Fremont.	• Consider prohibiting left turns during drop off/pick up times. • Restrict parking on south side of Fremont at this location.	Los Altos School District
2	Edith Avenue near Hampton Court	• Landscaping impedes pedestrian travel.	• Trim vegetation.	City of Los Altos
3	Edith Avenue curve/bridge area	• Drainage grates on bridge reported to need replacement.	• Maintain/replace grates.	City of Los Altos/Los Altos Hills
4	University Avenue at Edith Avenue	• Crossing location for students coming down University and turning onto Edith is unclear, with no marked crosswalk and awkwardly aligned intersection.	• Study potential marked crosswalk including enhancements such as median refuge or actuated beacon	City of Los Altos
5	University Avenue at Los Altos Chamber of Commerce driveway	• Vegetation blocks sidewalk.	• Trim vegetation.	City of Los Altos
6	Foothill Expressway at W Edith Ave and First Street	• Free right turn from westbound Edith to Foothill Expressway is concerning to parents	• Reclaim multiple slip lanes per Pedestrian Master Plan.	City of Los Altos
7	University Avenue at Burke Road	• Free right turn onto Burke, drivers reportedly not looking for students walking or biking.	• Study potential marked crosswalk including enhancements such as median refuge or RRFB.	City of Los Altos
8	Manuella Road pathway	• Pathway along Manuella needs ADA access to better accommodate wheelchairs and bikes.	• Install ADA compliant curb ramps along the Manuella Road pathway.	Los Altos Hills
9	Fremont Road at Fremont Pines Lane	• Existing crosswalk on Fremont Road is difficult for drivers to see Community reported driver noncompliance.	• Study potential marked crosswalk including enhancement such as median refuge or actuated beacon	Los Altos Hills
10	Los Altos Avenue from El Camino Real to Edith Avenue	• School walking and biking route.	• Restrict parking on Los Altos Avenue from 7:00am-9:00am on weekdays to allow parking lane to be used by bicyclists.	City of Los Altos
11	Los Altos Avenue from Yerba Buena to W. Edith Avenue	• No pedestrian facilities.	• Install path improvements.	City of Los Altos

Gardner Bullis Elementary School



Improvement Recommendations

1. **Fremont Road - School parking lot**
   a. Prohibit left turns out of parking lot during drop off/pick up times.
   b. Restrict parking on south side of Fremont Road.

2. **Edith Avenue near Hampton Court**
   a. Trim vegetation.

3. **University Avenue at Edith Avenue**
   a. Study potential marked crosswalk including enhancements such as median refuge or actuated beacon

4. **University Avenue at Los Altos Chamber of Commerce driveway**
   a. Trim vegetation.

5. **Foothill Expressway at W Edith Ave and First Street**
   a. Reclaim multiple slip lanes per Pedestrian Master Plan.

6. **University Avenue at Burke Road**
   a. Study potential marked crosswalk including enhancements such as median refuge

7. **Los Altos Avenue from El Camino Real to Edith Avenue**
   a. Restrict parking on Los Altos Avenue from 7:00am-9:00am on weekdays to allow parking lane to be used by bicyclists.

8. **Los Altos Avenue from Yerba Buena Avenue to W. Edith Avenue**
   a. Install path improvements.

Figure E-20: Gardner Bullis Elementary School improvement plan

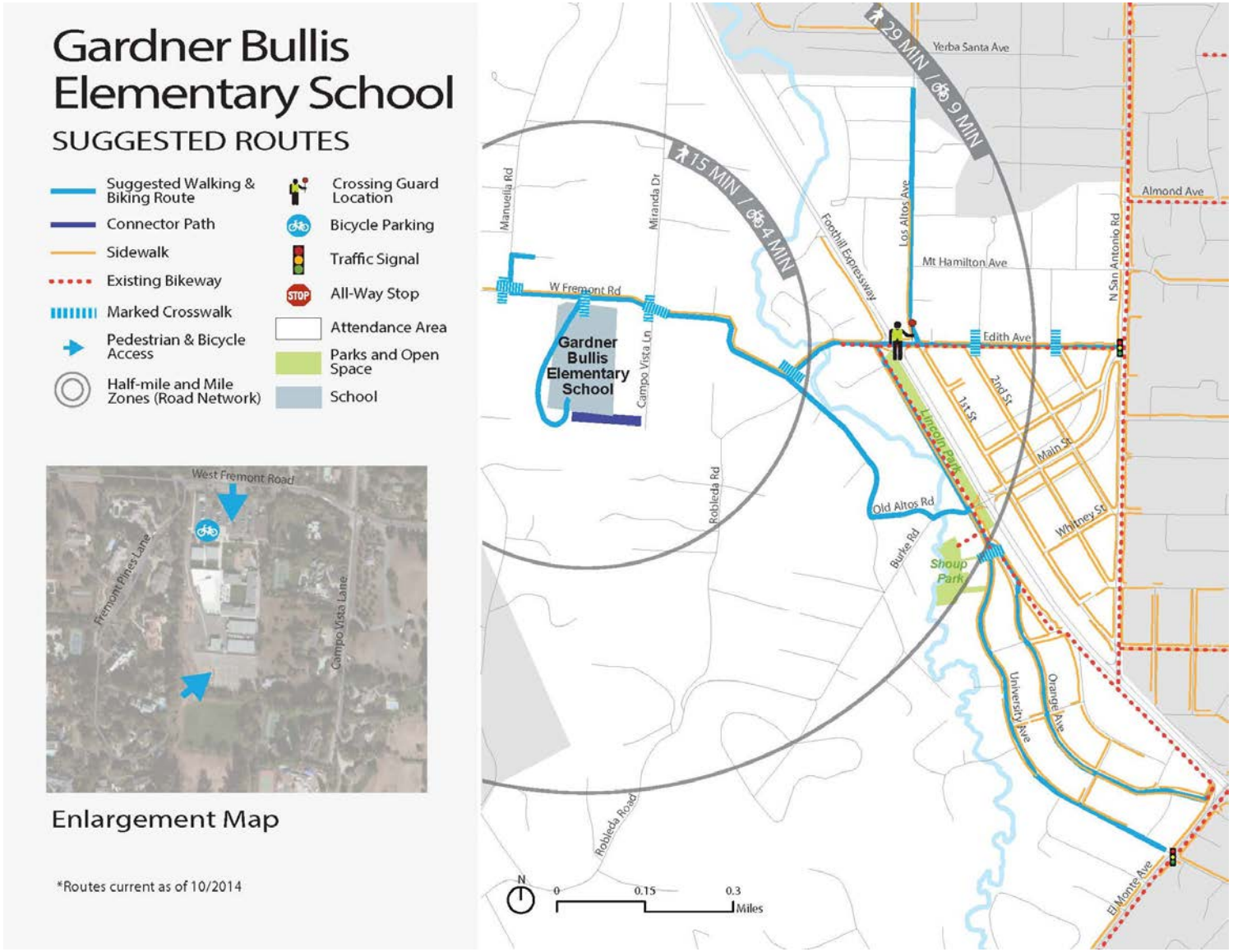


Figure E-21: Gardner Bullis Elementary School Suggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.

Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Gardner Bullis Elementary School

Figure E-22: Gardner Bullis Elementary School Suggested Routes to School map, back

E.5. Oak Avenue Elementary

E.5.1. School Characteristics

Oak Avenue Elementary School is a K-6 school, serving 506 students, located at 1501 Oak Avenue in Los Altos. Based on student hand tallies collected spring 2014, 19 percent of students currently walk and 27 percent bike. Oak Avenue Elementary is a neighborhood school, but its close proximity to both Blach Junior High and Mountain View High School causes major traffic congestion during drop-off and pick-up times, specifically on Truman Avenue. There are several locations where parents are operating informal park and walk sites, including Chelsea Drive and Marlbarough Avenue.

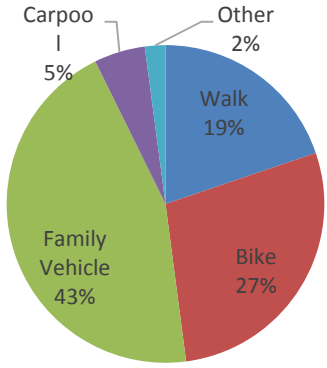


Figure E-23: Oak Ave Elementary mode split, Spring 2014 hand tallies

E.5.2. Pedestrian/Bicycle Facilities and Access

Oak Avenue Elementary can be accessed by pedestrians and bicyclists through the Oak Avenue frontage or via a path from Ridgemont Drive to the back entrance of the school. There is a marked crosswalk at the front of the school, and two crossing guards, one at Grant Road and Oak Avenue, and the other in front of the school at Marlbarough and Oak Avenues. The pathways on Oak Avenue leading up to the school are difficult for wheelchairs and strollers to navigate, as they are punctuated with utility poles and large trees. Additional walk audit observations and recommended improvements can be found in **Table E-4**.

E.5.3. Reported Collisions

From 2009-2011, there were two collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
0	1	0	1

Figure E-24: Collisions involving pedestrians or bicyclists near Oak Ave Elementary, 2009-2011

E.5.4. Existing SRTS Programs

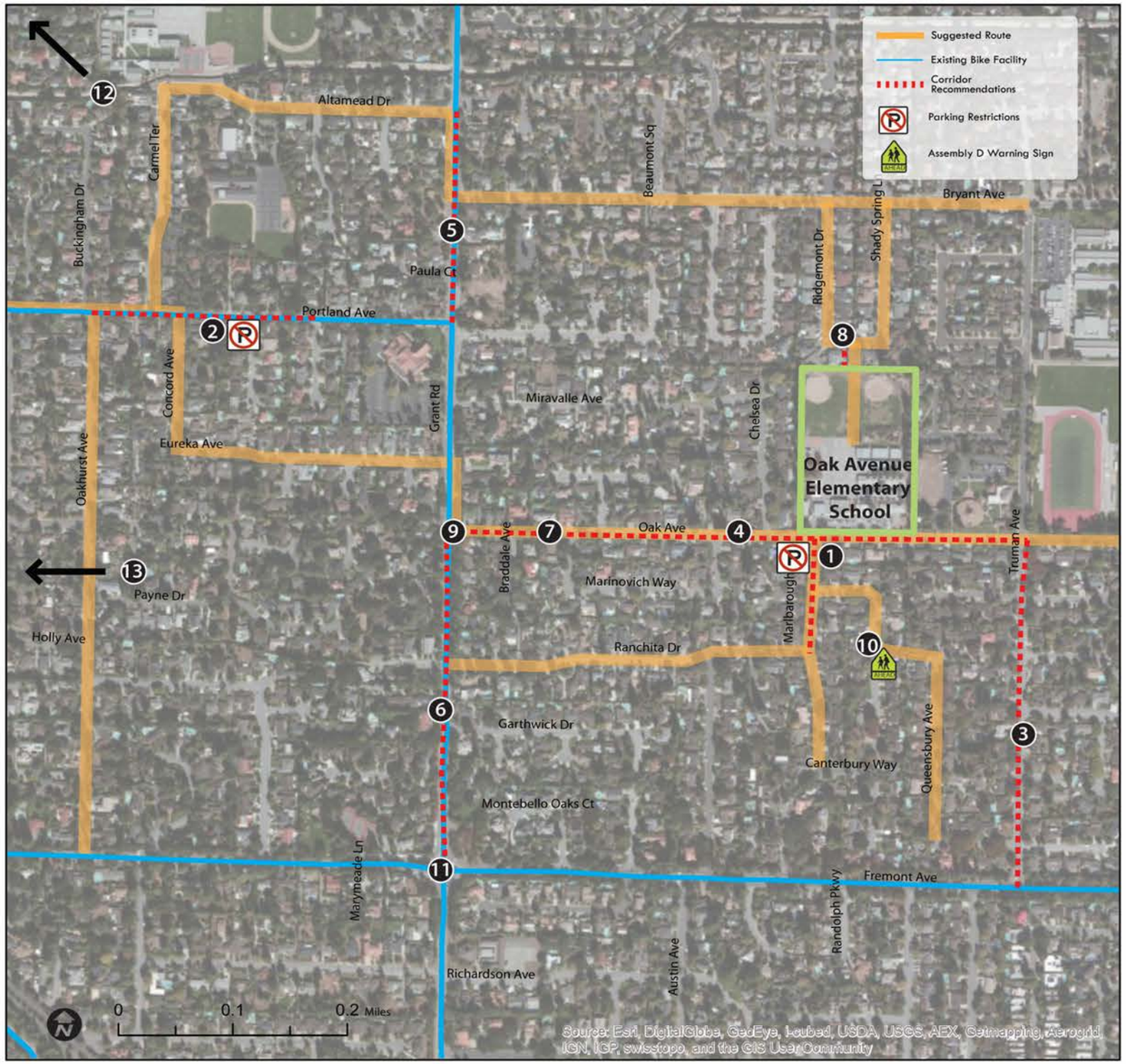
Oak Avenue Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. Oak Elementary won the 'Greenest Elementary School' award in 2013. The school also has a Suggested Routes to School map (see **Figure E-26**) and access to bike rodeos and school safety assemblies.

Table E-4: Oak Avenue Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Marlbarough Avenue from Oak Avenue to Ranchita Drive	• Walking route to school but no pedestrian facilities on a narrow roadway.	• Prohibit on-street parking on the west side of Marlbarough during school drop-off and pick-up times.	City of Los Altos
2	Portland Avenue from Buckingham to Carvo Court	• South side of Portland Ave does not have pedestrian or bikeway facilities. • Parked cars and trash bins block pedestrian access on the unimproved area outside the travel lane.	• Prohibit on-street parking on the south side of Portland Ave during school drop-off and pick-up times. • Install sidewalk.	City of Los Altos
3	Truman Avenue from Oak Avenue to Fremont Avenue	• No pedestrian facilities. • Community reported high vehicle speeds.	• Install a pedestrian walkway on the west side of the street.	City of Los Altos
4	Oak Avenue from Grant Road to Truman Avenue	• Community reported high vehicle speeds (eastbound), even with existing raised high visibility crosswalk.	• Stripe centerline along the Oak Ave corridor.	City of Los Altos
5	Grant Road from Altamead Drive to Portland Avenue	• No pedestrian facilities.	• Install a pedestrian walkway on the west side of the street.	City of Los Altos
6	Grant Road from Oak Avenue to Fremont Avenue	• No pedestrian facilities.	• Install a pedestrian walkway on the west side of the street.	City of Los Altos
7	Oak Avenue from Grant Road to Marinovich Way	• Large oak trees on north side of Oak impede pedestrian travel.	• Install pedestrian walkway on north side of street, requires tree preservation per Pedestrian Master Plan.	City of Los Altos
8	Oak Elementary back entrance	• The path is used by students but is not paved and gets muddy.	• Pave the path at the back entrance of the school and around the field onto campus.	Los Altos School District
9	Oak Avenue at Grant Road	• The light at Grant and Oak has cycles of green for cars before light turns for pedestrians/bikes, causing bikes and pedestrians to stack at the intersection	• Evaluate signal timing to provide more frequent walk phases.	City of Los Altos
10	Wessex Avenue at connector path to Queensbury Avenue	• No signage to alert drivers that bikes may be riding onto Wessex Ave from the connector path.	• Install Assembly D warning sign on Wessex Ave. • Install flexible bollard at entrance to connector path.	City of Los Altos
11	Grant Road at Fremont Avenue	• School walking and biking route at frequently used intersection.	• Conduct a count to determine eligibility for crossing guard.	City of Los Altos
12	Covington Road at Miramonte Avenue	• School walking route.	• Construct curb extensions per Pedestrian Master Plan.	City of Los Altos

13	Miramonte Ave from Alegre Ave to Loraine Ave	• School walking route that lacks pedestrian facilities.	• Install multi-use path per Pedestrian Master Plan.	City of Los Altos

Oak Avenue School



Improvement Recommendations

1. **Marlbarough Avenue from Oak Avenue to Ranchita Drive**
   a. Prohibit on-street parking on the west side of Marlbarough during school arrival and dismissal times.
2. **Portland Avenue from Buckingham to Carvo Court**
   a. Prohibit on-street parking on the south side of Portland Ave during school arrival and dismissal times.
   b. Install sidewalk.
3. **Truman Avenue from Oak Avenue to Fremont Avenue**
   a. Install a pedestrian walkway on the west side of the street.
4. **Oak Avenue from Grant Road to Truman Avenue**
   a. Stripe centerline.
5. **Grant Road from Altamead Drive to Portland Avenue**
   a. Install a pedestrian walkway on the west side of the street.
6. **Grant Road from Oak Avenue to Fremont Avenue**
   a. Install a pedestrian walkway on the west side of the street.
7. **Oak Avenue from Grant Road to Marinovich Way**
   a. Install pedestrian walkway on north side of street; requires tree preservation per Pedestrian Master Plan.
8. **Oak Elementary back entrance**
   a. Pave the path at the back entrance of the school and around the field onto campus.
9. **Oak Avenue at Grant Road**
   a. Evaluate signal timing to provide more frequent walk phases.
10. **Wessex Avenue at connector path to Queensbury Avenue**
    a. Install Assembly D warning sign on Wessex Ave
    b. Install flexible bollard at the entrance to the connector path.
11. **Grant Road at Fremont Avenue**
    a. Consider conducting a count to determine eligibility for crossing guard.
12. **Covington Road at Miramonte Avenue**
    a. Construct curb extensions per Pedestrian Master Plan.
13. **Miramonte Ave from Alegre Ave to Loraine Ave**
    a. Install multi-use path per Pedestrian Master Plan.

Figure E-25: Oak Avenue Elementary School improvement plan

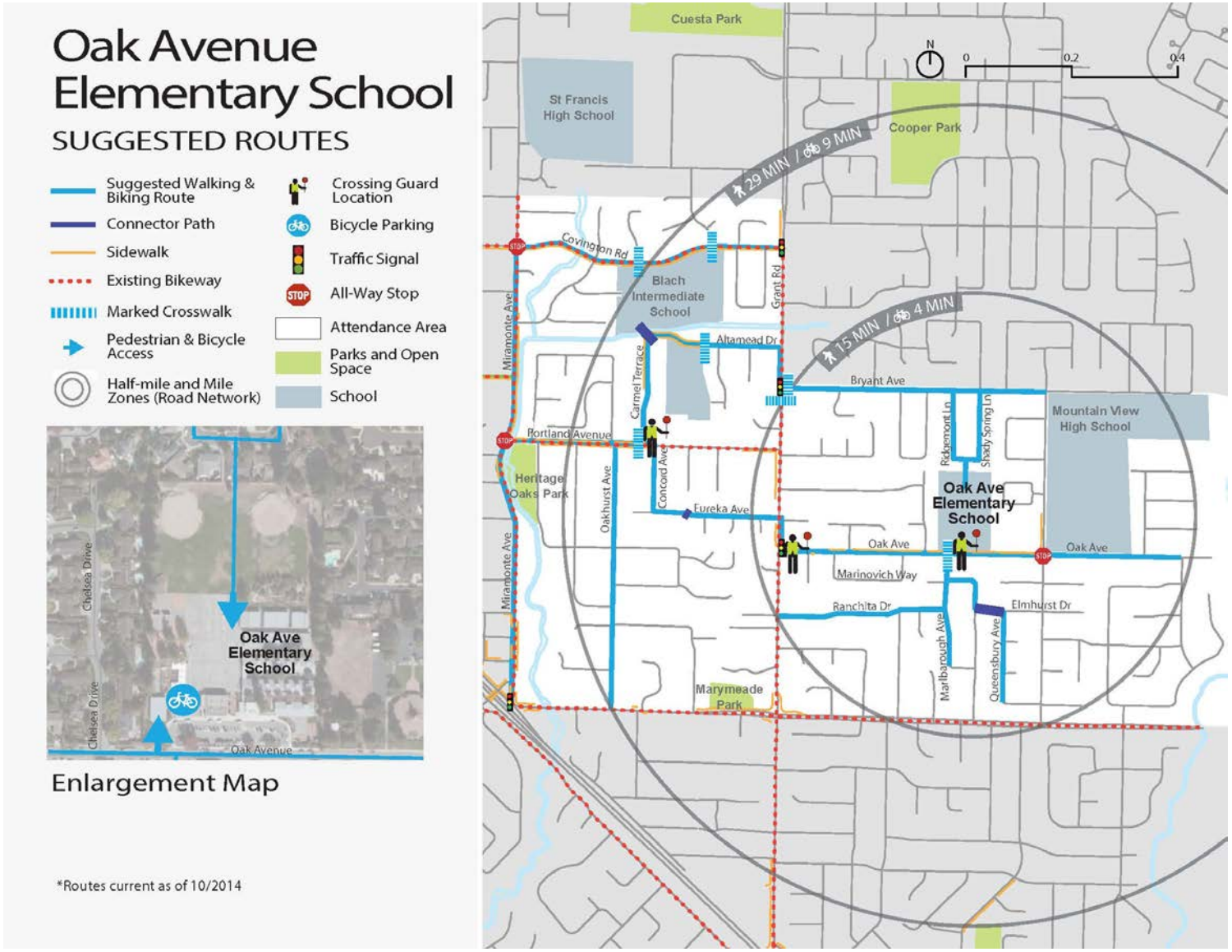


Figure E-26: Oak Avenue Elementary School Suggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.

Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Oak Avenue Elementary School

Figure E-27: Oak Avenue Elementary School Sugggested Routes to School map, back

E.6. Springer Elementary School

E.6.1. School Characteristics

Springer Elementary School is a K-6 school, serving 522 students, located at 1120 Rose Avenue in Mountain View, but is within the Los Altos School District. Based on student hand tallies collected spring 2014, 35 percent of students currently walk and 21 percent bike. The school is located just off of Springer Road, a major thoroughfare, and is a few blocks from St. Francis High School.

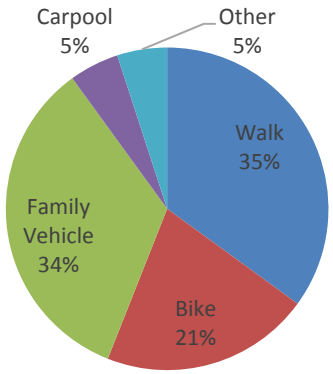


Figure E-28: Springer Elementary mode split, Spring 2014 hand tallies

E.6.2. Pedestrian/Bicycle Facilities and Access

Springer can be accessed by pedestrians and bicyclists through both the front and back of the school. There are three bike rack locations on campus, and several students on scooters were also observed during the audit. Crossing guards aid students at the crosswalk on Rose Avenue and at the back of the school on Cuesta Drive. The Cuesta Drive crosswalk has WAIT HERE pavement markings in advance of the crosswalk, but would benefit from high visibility crosswalk striping. Bikes lanes are present on Cuesta Drive, both east and west bound. Additional walk audit observations and recommended improvements can be found in **Table E-5**.

E.6.3. Reported Collisions

From 2009-2011, there were four collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
0	0	1	3

Figure E-29: Collisions involving pedestrians or bicyclists near Springer Elementary, 2009-2011

E.6.4. Existing SRTS Programs

Springer Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. The school also has a Suggested Routes to School map (see **Figure E-31**) and access to bike rodeos and school safety assemblies.

Table E-5: Springer Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Springer Road at Marilyn Drive	• No crosswalk across Marilyn (the stop controlled legs). Existing uncontrolled crosswalk does not have yield lines or advance warning signs. • Wide intersection with poor sight lines.	• Install white high visibility crosswalk on east leg of intersection. • Install advance yield markings on Springer approaches to uncontrolled crossing. • Install advance warning signs. • Review public ROW to evaluate feasibility of reducing intersection width.	City of Los Altos
2	Rose Avenue from Fordham Way to Miramonte Avenue	• Community reported high speeds.	• Install centerline and edge line striping along segment.	City of Los Altos
3	Springer Road at Birchwood/Riverside Drive	• Wide intersection with no crosswalk. Students cross to access the sidewalk on the east side.	• Review public ROW to evaluate feasibility of reducing intersection width. Study potential crosswalk with enhancements including median refuge or actuated beacon.	City of Los Altos
4	Springer Road at Cuesta Drive	• Intersection is not aligned. Reported challenging for bicyclists and pedestrians.	• Reconfigure northbound approach to Springer Road per Pedestrian Master Plan. • Consider trail concept per Pedestrian Master Plan.	City of Los Altos
5	Springer Road from Cuesta Drive to Covington Road	• West side of Springer does not have pedestrian facilities.	• Install a pedestrian walkway on the west side.	City of Los Altos
6	Rose Avenue at Orangetree Lane	• Existing curb cuts do not have truncated domes. Marked crosswalks at uncontrolled locations are standard crosswalks with no Assembly B signage. • Community reported wider sidewalk needed.	• Install truncated domes on all corners. • Restripe crosswalks on east and west legs high visibility. • Install Assembly B with down arrow on Rose Avenue approach..	City of Los Altos
7	Connector path between Fordham Way and Golden Way	• School walking route.	• Install ADA compliant curb ramps.	City of Los Altos
8	Hale Creek connecting Arroyo Road to Marilyn Drive	• Potential school route avoiding major arterials.	• Consider an easement along Hale Creek between Arroyo Road and Marilyn Drive to provide a path for students walking and biking (long term).	City of Los Altos
9	El Monte Avenue at Springer Road	• Reported driver noncompliance yielding to pedestrians	• Reconfigure intersection per Pedestrian Master Plan.	City of Los Altos
10	Rose Avenue at Limetree Lane	• Key school crossing. Marked crosswalk at uncontrolled location is standard crosswalk with no Assembly B signage.	• Restripe crosswalk on east leg as high visibility. • Install Assembly B with down arrow on Rose Avenue approach.	City of Los Altos

Springer Elementary School

Improvement Recommendations

1. **Springer Road at Marilyn Drive**
   a. Install white high visibility crosswalk on east leg of intersection.
   b. Install advance yield markings on Springer approaches to uncontrolled crossing.
   c. Install advance warning signs.
   d. Review public ROW to evaluate feasibility of reducing intersection width.
2. **Rose Avenue from Fordham Way to Miramonte Avenue**
   a. Install centerline and edge line striping along segment.
3. **Springer Road at Birchwood/Riverside Drive**
   a. Review public ROW to evaluate feasibility of reducing intersection width.
   b. Study potential crosswalk with enhancements including median refuge or actuated beacon.
4. **Springer Road at Cuesta Drive**
   a. Reconfigure northbound approach to Springer Rd per Pedestrian Master Plan.
   b. Consider trail concept per Pedestrian Master Plan.
5. **Springer Road from Cuesta Drive to Covington Road**
   a. Install a pedestrian walkway on west side.
6. **Rose Avenue at Orangetree Lane**
   a. Install truncated domes on all corners.
   b. Restripe crosswalks on east and west legs as high visibility.
   c. Install Assembly B with down arrow on Rose Avenue approach.
7. **Connector path between Fordham Way and Golden Way**
   a. Install ADA compliant curb ramps.
8. **Hale Creek connecting Arroyo Road to Marilyn Drive**
   a. Consider an easement along Hale Creek between Arroyo Road and Marilyn Drive to provide a path for students walking and biking.
9. **El Monte Avenue at Springer Road**
   a. Reconfigure intersection per Pedestrian Master Plan.
10. **Rose Avenue at Limetree Lane**
    a. Restripe crosswalk on east leg as high visibility.
    b. Install Assembly B with down arrow on Rose Avenue approach.

Figure E-30 Springer Elementary School improvement plan

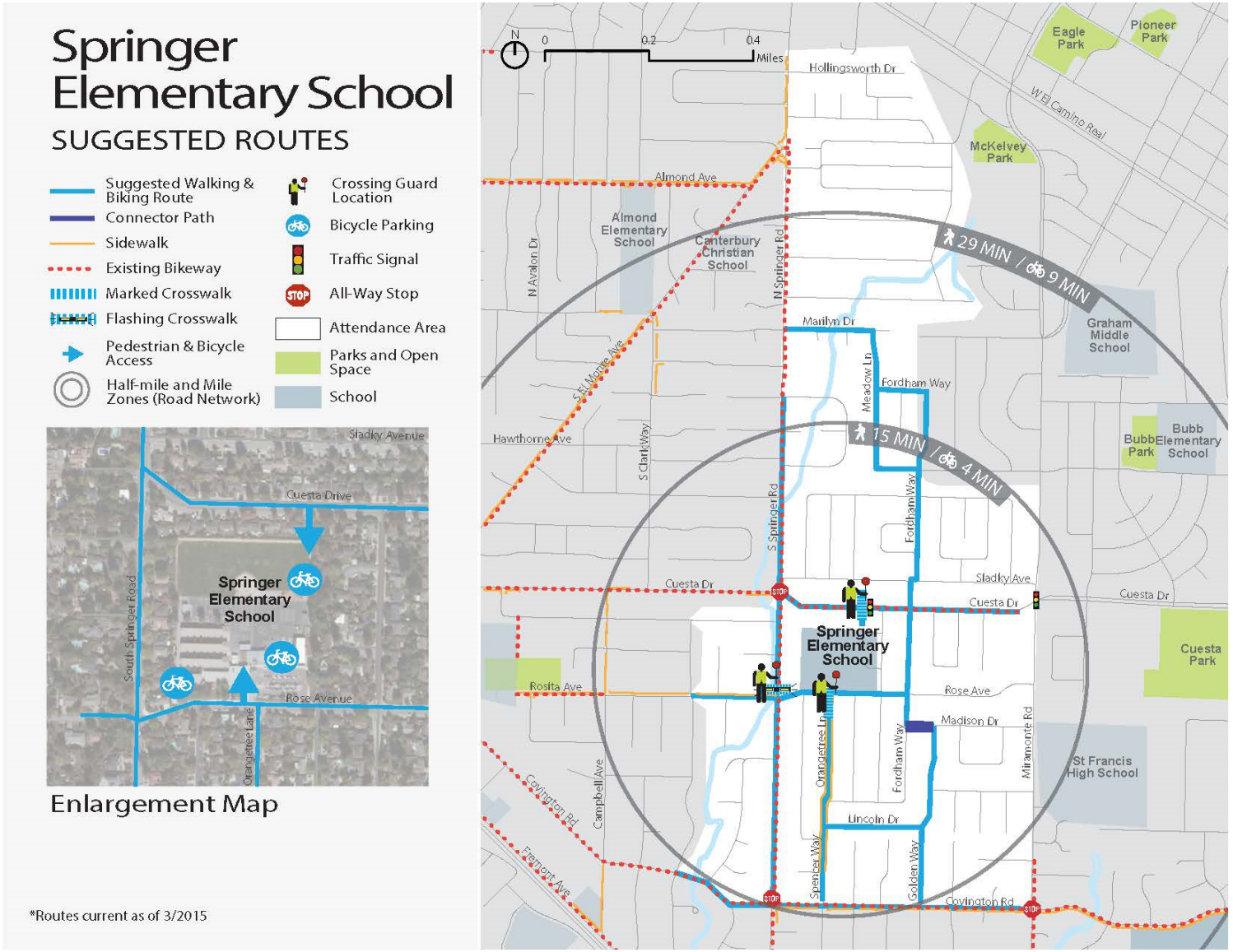


Figure E-31: Springer Elementary School Sugggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.

Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Springer Elementary School

Figure E-32: Springer Elementary School Sugggested Routes to School map, back

E.7. Santa Rita Elementary School

E.7.1. School Characteristics

Santa Rita Elementary School is a K-6 school, serving 559 students, located at 700 Los Altos Avenue in Los Altos. Based on student hand tallies collected spring 2014, 18 percent of students currently walk and 12 percent bike. The school is located on Los Altos Avenue, a two lane street with striped parking lanes, but no bike lanes, leading many students to ride on the sidewalk in the opposite direction of traffic on their way to school. Many students enter through the back of the school, coming from Santa Rita Avenue.

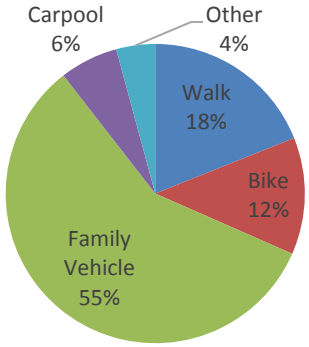


Figure E-33: Santa Rita Elementary mode split, Spring 2014 hand tallies

E.7.2. Pedestrian/Bicycle Facilities and Access

San Rita has multiple access points for pedestrians and bicyclists on the north, east, and west sides of campus. A crossing guards assists students at the Los Altos Avenue and Pine Lane intersection. There is a high visibility school crosswalk on Los Altos Avenue leading to the school parking lot, and both parking lot driveways have marked crosswalks. Most routes to school have sidewalks or pathways for pedestrians. Additional walk audit observations and recommended improvements can be found in **Table E-6**.

E.7.3. Reported Collisions

From 2009-2011, there were 17 collisions involving a pedestrian or bicyclist within a half-mile of the school. The majority of the collisions occurred at or near the intersection of El Camino Real and San Antonio Road. Santa Rita's attendance boundary runs along San Antonio Road, ending before this intersection and making it unlikely that students will need to cross here.

¼ mi	½ mi	¼ mi	½ mi
0	4	2	11

Figure E-34: Collisions involving pedestrians or bicyclists near Santa Rita Elementary, 2009-2011

E.7.4. Existing SRTS Programs

Santa Rita Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. The school also has a Suggested Routes to School map (see **Figure E-36**) and access to bike rodeos and school safety assemblies.

Table E-6: Santa Rita Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Cherry Avenue from Pine Lane to Coronado Avenue	• Wide road, reported high speeds.	• Install edge line striping to narrow travel lane.	City of Los Altos
2	Los Altos Avenue in front of school	• Jaywalking was observed and sight lines are blocked.	• Install red curb and no parking signage on east side of Los Altos Avenue to improve sight lines.	City of Los Altos
3	Los Altos Avenue from Pine Lane to Santa Rita Elementary	• No pedestrian facilities on east side.	• Install multi-use path.	City of Los Altos
4	Los Altos Avenue at Spagnoli Court	• Inadequate curb ramps.	• Install ADA compliant curb ramps.	City of Los Altos
5	Pine Lane at Linden Avenue	• Uncontrolled intersection with no marked crosswalks	• Install yellow transverse crosswalk and improve median across Linden Ave. • Install advance stop bars. • Consider curb radius reductions as part of future walkway installation projects.	City of Los Altos
6	Los Altos Avenue at entrance to school parking lot	• Midblock crosswalk heavily utilized by students. • Community reported visibility concerns.	• Install advance yield markings. • Install Rectangular Rapid Flashing Beacon (RRFB). • Update Los Altos Ave SCHOOL XING signs to Assembly B with down arrow.	City of Los Altos
7	W Portola Ave at Linden Ave	• School walking route, new sidewalk recently installed.	• Install yellow transverse crosswalk on south leg.	City of Los Altos
8	W Portola Ave at Carmel Ave	• School walking route.	• Install yellow transverse crosswalk on north leg.	City of Los Altos
9	Santa Rita Avenue from W Portola Avenue to school campus	• Congestion and reported safety concerns at the back entrance to the school.	• Recommend identifying Santa Rita Avenue as a Bicycle Boulevard with on-pavement gateway markings at Santa Rita Ave at W Portola Ave and Los Altos Ave at W Portola Ave.	City of Los Altos
10	Santa Rita Avenue from Van Buren Street to school campus	• Congestion and reported safety concerns due to drop offs, parking, and U turns.	• Prohibit parking on Santa Rita Ave from Van Buren St to school grounds. • Install no U-Turn signage on Santa Rita Ave.	City of Los Altos
11	Van Buren Street near Santa Rita Ave	• Congestion and reported safety concerns due to drop offs and parking.	• Prohibit parking on Van Buren within 50 feet of Santa Rita Ave.	City of Los Altos
12	Los Altos Avenue from El Camino Real to Edith Avenue	• School walking and biking route.	• Restrict parking on Los Altos Avenue from 7:00am-9:00am on weekdays to allow parking lane to be used by bicyclists.	City of Los Altos
13	W Portola Avenue from Los Altos Avenue to Egan Junior High	• Existing walkway is narrow.	• Reconstruct and widen berm-protected walkway or improve asphalt walkway on the south side.	City of Los Altos

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
14	San Antonio Road from Almond Avenue to El Camino Real	• Sidewalk damage due to tree roots, overgrown vegetation impedes walkway. • Community identified need for wider sidewalk.	• Repair sidewalk damage. • Trim vegetation. • Consider sidewalk widening.	City of Los Altos
15	Los Altos Avenue at W Portola Avenue	• Missing tactile domes on curb ramps. • Intersection is frequently used by students walking and biking to school.	• Install tactile domes on all four corners. • Restripe existing crosswalks (4) as high visibility.	City of Los Altos
16	Los Altos Avenue at Pine Lane	• Missing tactile domes on curb ramps. • Intersection is frequently used by students walking and biking to school.	• Install tactile domes on all four corners. • Restripe existing crosswalks (4) as high visibility.	City of Los Altos

Santa Rita Elementary School

Improvement Recommendations

1. **Cherry Avenue from Pine Lane to Coronado Avenue**
   a. Install edge line striping.
2. **Los Altos Avenue in front of school**
   a. Install red curb and no parking signage on east side of Los Altos Avenue.
3. **Los Altos Avenue from Pine Lane to Santa Rita Elementary**
   a. Install multi-use path.
4. **Los Altos Avenue at Spagnoli Court**
   a. Install ADA compliant curb ramps.
5. **Pine Lane at Linden Avenue**
   a. Install yellow transverse crosswalk and improve median across Linden Ave.
   b. Install advance stop bars.
   c. Consider curb radius reductions as part of future walkway installation projects.
6. **Los Altos Avenue at entrance to school parking lot**
   a. Install advance yield markings
   b. Install RRFB
   c. Update Los Altos Ave SCHOOL XING signs to Assembly B with down arrow
7. **W Portola Ave at Linden Ave**
   a. Install yellow transverse crosswalk on south leg
8. **W Portola Ave at Carmel Ave**
   a. Install yellow transverse crosswalk on north leg
9. **Santa Rita Avenue from W Portola Avenue to school campus**
   a. Recommend identifying Santa Rita Avenue as a Bicycle Boulevard with on-pavement gateway markings at Santa Rita Ave at W Portola Ave and Los Altos Ave at W Portola Ave.
10. **Santa Rita Avenue from Van Buren Street to school campus**
    a. Prohibit parking on Santa Rita Ave from Van Buren Street to shool grounds
    b. Install No U-Turn signage on Santa Rita Avenue
11. **Van Buren Street near Santa Rita Ave**
    a. Prohibit parking on Van Buren Street within 50 feet of Santa Rita Ave
12. **Los Altos Avenue from El Camino Real to Edith Avenue**
    a. Restrict parking on Los Altos Avenue from 7:00am-9:00am on weekdays to allow parking lane to be used by bicyclists.
13. **W Portola Avenue from Los Altos Avenue to Egan Junior High**
    a. Reconstruct and widen berm-protected walkway or improve asphalt walkway on the south side.
14. **San Antonio Road from Almond Avenue to El Camino Real**
    a. Repair sidewalk damage.
    b. Trim vegetation.
    c. Consider sidewalk widening.
15. **Los Altos Avenue at W Portola Avenue**
    a. Install tactile domes on all four corners.
    b. Restripe existing crosswalks (4) as high visibility.
16. **Los Altos Avenue at Pine Lane**
    a. Install tactile domes on all four corners.
    b. Restripe existing crosswalks (4) as high visibility.

Figure E-35: Santa Rita Elementary School improvement plan

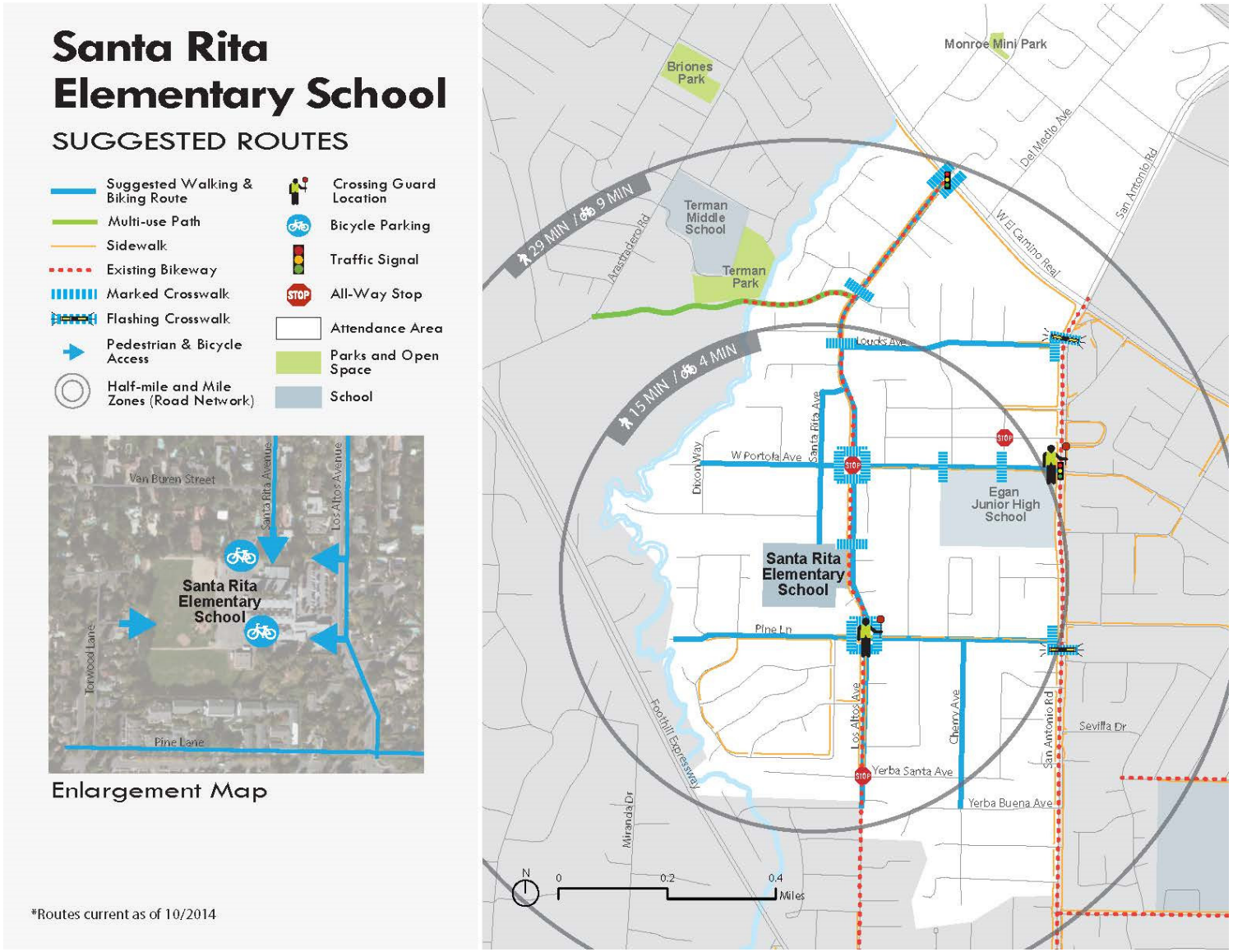


Figure E-36: Santa Rita Elementary School Sugggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.

Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Santa Rita Elementary School

Figure E-37: Santa Rita Elementary School Sugggested Routes to School map, back

E.8. Montclaire Elementary School

E.8.1. School Characteristics

Montclaire Elementary School is a K-5 school, serving 509 students, located at 1160 Saint Joseph Avenue in Los Altos. Based on student hand tallies collected spring 2014, 16 percent of students currently walk and 19 percent bike. The school is located uphill on Saint Joseph Avenue and the attendance boundary extends across Foothill Expressway, a primary location of concern for parents.

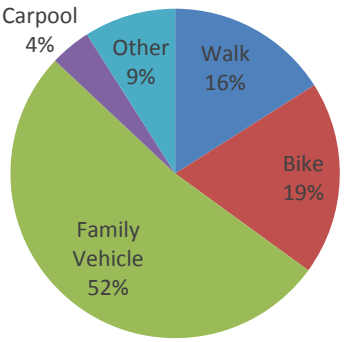


Figure E-38: Montclaire Elementary mode split, Spring 2014 hand tallies

E.8.2. Pedestrian/Bicycle Facilities and Access

Montclaire can be accessed by pedestrians and bicyclists on three of four sides of the school. A trained crossing guard is located at the Foothill Expressway intersection and a volunteer crossing guard sometimes assists students walking uphill from Saint Joseph Avenue. Although there is a raised crosswalk at the Saint Joseph Avenue intersection near the school, the intersection is awkwardly aligned and parents have requested a paid crossing guard to be stationed at the location. Additional walk audit observations and recommended improvements can be found in **Table E-7**.

E.8.3. Reported Collisions

From 2009-2011, there were four collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
0	0	1	3

Figure E-39: Collisions involving pedestrians or bicyclists near Montclaire Elementary, 2009-2011

E.8.4. Existing SRTS Programs

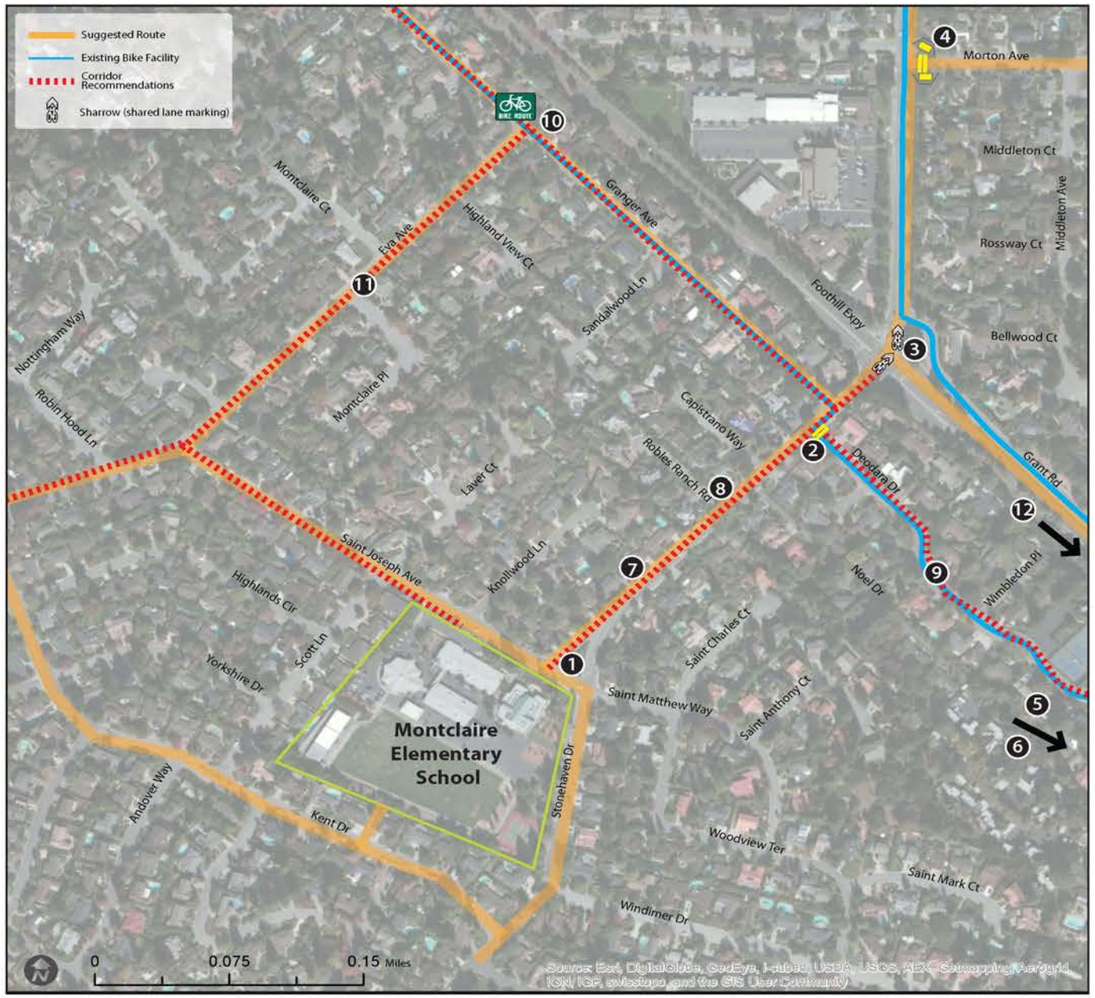
Montclaire Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. Montclaire Elementary has an active Suggested Routes to School program that organizes annual Walk to School Day and Bike to School Month activities to encourage students to walk and bike to school. The school also has a Suggested Routes to School map (see **Figure E-41**) and access to bike rodeos and school safety assemblies.

Table E-7: Montclaire Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Saint Joseph Avenue at Stonehaven	• St. Joseph has sweeping right turn at Stonehaven. Crosswalk on west leg aligns with uncontrolled right turn lane.	• Install improvements per Pedestrian Master Plan.	City of Los Altos
2	Saint Joseph Avenue at Deodara Drive	• No marked crosswalk on Deodara. School walking route.	• Install yellow transverse crosswalk on Deodara Drive.	City of Los Altos
3	Foothill Expressway at Grant Road	• Heading north away from the school, bike lane is not striped through the intersection and students have difficulty crossing; some reportedly ride to the right of the island and through the free right turn lane.	• Use sharrows to mark bikeway path of travel through the intersection.	City of Los Altos
4	Grant Road at Morton Avenue	• Cars park blocking the corner to cross Morton Ave. • No curb ramp or crosswalk on Morton Ave. School walking route.	• Paint red curb at northeast and southeast corners. • Install yellow transverse crosswalk on Morton Ave and push stop bar back behind crosswalk. • Install ADA compliant curb ramps on northeast and southeast corners. • Install parking lane striping on Morton Avenue	City of Los Altos
5	Arboretum Drive approaching Foothill Expressway	• Reported high speeds.	• Install speed feedback sign near Farm Road.	City of Los Altos
6	Arboretum Drive at Deodara Drive	• Crossing is difficult to see due to blocked sight lines. Cars reportedly speed downhill. • Poor visibility at the intersection due to curves.	• Trim vegetation. • Conduct stop sign analysis to determine if 3-way stop is warranted. If 3-way stop is installed, install crosswalk with in-pavement flashers.	City of Los Altos
7	St. Joseph Avenue from Foothill Expressway to school	• Sidewalks/paths present on both sides, but northwest side has poles obstructing the walkway for strollers/wheelchairs and path is uneven.	• Widen pedestrian paths and remove obstructions.	City of Los Altos
8	St. Joseph Ave from Robles Ranch Rd to Granger Avenue	• No sidewalk on this segment.	• Install sidewalk to close gap.	City of Los Altos
9	Deodara Drive from St. Joseph Avenue to Arboretum Drive	• Street is wide as it approaches St Joseph. No designated pedestrian or bicycle path. School walking and biking route.	• Install parking lane/edge line striping on Deodara Drive.	City of Los Altos

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
10	Granger Avenue from Loyola Drive to St. Joseph Avenue	• Street has parking lane and center line striped, but no pedestrian or bicycle facilities.	• Consider signing a Class III bike route on Granger Ave. • Review public ROW to evaluate feasibility of including pedestrian walkway.	City of Los Altos
11	Eva Avenue from Granger Avenue to St. Joseph Avenue	• School biking route without bike facilities.	• Install Class II bike lanes per Bicycle Transportation Plan.	City of Los Altos
12	Grant Road from Newcastle Drive to Los Altos boundary	• School biking route with frequent driveways and poor cyclist visibility.	• Prioritize installing Class II bike lanes per Bicycle Transportation Plan.	City of Los Altos

Montclaire Elementary School



Improvement Recommendations

1. **Saint Joseph Avenue at Stonehaven Drive**
   a. Install improvements per Pedestrian Master Plan.
2. **Saint Joseph Avenue at Deodara Drive**
   a. Install yellow transverse crosswalk on Deodara.
3. **Foothill Expressway at Grant Road**
   a. Use sharrows to mark bikeway path of travel through the intersection.
4. **Grant Road at Morton Avenue**
   a. Paint red curb at northeast and southeast corners.
   b. Install yellow transverse crosswalk on Morton Avenue and push stop bar back.
   c. Install ADA compliant curb ramps on northeast and southeast corners.
5. **Arboretum Drive approaching Foothill Expressway**
   a. Install speed feedback sign near Farm Road.
6. **Arboretum Drive at Deodara Drive**
   a. Trim vegetation.
   b. Conduct stop sign analysis to determine if 3-way stop is warranted. If 3-way stop is installed, install crosswalk with in-pavement flashers.
7. **Saint Joseph Avenue from Foothill Expressway to School**
   a. Widen pedestrian pathway and remove obstructions.
8. **Saint Joseph Avenue from Robles Ranch Road to Granger Avenue**
   a. Install sidewalk close to gap.
9. **Deodara Drive from Saint Joseph Avenue to Arboretum Drive**
   a. Install parking lane/edge line striping on Deodara Drive.
10. **Granger Avenue from Loyola Drive to Saint Joseph Avenue**
    a. Consider signing a Class III bike route on Granger
    b. Review public ROW to evaluate feasibility of including pedestrian walkway.
11. **Eva Avenue from Granger Avenue to Saint Joseph Avenue**
    a. Install Class II bike lane per Bicycle Transportation Plan.
12. **Grant Road from Newcastle Drive to Los Altos boundary**
    a. Prioritize installing Class II bike lanes per Bicycle Transportation Plan.

Figure E-40: Montclaire Elementary School improvement plan

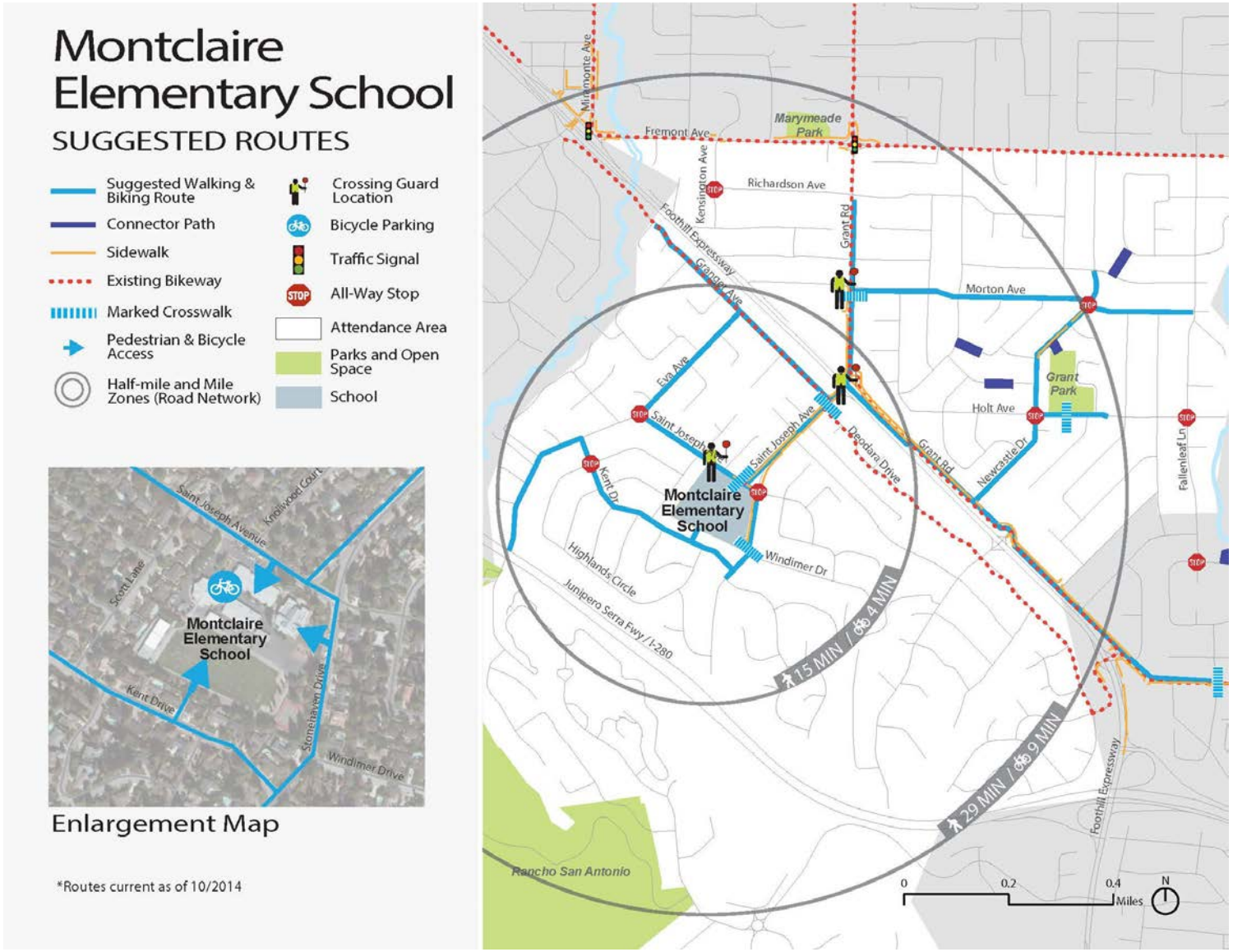


Figure E-41: Montclaire Elementary School Sugggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

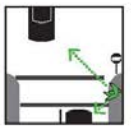
Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.



Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Montclaire Elementary School

Figure E-42: Montclaire Elementary School Sugggested Routes to School map, back

E.9. Covington Elementary School

E.9.1. School Characteristics

Covington Elementary School is a K-6 school, serving 512 students, located at 201 Covington Road in Los Altos. Based on student hand tallies collected spring 2014, 15 percent of students currently walk and 14 percent bike. The school is located near the intersection of El Monte Avenue and Foothill Expressway, a major intersection in the city.

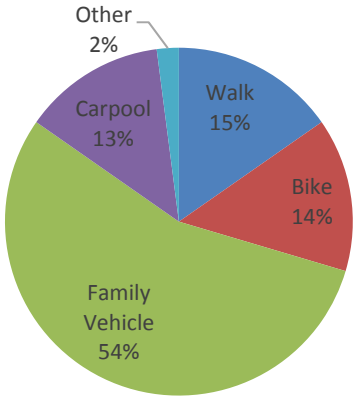


Figure E-43: Covington Elementary mode split, Spring 2014 hand tallies

E.9.2. Pedestrian/Bicycle Facilities and Access

Covington can be accessed by pedestrians and bicyclists via front and back entrances. Arboleda Drive runs along the back of the school, and leads to a path for students to enter campus. While the street is unstriped and there a curve in the road, very few vehicles drive up to this back entrance. Students were observed walking and biking in the street on both the north and south sides. In front of the school, Covington Road has striped edge lanes and no bike lanes. Sidewalks are only present on the school frontage leading up to El Monte Avenue. A crossing assists students at the Covington Road and El Monte Avenue intersection. However, students were observed crossing at other midblock locations on El Monte Avenue as well. Additional walk audit observations and recommended improvements can be found in **Table E-8**.

E.9.3. Reported Collisions

From 2009-2011, there were four collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
0	2	1	1

Figure E-44: Collisions involving pedestrians or bicyclists near Covington Elementary, 2009-2011

E.9.4. Existing SRTS Programs

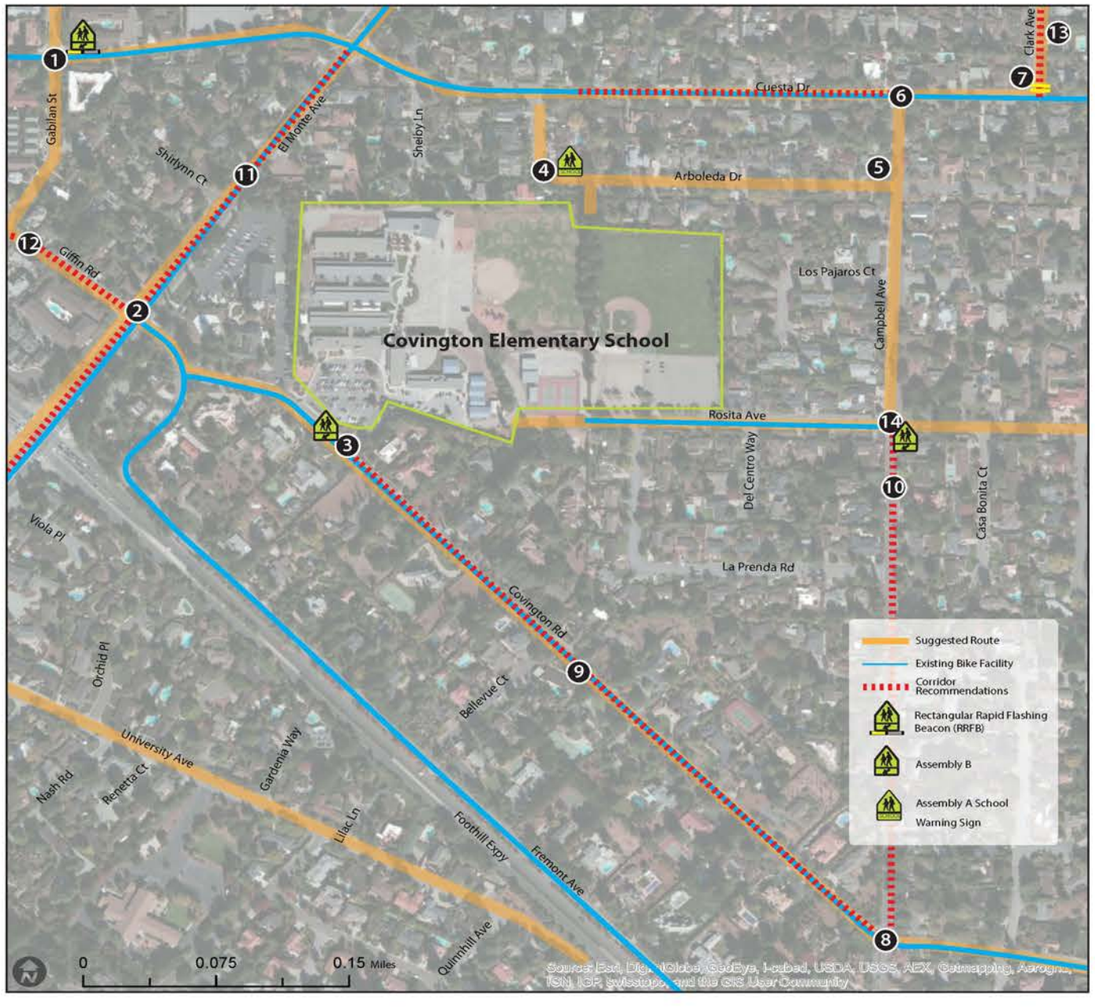
Covington Elementary participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. The school also has a Suggested Routes to School map (see **Figure E-46**) and access to bike rodeos and school safety assemblies.

Table E-8: Covington Elementary School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Cuesta Dr at Gabilan St	• Reported driver noncompliance at existing high visibility crosswalk on Cuesta Drive.	• Install Rectangular Rapid Flashing Beacon on east leg.	City of Los Altos
2	El Monte Avenue at Giffin Road/Covington Road	• Students queue at the intersection and have no space to wait for the light.	• Construct curb extensions at all four corners of the intersection. • Extend the walk phase across El Monte Avenue.	City of Los Altos
3	Covington Road at school driveway	• High visibility crosswalk leads to blind corner into school parking lot. Property next to the school protrudes into the sight line.	• Work with adjacent homeowner to trim vegetation at crosswalk. • Update Covington Road SCHOOL XING signs to Assembly B with down arrow.	City of Los Altos
4	Arboleda Drive south of Cuesta Drive	• The road curves blocking sight lines and this street is used by students walking and biking, primarily from the east.	• Install School Warning Assembly A signage on Arboleda Drive.	City of Los Altos
5	Arboleda Drive at Campbell Avenue	• No crosswalk, but students/parents cross here frequently to access back entrance to school on Arboleda	• Study installation of high visibility crosswalk including potential enhancements such as median refuge or actuated beacon	City of Los Altos
6	Cuesta Drive at Campbell Avenue	• Pedestrians standing on the north side of Cuesta Dr waiting to cross are difficult to see because of shadows.	• Install advance stop lines at all legs. • Consider improving unpaved area adjacent to utility pole to increase size and visibility of pedestrian area on north side.	City of Los Altos
7	Cuesta Drive at S Clark Avenue	• Clark Avenue is a widely used school route and crossing Cuesta Drive to get to the path is difficult	• Study installation of high visibility crosswalk across Cuesta, including potential enhancements such as median refuge or actuated beacon. • Install yellow transverse crosswalk on north leg.	City of Los Altos
8	Covington Road at Campbell Avenue	• School walking route.	• Reduce curb radii at all four corners per Pedestrian Master Plan.	City of Los Altos
9	Covington Road from school to Campbell Avenue	• Reported high speeds down Covington Road.	• Install speed feedback sign.	City of Los Altos
10	Campbell Ave from Rosita Avenue to La Prenda	• Narrow shoulder for walking/biking.	• Install pedestrian path.	City of Los Altos
11	El Monte Avenue from Cuesta Drive to Giffin Road	• No pedestrian facilities on west side. Key school walking route.	• Install sidewalk on west side of El Monte Avenue.	City of Los Altos

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
12	Giffin Road from Fremont Avenue to El Monte Avenue	• No sidewalk/path near relatively high density housing where students live.	• Install pedestrian path.	City of Los Altos
13	Clark Avenue from El Monte Ave to Cuesta Drive	• School walking route with narrow pedestrian facilities.	• Repair and widen existing sidewalk/berm-protected walkway per Pedestrian Master Plan.	City of Los Altos
14	Rosita Ave at Campbell Avenue	• Key crossing location with two of four crossings uncontrolled.	• Update Campbell Ave SCHOOL XING signs to Assembly B with down arrow.	City of Los Altos

Covington Elementary School



Improvement Recommendations

1. **Cuesta Drive at Gabilan Street**
   a. Install RRFB on east leg.
2. **El Monte Avenue at Giffin Road/Covington Road**
   a. Construct curb extensions at all four corners of intersection.
   b. Extend the walk phase across El Monte Avenue.
3. **Covington Road at school driveway**
   a. Work with adjacent homeowner to trim vegetation at crosswalk.
   b. Update Covington Road SCHOOL XING signs to Assembly B with down arrow.
4. **Arboleda Drive south of Cuesta Drive**
   a. Install School Warning Assembly A signage on Arboleda Drive.
5. **Arboleda Drive at Campbell Avenue**
   a. Study installation of high visibility crosswalk including potential enhancements such as median refuge or actuated beacon
6. **Cuesta Drive at Campbell Avenue**
   a. Install advance stop lines at all legs.
   b. Consider improving unpaved area adjacent to utility pole to increase size and visibility of pedestrian area on north side.
7. **Cuesta Drive at South Clark Avenue**
   a. Study installation of high visibility crosswalk across Cuesta, including potential enhancements such as median refuge or actuated beacon
   b. Install yellow transverse crosswalk on north leg.
8. **Covington Road at Campbell Avenue**
   a. Reduce curb radii at four corners per Pedestrian Master Plan.
9. **Covington Road from school to Campbell Avenue**
   a. Install speed feedback sign.
10. **Campbell Avenue from Rosita Avenue to La Prenda Road**
    a. Install pedestrian path.
11. **El Monte Avenue from Cuesta Drive to Giffin Road**
    a. Install sidewalk on west side of El Monte Avenue.
12. **Giffin Road from Fremont Avenue to El Monte Avenue**
    a. Install pedestrian path.
13. **Clark Avenue from El Monte Avenue to Cuesta Drive**
    a. Repair and widen existing sidewalk/berm-protected walkway per Pedestrian Master Plan.
14. **Rosita Avenue at Campbell Avenue**
    a. Update Campbell Avenue SCHOOL XING signs to Assemby B with down arrow.

Figure E-45: Covington Elementary School improvement plan

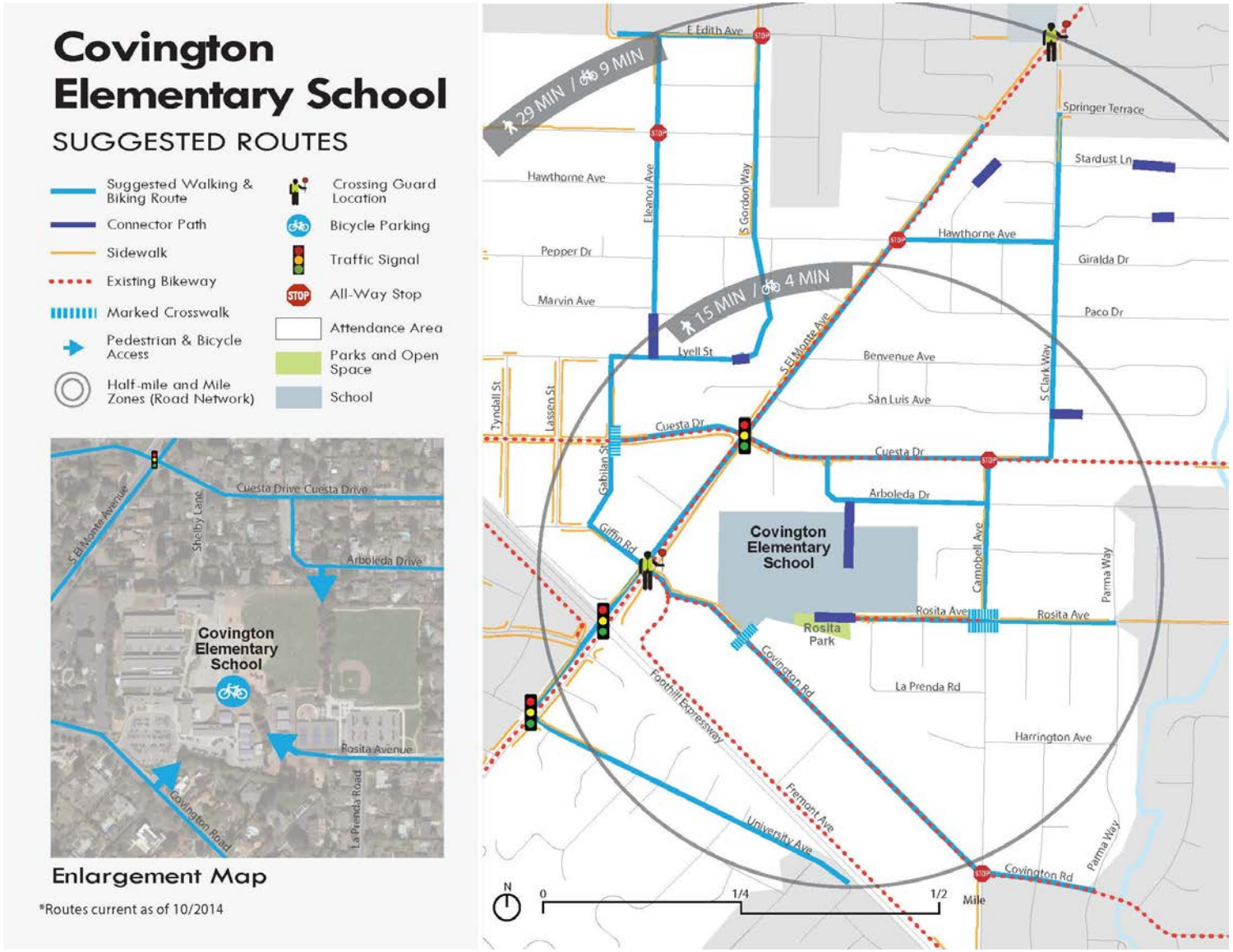


Figure E-46: Covington Elementary School Sugggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.

Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Covington Elementary School

Figure E-47: Covington Elementary School Sugggested Routes to School map, back

E.10. Egan Junior High School

E.10.1. School Characteristics

Egan Junior High School is a 7-8 grade school, serving 560 students, located at 100 W. Portola Avenue in Los Altos. Based on student hand tallies collected spring 2014, 9 percent of students currently walk and 27 percent bike. Junior high attendance boundaries extend much further than elementary schools, and may account for the low amount of walking in comparison to other schools. Biking mode share is relatively high. Egan is located less than half a mile from Santa Rita Elementary and shares a campus with Bullis Charter School. Egan is located on Portola Avenue, a narrow street that lacks striping aside from crosswalks.

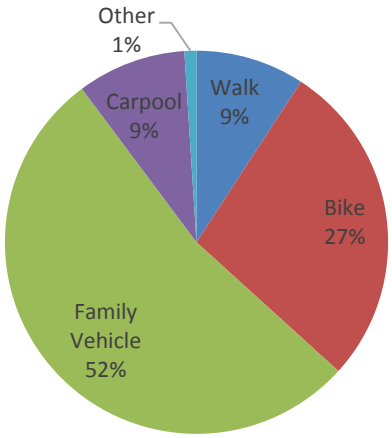


Figure E-48: Egan Jr. High mode split, Spring 2014 hand tallies

E.10.2. Pedestrian/Bicycle Facilities and Access

Egan can be accessed by pedestrians and bicyclists on three of four sides of campus. The routes to school are primarily unimproved for both pedestrians and bicyclists. A Pedestrian Safety Assessment was conducted in 2010 through the UC Berkeley Institute of Transportation Studies. Through this process, seven focus areas were identified for improvement and have been included in **Table E-9**.

E.10.3. Reported Collisions

From 2009-2011, there were 17 collisions involving a pedestrian or bicyclist within a half-mile of the school. The majority of the collisions occurred at or near the intersection of El Camino Real and San Antonio Road. Egan's attendance boundary extends beyond this intersection, indicating that students may be crossing here or are driven to school in order to avoid this intersection.

¼ mi	½ mi	¼ mi	½ mi
0	4	2	11

Figure E-49: Collisions involving pedestrians or bicyclists near Egan Jr. High, 2009-2011

E.10.4. Existing SRTS Programs

Egan Junior High participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. The school also has a Suggested Routes to School map (see **Figure E-51**) and access to bike rodeos, school safety assemblies, and the Drive that Bike program.

Table E-9: Egan Junior High School Recommendations

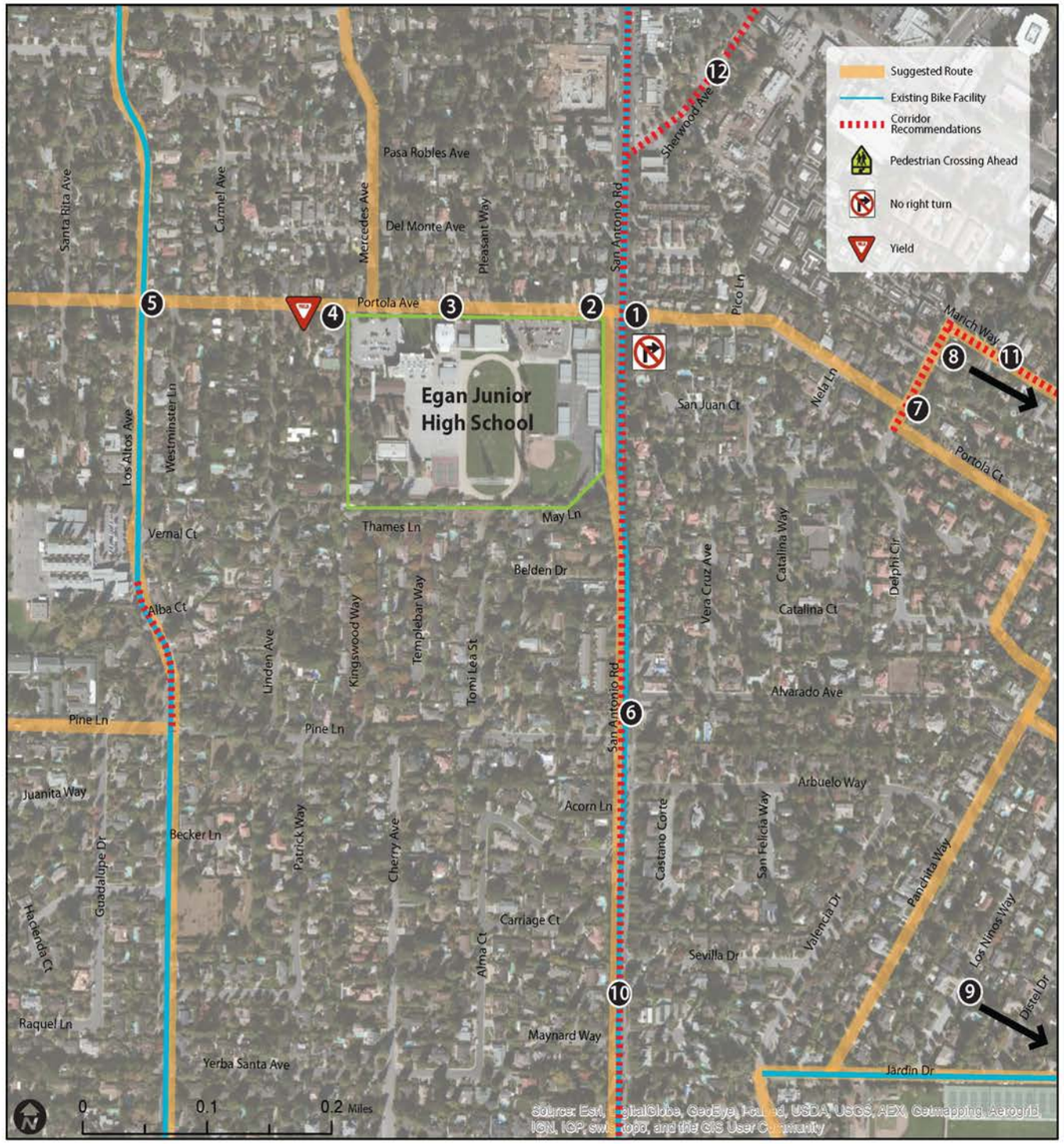
ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Portola Avenue and San Antonio Road	• Conflicts between turning motorists and crossing pedestrians and bicyclists.	• Provide a protected phase for the south crosswalk, with "No Right Turn" graphic sign facing the eastbound approach, active at least during school commute peaks. • Restripe the eastbound approach to provide one left-through lane and one right-turn lane • Consider protected phase for the eastbound right and northbound left turns. • Red stripe to corners of the intersection to improve the safety of pedestrians crossing the street	City of Los Altos
		• Signal head on median may block sightline.	• On the southeast corner, check visibility of the south crosswalk's west pedestrian signal. Consider moving the south median's signal pole a bit to the south if needed.	
		• Accessibility of push button for wheelchair users	• On the southeast corner, improve the accessibility of westbound pedestrian call button. • On the southeast corner, consider adding a second button near the large tree, to serve the south crosswalk • On the southwest corner, improve the accessibility of northbound pedestrian call button.	
		• Bicyclist accessibility	• On the southwest and southeast corners, consider "squaring up" by reducing corner radius, to enable replacement of single curb ramps with two directional ramps aligned with crosswalks. Because southbound San Antonio has a bike lane, the southwest corner's effective right-turn radius is greater than the physical curb radius.	
		• Residents on the northeast quadrant who wish to use the west (southbound) bus stop need to traverse three intersection legs.	• Consider marking and serving the north crosswalk.	
		• Limit vehicle/pedestrian exposure	• Make both sides of Portola Avenue "No Parking/Stopping 7am-9am on school days"	
2	Bullis Charter School frontage	• Lack of sidewalk capacity	• Between San Antonio Road and the exit driveway, increase sidewalk capacity at ADA ramp by moving the fence toward school property and add concrete pad for pedestrian storage. Provide 3' of walkway width behind the large utility cabinet. • Between the driveways, remove the low plantings and widen the sidewalk 2.5'.	City of Los Altos and Los Altos School District

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
			• Work with school and school district to clear trees in front of school to improve sidewalk clearance	
		• Blocking of driveway crosswalks by motorists.	• In front of both driveways, mark KEEP CLEAR areas on the south (eastbound) half of Portola.	
		• Motorists blocking exit driveway	• Upstream of the exit driveway for one car length, where the curb is painted red, add a slash-striped area. • Mark the exit driveway with a white centerline and turn arrows: Left lane: left-and-right Right lane: right-only. • East of the exit driveway, consider: o Extending Portola's double yellow centerline to the exit driveway. o Adding a lane line (dashed white) to divide eastbound Portola into a through-and-left lane and a right turn only lane. o East of the exit driveway, consider adding a lane line (solid white) to divide eastbound Portola into a through-and-left lane and a right turn only lane.	
3	Egan Junior High School frontage	• Conflicts between walkers and drop-off/pick-up activity.	• Widen the street sidewalk along the entire frontage by 3' to 5' by moving the bushes and the low fence behind them further from the curb.	City of Los Altos and Los Altos School Disctrict
		• Bicyclists using sidewalk	• Add as short path link between the street sidewalk near Bullis Charter School's west driveway, and Egan's internal east-west walkway near the east front door of the gymnasium. Consider aligning this path diagonally between the second and third evergreen trees from the Bullis driveway.	
		• Bicyclist and pedestrian conflicts on walkway	• Widen the internal east-west walkway along the front of the gymnasium, west of the gym's east front door, to 10' if possible (8' minimum).	
		• Vehicles blocking exit lane	• Consider "NO STOPPING" pavement markings in the left lane of the drop-off/pick-up area.	
4	Portola west of Egan Junior High	• Walkway capacity	• Along walkway, maintain 8' vertical hedge face.	City of Los Altos
		• Signage obscured by vegetation	• Trim hedges to maintain sign visibility.	

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
			• Until the asphalt walkway is replaced, consider replacing the angled berm at its west terminus with a bicycle permeable (ex: flex posts) and prohibiting parking from there to Westminster. If this is done, place a Yield sign facing east, to inform westbound bicyclists using the asphalt walkway that they need to yield to street traffic as they leave the bermed area, and add a guide strip to steer blind pedestrians toward the curb.	
5	Portola and Los Altos Avenue intersection	• Sight lines blocked by vegetation.	• On southeast corner, replace bushes with low landscape between the tree and the corner. • On the northbound approach, move the stop sign as close as practical to the first crosswalk line.	City of Los Altos
6	San Antonio Road crossing at Pine/Alvarado /Arbuelo	• Yield compliance at existing uncontrolled crosswalk. • Insufficient storage capacity at signage for waiting bicyclists and pedestrians • Visibility of crossing treatments	• Evaluate replacing the crosswalk warning device at Pine Lane/San Antonio Road with an RRFB or Pedestrian Hybrid Beacon. • Widen San Antonio's east sidewalk between Alvarado and Arbuelo, and provide a wide waiting area at the Pine Avenue south crosswalk. • Add 2 sided pedestrian warning signs in the median to create a "4-sign" setup where both San Antonio directions have two signs facing them. • Add high visibility ("ladder") yellow striping. • Add school crossing/school zone signage on San Antonio Road (both south- and north-facing) to inform vehicle traffic of nearby school • Relocate the northbound bus stop north of the crosswalk.	City of Los Altos
7	E. Portola Ave at Jordan Ave	• Students on bicycles are observed not stopping through the intersection, creating driver/bicyclist conflict concerns.	• Conduct stop warrant analysis to determine if stop signs are warranted on Jordan Avenue to make it a 3-way stop.	City of Los Altos
8	Marich Way at Casita Way	• The curve on Marich Way causes visibility issues.	• Conduct stop sign analysis to determine if all-way stop signs are warranted.	City of Los Altos
9	Springer Road at El Monte Avenue	• Community reported the intersection is difficult for students to cross.	• Install intersection improvements per Pedestrian Master Plan.	City of Los Altos
10	San Antonio Road from Almond Avenue to El Camino Real	• Sidewalk is narrow with uprooting due to trees and overgrown landscaping.	• Repair sidewalk damage. • Trim vegetation. • Consider sidewalk widening.	City of Los Altos

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
11	Marich Way from Jordan Ave to Casita Way	• Road is wide with no striping. Community reported high speeds and traffic.	• Install Class III bicycle facility signage on Marich Way per Bicycle Transportation Plan. • Consider traffic calming such as speed hump at location where Marich Way widens.	City of Los Altos

Egan Junior High School



Improvement Recommendations

1. **Portola Avenue and San Antonio Road**
   a. Provide protected phase for south crosswalk, with "No Right Turn" graphic sign facing eastbound approach, active at least during school commute peaks.
   b. Restripe EB approach to provide 1 left-through lane and 1 right-turn lane.
   c. Consider protected phase for EB right and NB left turns.
   d. On SE corner, (1) check visibility of south crosswalk's west ped signal, (2) consider moving the south median's signal pole a bit to the south if needed, (3) improve the accessibility of westbound pedestrian call button, (4) consider adding a second button near the large tree, to serve the south crosswalk.
   e. On SW and SE corner, consider "squaring up" by reducing corner radius, to enable replacement of single curb ramps with two directional ramps aligned with crosswalks.
   f. Consider marking and serving north crosswalk.
2. **Bullis Charter School frontage**
   a. Between San Antonio Road and the exit driveway, increase sidewalk capacity by adding second walkway behind tree/planting strip and move fence inward to 1' behind new walkway. Provide 3' of walkway width behind large utility cabinet.
   b. Between driveways, remove low plantings and widen sidewalk 2.5'
   c. Work with school and school district to clear trees in front of school to improve sidewalk clearance.
   d. In front of both driveways, mark KEEP CLEAR areas on south (EB) half of Portola.
   e. Upstream of exit driveway for 1-car length, where curb is red, add a slash-striped area.
   f. Mark exit driveway with white centerline and turn arrows: Left lane: left-and-right Right lane: right-only.
   g. East of the exit driveway, consider: (1) Extending Portola's double yellow centerline to exit driveway. (2) Adding a lane line (dashed white or solid white) to divide EB Portola into a through-and-left lane and a right turn only lane.
3. **Egan Jr. High School frontage**
   a. Widen sidewalk along frontage by 3-5 feet.
   b. Add short path link between street sidewalk near Bullis Charter School's west driveway and Egan's internal east-west walkway.
   c. Widen internal east-west walkway along front of gym to 10' (8'min.)
   d. Add bike cage closer to bicyclists' east arrival lane.
   e. "NO STOPPING" pavement markings in left land of pick-up/drop-off area.
4. **Portola west of Egan Jr. High**
   a. Maintain 8' vertical hedge face along walkway.
   b. Trim hedges to maintain visibility.
   c. Until asphalt walkway is replaced, (1) maintain a min 5' wide clear area at foot of sidewalk's terminal ramp, (2) replace angled bern at its west terminus with a bicycle permeable & prohibit parking to Westminster and add yield sign facing east for WB bicyclists and guide strip for visually-impaired pedestrians.
   d. Replace asphalt sidewalk with conventional raised sidewalk.
5. **Portola and Los Altos Avenue intersection**
   a. On SE corner, replace bushes with low landscaping.
   b. On northbound approach, move stop sign closer to first crosswalk line.
6. **San Antonio Road crossing at Pine/Alvarado/Arbuelo**
   a. Evaluate replacing crosswalk warning device at Pine Lane/San Antonio Rd with RRFB or Pedestrian Hybrid Beacon.
   b. Widen San Antonio's east sidewalk between Alvarado & Arbuelo; provide waiting area at Pine Ave south crosswalk.
   c. Add 2-sided ped warning signs in median.
   d. Add high visibility yellow striping.
   e. Relocate NB bus stop north of crosswalk.
7. **E. Portola Ave at Jordan Ave**
   a. Conduct stop warrant analysis to make 3-way stop on Jordan Ave.
8. **Marich Way at Casita Way**
   a. Conduct stop sign analysis.
9. **Springer Road at El Monte Avenue**
   a. Install improvements per Pedestrian Master Plan.
10. **San Antonio Road from Almond Ave to El Camino Real**
    a. Repair sidewalk damage.
    b. Trim vegetation.
    c. Consider sidewalk widening.
11. **Marich Way from Jordan Ave to Casita Way**
    a. Install Class III bicycle facility signage on Marich Way per Bicycle Transportation Plan.
    b. Install Consider traffic calming such as speed hump at location where Marich Way widens.
12. **Sherwood Ave from San Antonio Rd to El Camino Real**
    a. Install sidewalk on south side to close gaps in the network.

Figure E-50: Egan Junior High School improvement plan

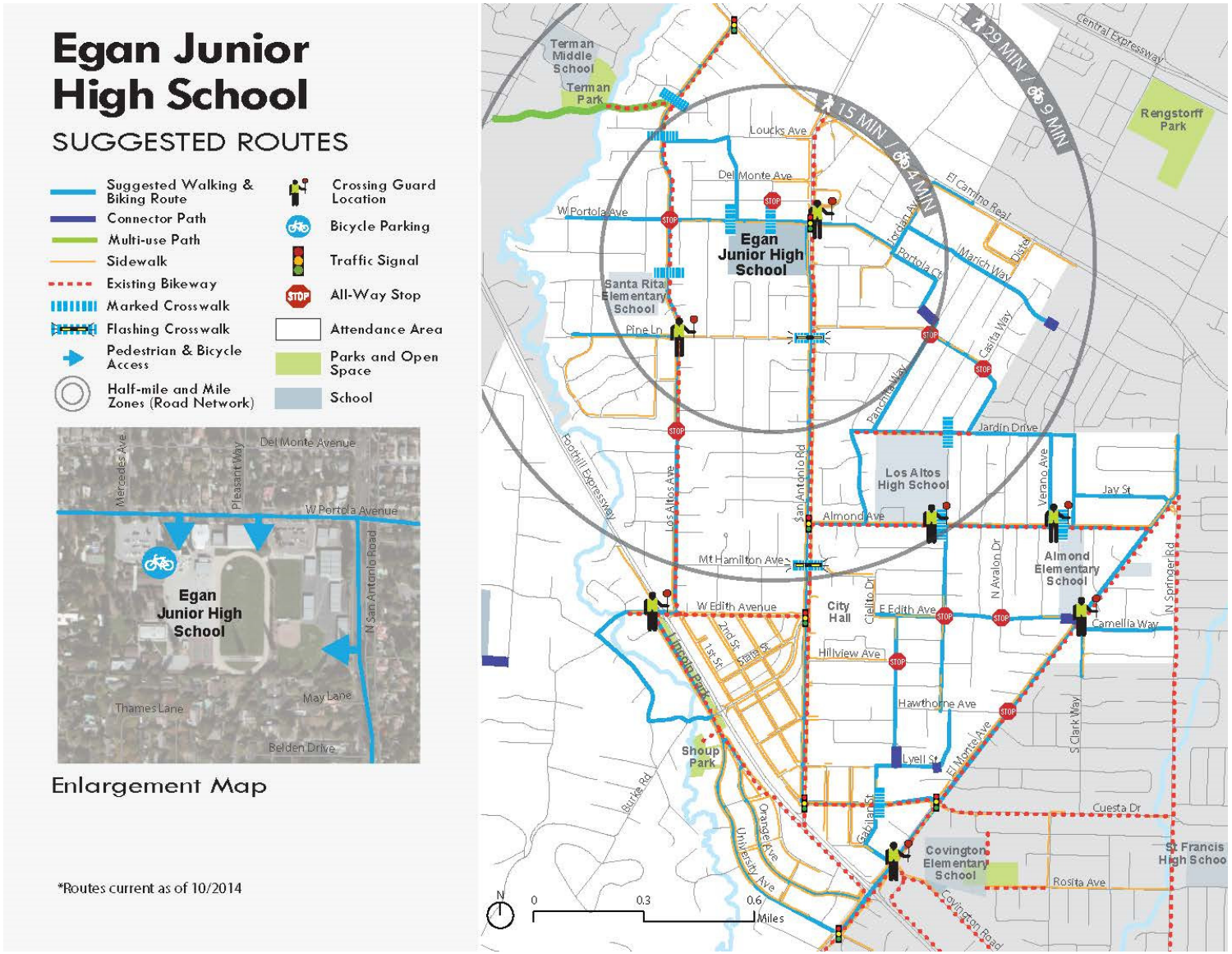


Figure E-51: Egan Junior High School Sugggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

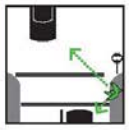
Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.



Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Egan Junior High School

Figure E-52: Egan Junior School Sugggested Routes to School map, back

E.11. Blach Intermediate School

E.11.1. School Characteristics

Blach Intermediate School is a 7-8 grade school, serving 512 students, located at 1120 Covington Road in Los Altos. Based on student hand tallies collected spring 2014, 12 percent of students currently walk and a staggering 48 percent of students bike. Junior high attendance boundaries extend much further than elementary schools, and may account for the dramatic difference in walking and biking. Students in junior high are also much more independent than elementary school students, again contributing to the high biking mode share. The school is located on the south side of Covington Road, in close proximity to several elementary and high schools.

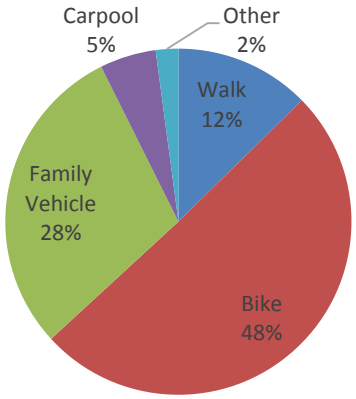


Figure E-53: Blach Intermediate mode split, Spring 2014 hand tallies

E.11.2. Pedestrian/Bicycle Facilities and Access

Blach can be accessed by pedestrians and bicyclists on the north and south sides of campus. There are high visibility school crosswalks at the front and back entrances, but not crossing guards. Recommended improvements come from a Neighborhood Traffic Study completed in January 2011. Recommendations can be found in **Table E-10**.

E.11.3. Reported Collisions

From 2009-2011, there were two collisions involving a pedestrian or bicyclist within a half-mile of the school.

¼ mi	½ mi	¼ mi	½ mi
0	1	0	1

Figure E-54: Collisions involving pedestrians or bicyclists near Blach Intermediate, 2009-2011

E.11.4. Existing SRTS Programs

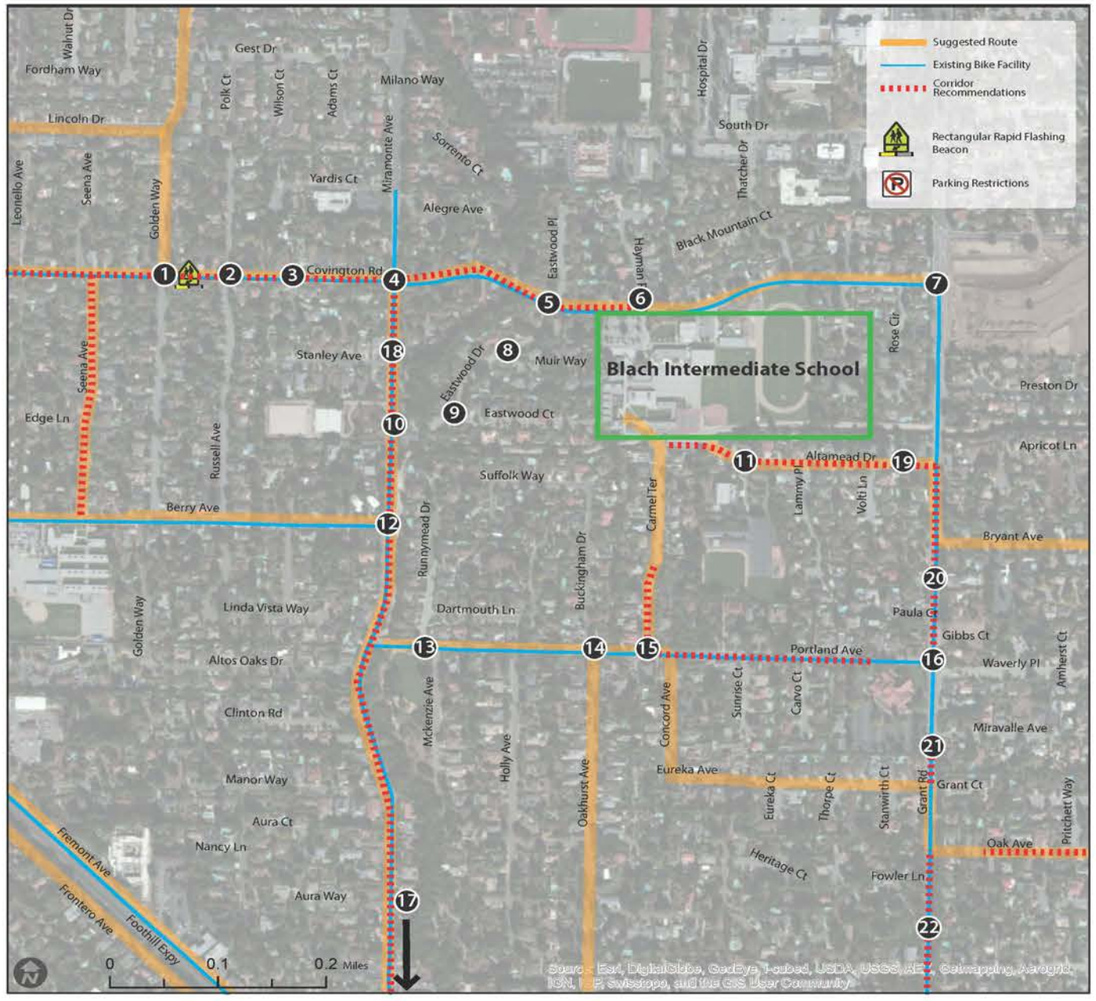
Blach Intermediate participates in the Walk or Wheel (WoW!) program through GreenTown Los Altos. Each year there is a Greenest Schools Challenge in the city, spanning from Earth Day to Bike to School Day. The school also has a Suggested Routes to School map (see **Figure E-56**) and access to bike rodeos, school safety assemblies, and the Drive that Bike program.

Table E-10: Blach Intermediate School Recommendations

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
1	Covington Road at Golden Way	• Reported driver noncompliance at existing high visibility crosswalks.	• Install yield teeth. • Install Rectangular Rapid Flashing Beacon (RRFB).	City of Los Altos
2	Covington Road at Russell Avenue	• Difficult for residents to leave in the morning, contributes to lack of visibility of pedestrians and cyclists.	• Stencil KEEP CLEAR at the intersections.	City of Los Altos
3	Covington Road at Covington Court	• Difficult for residents to leave in the morning, contributes to lack of visibility of pedestrians and cyclists.	• Stencil KEEP CLEAR at the intersections.	City of Los Altos
4	Covington Road at Miramonte Avenue	• Reported need to improve traffic flow and reduce vehicular delay. • Reported need to improve intersection right-of-way control and driver yielding • Reported need to batch pedestrian crossings • Reported need to reduce potential for speeding through the intersection on major street approaches.	• Install 2 phase traffic signal. • Add crosswalk across north leg. • Add advanced stop bars. • Build out corners to improve pedestrian and bicycle storage areas. • Rest signal in all-red during off peak times.	City of Los Altos
5	Eastwood Drive at Covington Road	• Reported high vehicle speeds entering Eastwood Drive. • Lack of bicycle facilities.	• Tighten corner radii at Miramonte Avenue and Covington Road. • Add shoulder stripe or bike lanes.	City of Los Altos
6	Blach Intermediate School Entrance	• Wide turning radius on key school access point.	• Tighten corner radius at western driveway on Covington Road. • Widen sidewalk on west side of parking lot.	City of Los Altos
7	Covington Road at Grant Road	• Reported vehicle encroachment into crosswalk.	• Install advanced stop bars.	City of Los Altos
8	Eastwood Drive at Muir Way	• Slow vehicle traffic to minimize conflicts with bicycles.	• Consider constructing traffic circle.	City of Los Altos
9	Eastwood Drive at Eastwood Court	• Vehicle/bicycle conflict points.	• Consider constructing traffic circle.	City of Los Altos
10	Eastwood Drive at Miramonte Ave	• Reported high vehicle speeds entering Eastwood Drive. • Lack of bicycle facilities.	• Tighten corner radii at Miramonte Avenue and Covington Road. • Add shoulder stripe or bike lanes.	City of Los Altos
11	Altamead Drive	• Reported concerns with visibility of existing crosswalk. Missing curb ramps.	• Enhance existing crosswalk at Miramonte School with high visibility striping and signing, add refuge island, and provide ADA-compliant curb ramps.	City of Los Altos
12	Miramonte Avenue at Berry Ave	• Connection needed to Class I path on Berry Avenue. School walking route with no marked crosswalk on Miramonte Avenue.	• At Berry Avenue, install high visibility crosswalk with enhancements including media refuge and actuated beacon	City of Los Altos

ID	Location	Reported or Observed Challenge	Recommended Improvement	Lead Agency
13	Portland Avenue at Runnymead Drive	• Lack of crossing opportunity serving Heritage Oaks Park. • Reported need for traffic calming device and improved visibility of/ protection of tree.	• Study installation of high visibility crosswalk including enhancements such as median refuge and actuated beacon • Extend median through Runnymead/McKenzie.	City of Los Altos
14	Portland Avenue at Buckingham Drive	• Vehicles currently travel through crossing area before stopping, creating a potential conflict with pedestrians	• Relocate stop bar on Buckingham Drive to behind pedestrian crossing.	City of Los Altos
15	Carmel Terrace and north side of Portland Avenue	• Sidewalk gap leading to school.	• Install sidewalk to close gap. • Consider restricting parking during school hours.	City of Los Altos
16	Grant Road at Portland Road	• Reported need to reduce cut through traffic on Carmel Terrace/Altamead Drive.	• Work with Mountain View to evaluate potential signalization.	City of Mountain View
17	Fremont Ave at Miramonte Ave	• School route.	• Remove slip lane on northwest corner per Pedestrian Master Plan.	City of Los Altos
18	Miramonte Avenue from Eastwood Drive to Covington Road	• No pedestrian facilities. • No queuing area for pedestrian traffic.	• Extend east side sidewalk from Eastwood Drive to Covington Road. • At Portland Avenue, bulb out the southeast corner and add advanced stop bars.	City of Los Altos
19	Altamead Drive from Grant Road to Carmel Terrace	• Wide road with reported high speeds. Bicycle connection needed to Blach, MVHS, and Miramonte School.	• Add shoulder stripe or bike lanes between Grant Road and Carmel Terrace.	City of Los Altos
20	Grant Road from Portland Avenue to Bryant Street	• No pedestrian path.	• Install path improvements.	City of Los Altos
21	Grant Road from Eureka Avenue to Miravalle Avenue	• Sidewalk gap leading to school.	• Install sidewalk to close gap.	City of Los Altos
22	Grant Road from Oak Avenue to Fremont Avenue	• No pedestrian path.	• Install multi-use path.	City of Los Altos
23	Grant Road from Newcastle Drive to Los Altos boundary	• School biking route with frequent driveways and poor cyclist visibility	• Prioritize installing Class II bike lanes per Bicycle Transportation Plan.	City of Los Altos
24	Covington Road	• Observed wrong way bicycle riding and scooting.	• Provide class I path on south side.	City of Los Altos

Blach Intermediate School



Improvement Recommendations

1. **Covington Road at Golden Way**
   a. Install yield teeth.
   b. Install rectangular rapid flashing beacon.
2. **Covington Road at Russell Avenue**
   a. Stencil KEEP CLEAR at intersection.
3. **Covington Road at Covington Court**
   a. Stencil KEEP CLEAR at intersection
4. **Covington Road at Miramonte Avenue**
   a. Install 2 phase traffic signal.
   b. Add crosswalk across north leg.
   c. Add advanced stop bars.
   d. Build out corners to improve pedestrian and bicycle storage areas.
   e. Rest signal in all-red during off peak times.
5. **Eastwood Drive at Covington Road**
   a. Tighten corner radii.
   b. Add shoulder stripe or bike lane.
6. **Blach Intermediate School Entrance**
   a. Tighten corner radius at western driveway on Covington Road.
   b. Widen sidewalk on west side of parking lot.
7. **Covington Road at Grant Road**
   a. Add advance stop bars.
8. **Eastwood Drive at Muir Way**
   a. Consider constructing traffic circle.
9. **Eastwood Drive at Eastwood Court**
   a. Consider constructing traffic circle.
10. **Eastwood Drive at Miramonte Avenue**
    a. Tighten corner radii.
    b. Add shoulder stripe or bike lane.
11. **Altamead Drive**
    a. Enhance existing crosswalk at Miramonte School with high visibility and signage.
12. **Miramonte Avenue at Berry Avenue**
    a. At Berry Avenue, install high visibility crosswalk including enhancements such as median refuge and actuated beacon.
13. **Portland Avenue at Runnymead Drive**
    a. Study installation of high visibility crosswalk.
    b. Extend median through Runnymead Drive and McKenzie Avenue.
14. **Portland Avenue at Buckingham Drive**
    a. Relocate stop bar on Buckingham Drive to behind pedestrian crossing.
15. **Carmel Terrace at Portland Avenue**
    a. Install sidewalk to close gap.
    b. Consider restricting parking during school hours.
16. **Grant Road at Portland Ave**
    a. Work with Mountain View to evaluate potential signalization.
17. **Fremont Avenue at Miramonte Avenue**
    a. Remove slip lane on northwest corner per Pedestrian Master Plan.
18. **Miramonte Avenue from Eastwood Drive to Covington Road**
    a. Extend east sidewalk from Eastwood Drive to Covington Road.
    b. At Portland Avenue, bulb out the southeast corner and add advanced stop bars.
19. **Altamead Drive from Grant Road to Carmel Terrace**
    a. Add shoulder stripe or bike lanes between Grant Road and Carmel Terrace.
    b. At Portland Avenue, bulb out the southeast corner and add advanced stop bars.
20. **Grant Road from Portland Avenue to Bryant Street**
    a. Install path improvement.
21. **Grant Road from Eureka Avenue to Miravalle Avenue**
    a. Install sidewalk to close gap.
22. **Grant Road from Oak Avenue to Fremont Ave**
    a. Install multi-use path.

Figure E-55: Blach Intermediate School improvement plan

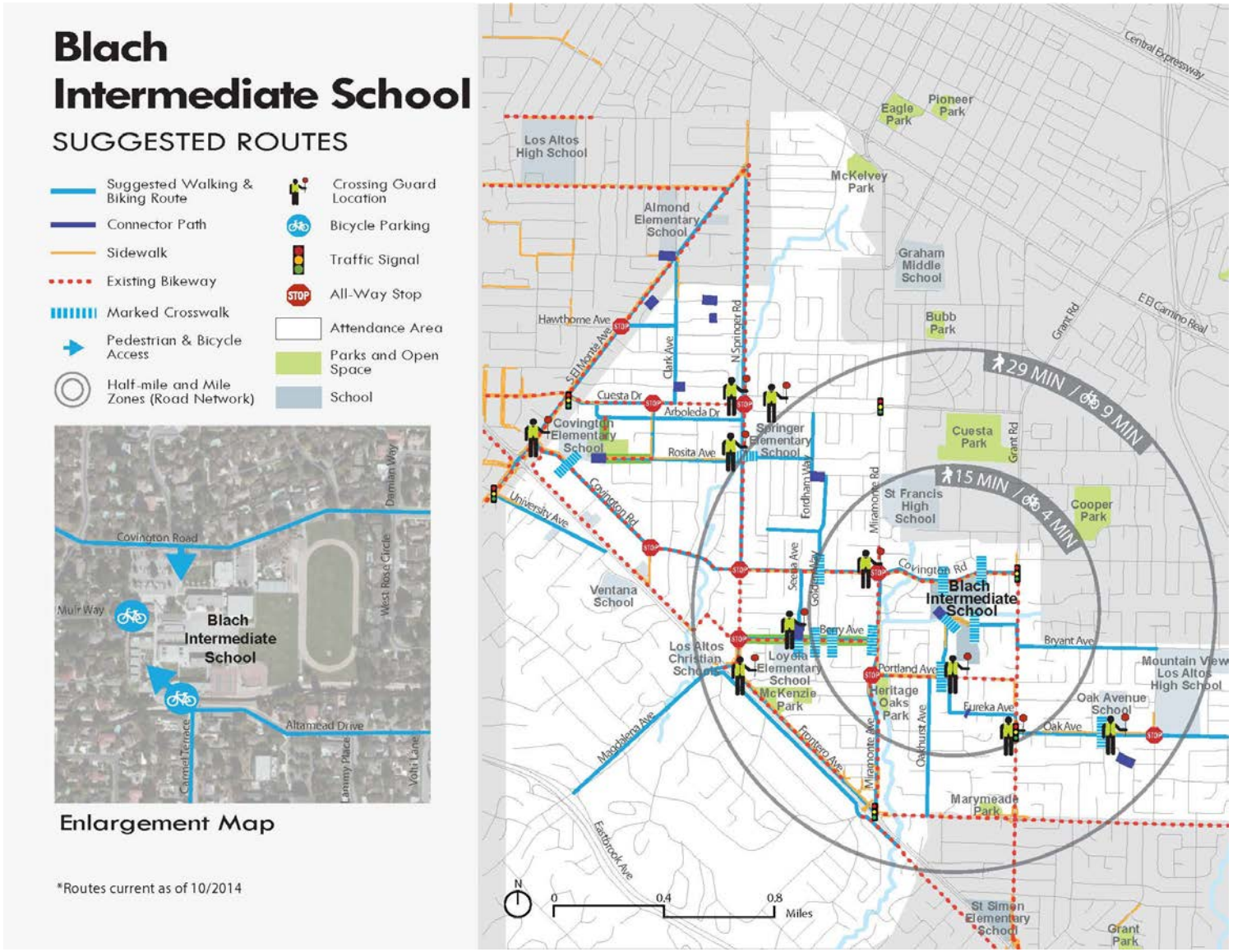


Figure E-56: Blach Intermediate School Sugggested Routes to School map, front

How to Use this Map

This suggested route to school map helps parents and students get to and from school in the safest and most direct way possible.

Obey crossing guards. They are there to help everyone cross congested intersections safely.

Half-Mile and Mile Zones

If you live within a half-mile or a mile from school, commuting on foot or bicycle can be just as convenient as driving, and much more fun. It can also be a great way for you and your child to get regular exercise, and for your child to get to school ready for to learn.

Pick a day and use the map to find the best route to school from your home. Even one or two days can make a big difference - for you, your child, and the environment. Already walk or bike? Use the map to help choose the best routes ot to explore new areas around your school.

Drive Safely

- Slow down and use extra caution in school zones and along commute routes! Signal your turns and yield to pedestrians.
- Help reduce traffic congestion near your school by carpooling with a neighbor and avoiding the last minute rush whenever possible.
- Obey adult crossing guards and "No Right Turn on Red" signs posted at designated school intersections. This allows students to cross safely without cars turning through crosswalks.
- Don't make U-turns and other unsafe maneuvers that put other road users at risk.
- When dropping off or picking up your student, follow school guidelines and always ensure that he/she exits or enters the car from the curb side.
- Never double park, block access ramps or stop where prohibited.
- Avoid texting, phone calls and other distractions when driving.

Parents: Help your student learn how to share the road safely with other users. Children who regularly practice safe walking and biking skills are more likely to make safer choices as teenagers.

Bike Safely

Wear your helmet and buckle it every time. It's the law. To best protect your brain, your helmet must fit properly: snug and level on your head, just above your eyebrows.

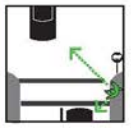
Be predictable. Obey ALL stop signs and traffic signals. Always ride on the right hand side. The best way to avoid bike crashes as well as traffic tickets is to follow the same rules of the road as apply to car drivers.

Be visible. Wear bright and reflective clothing. Use headlights and taillights.

Be alert. Watch out for drivers turning left or right, or coming out of driveways. Avoid car doors opening in front of you by riding out of the door zone. Yield to pedestrians.

Walk or Skate Safely

Be alert. Look for cars coming from all directions before entering the street - including behind you.



Cross at corners and crosswalks. This is where drivers expect pedestrians.

Don't assume drivers see you. Make eye contact before crossing intersections.

Graphics courtesy of Portland Bureau of Transportation

Los Altos Suggested Routes to School

Blach Intermediate School

Figure E-57: Blach Intermediate School Sugggested Routes to School map, back

E.12. Program Recommendations

The potential infrastructure improvements presented on the previous pages address the recommended engineering improvements. The other four "E's" are related to programs. Programs will complement engineering improvements such as sidewalk and crosswalk improvements by giving students and parents the tools they need to safely and confidently get to school. All of the Five E's work together to enhance the school commute. The following section presents recommended programs to support safer school access.

The recommended programs were developed based on review of existing programs and community identified need.

The five "E's" of Suggested Routes to School include:

- Engineering
- Education
- Encouragement
- Enforcement
- Evaluation

E.12.1. Education

Pedestrian and Bicycle Education Workshops

The City of Los Altos Police Department conducts bicycle education programs, including bike rodeos for 3rd and 4th grade students, pedestrian and bicycling safety assemblies for elementary school students, and a Drive that Bike defensive biking course for junior high school students.

Bicycle rodeos teach students rules of the road, proper use of bicycle equipment, and bicycle riding skills in a contained and safe environment, typically on a playground or blocked off school parking lot.

Recommendation: The Program should continue providing bicycle safety education and expand to include all schools in Los Altos. In addition, pedestrian safety should be integrated into existing bicycle education workshops or provided through an additional workshop focused on pedestrian safety.

Parent Education Workshops

Parent education programs are also an essential component of a Safe Routes to School effort by helping parents lead by good example. A Raising Safe Cyclists for all Parents class is offered to schools in Los Altos. Parents are taught key traffic safety skills they can practice with their children anytime they walk or bicycle as a family. Example parent education curriculum elements include basic pedestrian safety skills such as "look left, right, left," obeying crossing guards, bicycle hand signals, and riding safely with traffic. The curriculum may also include safe driving behaviors, which is especially important in school zones.

Recommendation: The Program should continue providing parent traffic safety workshops and expand to include all schools in Los Altos.

E.12.2.Encouragement

Monthly Walk and Roll to School Days

Eleven schools in Los Altos currently participate in the Walk or Wheel (WoW!) program through GreenTown Los Altos. At these schools, parent-teacher organizations have assigned volunteers to work with students to embrace walking and rolling to school. The WoW program utilizes contests and incentives to encourage walking and rolling to school. Each year there is a Greenest Schools Challenge held throughout the City, spanning from Earth Day to Bike to School Day.

Recommendation: The Program should continue Walk or Wheel to School Days and include reference to Suggested Routes to School maps in outreach materials for families that are new to the program.

Suggested Routes to School Maps

Since 2008, ten schools in Los Altos have used Suggested Routes to School maps to identify the best routes for walking and bicycling to school. These maps have been updated to locations of crossing guards, stop signs, crosswalks, bike parking, and walking/biking travel times.

Recommendation: The Program should integrate the updated maps into school, City, and GreenTown Los Altos websites and newsletters. The maps should be shared with parents at orientation and in advance of events such as Walk or Wheel to School Day.

Walking School Bus

A Walking School Bus is a group of students walking to school with one or more adults. While a walking school bus program requires parent volunteers, this program can help with traffic congestion around the school, help develop healthy habits, and build community.

Recommendation: Schools should adopt the Walking School Bus program where appropriate. The program may be organized through outreach including tabling, meet and greet sessions, and through school communications. Meet and greet sessions may bring parents together and instill a sense of comfort with parents leading the Walking School Bus.

Bike Train

Bike trains are based on the same concept as walking school buses: they provide a way for children to bike to school in a group with adult supervision, whether it's during a special event or a daily trip to school. While a bike train program requires parent volunteers, this program can help with traffic congestion around the school, help develop healthy habits, and build community.

Recommendation: Schools should adopt a bike train program where appropriate. The program may be organized through outreach including tabling, meet and greet sessions, and through school communications. Meet and greet sessions may bring parents together and instill a sense of comfort with parents leading the bike train. Parent leaders should take the Raising Safe Cyclists for all Parents class prior to leading a bike train.

Park-and-Walk Locations

Park and Walk Locations are sites identified as a remote drop-off for students to walk part of the way to school in order to decrease traffic congestion around the school and encourage student physical activity. These locations can be added to a school's Suggested Route map for promotion.

Recommendation: Schools should develop a Park-and-Walk program where appropriate. As locations are determined, they should be added to the Suggested Route map for promotion. The maps should be distributed in back to school packets and be available in the school office. School newsletters or related school news should remind parents of this program.

Carpooling

Carpooling complements walking and biking modes by reducing vehicle congestion and increasing pedestrian and bicyclist safety at schools, and by providing a greener transportation alternative for families who live further away from school.

Recommendation: Carpools should be organized where appropriate. Parents can use a variety of mechanisms to organize carpools, including school newsletters and tabling at events.

E.12.3. Enforcement

Crossing Guard Program

The effectiveness of a crossing guard can be the deciding factor in a parent feeling comfortable enough to let their child walk or bicycle to school. Currently, the cost for adult crossing guards in the City is shared between the City and the Los Altos School District.

Recommendation: The Program should continue providing adult crossing guards at key locations through a partnership between the City and School District.

School Crosswalk Stings/Enforcement Campaigns

In a crosswalk sting operation, the Police Department targets drivers who fail to yield to pedestrians in a school crosswalk. A plain-clothes decoy police officer ventures into a crosswalk and motorists who do not yield are given a citation by a second officer stationed nearby. The Police Department or School District may alert the media to the crosswalk stings to increase public awareness of the crosswalk safety issue. Other common enforcement campaigns include targeting driver violations including speeding or talking/texting on cellphones.

Recommendation: This Report recommends the City and School District work with the Police Department to conduct school crosswalk stings and enforcement campaigns.

E.12.4.Evaluation

Parent surveys and student hand tallies are an important evaluation tool for Safe Routes to School. Student hand tallies are conducted twice each year in two classrooms per grade level at each school. A teacher or volunteer asks students to raise their hand if they walked, biked, were driven to school, carpooled, or took transit that morning. Tallies provide a mechanism to track mode shift over time.

Parent surveys ask opinion questions regarding travel to school, while also asking how students arrived at and left school in the past week. At Back to School Nights in fall 2014, parents were invited to complete online parent surveys.

Recommendation: The Program should continue conducting student hand tallies twice each year and expand to conduct parent surveys once per year.

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Appendix F: Benefit Impact Analysis

Memorandum

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Date: January 28, 2015

To: City of Los Altos, CA

From: Alta Planning + Design

Re: Los Altos Pedestrian Master Plan – Impact Analysis

INTRODUCTION

This memo contains an analysis of the quantified benefits that might occur as the result of implementing the recommended projects in the Los Altos Pedestrian Master Plan. The analysis estimates the number of pedestrian trips that would directly result from the implementation of the project list, approximates the corresponding reduction in vehicle trips and vehicle miles travelled (VMT), and assesses the potential health-, environmental-, and transportation-related benefits.

METHODOLOGY

The impact analysis utilizes a standard methodology for calculating health-, environmental-, and transportation-related benefits. All projections are based on five-year estimates from the U.S. Census Bureau, which are then extrapolated through the use of various multipliers derived from national studies and quantified in terms of monetary value where appropriate. The estimated monetary values are then calibrated to baseline values and compared to pedestrian mode splits of peer cities that recently have implemented similar projects.

Selecting Peer Cities

In order to estimate future walking mode split increases that may result from the implementation of the Los Altos Pedestrian Master Plan project list, the consultant team examined levels of walking in municipalities with similar infrastructure already in place, called peer cities. Selection factors in choosing these municipalities included the existing street network, geographic location, climate, typography, socio-demographic data, and the completeness of the city's pedestrian network. **Table F-1** shows general characteristics of Los Altos and the selected peer cities.

Table F-1: General Characteristics Comparison of Selected Peer Cities

	Los Altos	Burlingame	Decatur, GA	East Palo Alto	Menlo Park	Mountain View	Riverside	San Mateo	Santa Clara
Street Network[1]	Suburban collectors	Loose grid	Suburban collectors	Suburban collectors	Suburban collectors	Loose grid	Suburban collectors	Loose grid	Tight grid
Region	Bay Area	Bay Area	Southeast	Bay Area	Bay Area	Bay Area	S. CA	Bay Area	Bay Area
Climate	Mediter.	Mediter.	Subtrop.	Mediter.	Mediter.	Mediter.	Semi-arid	Mediter.	Mediter.
Elevation (ft)	157	39	1,043	20	72	105	860	46	75
Population[2]	28,976	28,806	19,335	28,155	32,026	74,066	303,871	97,207	116,468
Population Density per Square Mile[3]	4,500	4,800	4,700	11,000	3,271	6,000	3,900	8,013	6,300
Percent Minority Population[4]	29.4%	32.3%	26.5%	71.2%	29.8%	44.0%	43.5%	53.25	55.0%
Bicycle Friendly Community Award Level[5]	Bronze	None	Bronze	None	Silver	Silver	Bronze	None	Bronze
Walk Friendly Community Award Level[6]	None	None	None	None	None	None	None	None	None

1 *American Community Survey. (2009-2013).*

2 Ibid.

3 Ibid.

4 *Ibid.*

5 *"Current Bicycle Friendly Communities." (2014). The League of American Bicyclists. http://bikeleague.org/sites/default/files/BFC_MasterList_2014.pdf.*

6 *"Full List of Walk Friendly Communities." (2014). Walk Friendly Communities. http://www.walkfriendly.org/communities/list.cfm.*

Burlingame, Decatur, East Palo Alto, Menlo Park, Mountain View, Riverside, San Mateo, and Santa Clara were chosen by the consultant team as peer cities because they have similar design, geographic, and demographic characteristics to Los Altos.

After the identification of peer cities based on general characteristics, the consultant team analyzed the bike commute data from each city. Compared to selected peer cities, Los Altos has the lowest walk commute mode share (2.5%) according to five-year American Community Survey data from 2009 to 2013. **Table F-2** shows the current and estimated mode splits for Los Altos.

Table F-2: Estimated Future Walk Bike Mode Split

	Los Altos	Burlingame	Decatur, GA	East Palo Alto	Menlo Park	Mountain View	Riverside	San Mateo	Santa Clara
Employed Population[7]	12,294	14,710	9,646	12,099	15,730	41,615	124,451	51,126	55,882
Daily Walk Commute Trips[8]	276	443	379	396	421	1,118	3,512	1,770	1,867
Walk Commute Mode Share[9]	2.5%	3.0%	3.9%	3.3%	2.7%	2.7%	2.8%	3.5%	3.3%
Estimated Future Walk Commute Mode Share*	3.1%								

*Based on the difference between Los Altos existing walk commute mode share and the 50th percentile bicycle mode share of peer cities.

Multipliers

Multipliers were developed through an analysis of the relationship between two or more model inputs (such as the number of vehicle-miles reduced) and associated model outputs (such as the cost of road maintenance per every vehicle-mile travelled). The model used for this study utilizes over 50 multipliers in order to extrapolate daily, monthly, and annual trip rates, trip distance, vehicle trips replaced, emission rates, physical activity rates, and other externalities linked to an increase in bicycling and walking trips and to a decrease in motor vehicle trips. Individual multipliers of note are covered in more detail in the sections that follow.

Limitations

The primary purpose of the analysis is to enable a more informed policy discussion on whether and how best to invest in a pedestrian network in Los Altos. Even with extensive primary and secondary research incorporated into the impact analysis model, it is impossible to accurately predict the exact impacts of various

7 American Community Survey. (2009-2013).

8 Ibid.

9 Ibid.

factors. Accordingly, all estimated benefit values are rounded and should be considered order of magnitude estimates, rather than exact amounts.

Health Benefits

The implementation of a well-designed, connected pedestrian network across Los Altos will encourage a shift from energy-intensive modes of transportation such as cars and truck to active modes of transportation such as walking. The impact analysis model evaluates and quantifies the estimated increase in walking trips, the estimated increase in hours of physical activity, and the annual savings resulting from reduced healthcare costs. In order to evaluate these health factors, the consultant team analyzed readily-available data inputs.

Health Calculations

The primary inputs into the health component of the impact analysis model come from five-year estimates of commute trip data from the U.S. Census Bureau. Five-year estimates were chosen because they are the most reliable dataset available from the U.S. Census Bureau between the 10-year censuses and because they allow for analysis at the individual census tract level. [10]

After extrapolating the commute trip data to recreational trips and to estimate daily, monthly, and annual trip values, the consultant team used a series of multipliers and assumptions to calculate the various health factors. If Los Altos implements all of the recommended projects, the City could experience 613,000 more walking trips than is currently experienced. Using trip distance multipliers derived the National Household Travel Survey (NHTS) and annual vehicle trip replacement factors derived from a combination of US Census data, NHTS data, and historic Safe Routes to School data, the estimated increase in distance walked is 169,000 miles per year, resulting in 203,000 fewer vehicle-miles travelled (VMT) annually.

These annual distance estimates and VMT reduction estimates were used to calculate changes in physical activity rates among residents in Los Altos. Implementation of the recommended projects could result in 57,000 more hours of physical activity per year among Los Altos residents than currently occurs. This increase in physical activity means that 438 more residents will be meeting the Centers for Disease Control and Prevention (CDC) minimum number of hours of physical activity per day, which is equal to a jump from approximately 15.7 percent of the regional physical activity need being met to 17.2 percent of the regional physical activity need being met – an increase of 1.5 percent. This growth in the percent of people within the city exercising also equates to a $19,000 reduction in healthcare expenses per year. **Table F-3** summarizes the annual health benefits for Los Altos.

Table F-3: Annual Health Benefits

	Baseline	Low Estimate	Mid Estimate	High Estimate
Annual Walk Trips	1,532,000	1,903,000	**2,145,000**	2,301,000
Annual Miles Walked	1,009,000	1,111,000	**1,178,000**	1,221,000
Annual Hours of Physical Activity	336,000	370,000	**393,000**	407,000
Number of Residents Meeting CDC Recommended Number of Hours of Physical Activity	2,585	2,846	**3,023**	3,131
Physical Activity Need Met	15.7%	16.6%	**17.2%**	17.6%
Annual Healthcare Cost Savings	$48,000	$60,000	**$67,000**	$72,000

10 "When to use 1-year, 3-year, or 5-year estimates." US Census Bureau. http://www.census.gov/acs/www/guidance_for_data_users/estimates/.

Environmental Benefits

While the causes of physical inactivity and pollution stem from many sources, the implementation of the recommended pedestrian projects in Los Altos will contribute to a shift from energy-intensive modes of transportation such as cars and trucks to active modes of transportation such as walking. The impact analysis model evaluates and quantifies the estimated increase in walking trips and the annual savings from reduced vehicle emissions. In order to evaluate these environmental factors, a number of readily-available data inputs were analyzed.

2.1.1 Environmental Calculations

The primary inputs into the environmental component of the impact analysis model come from five-year estimates of commute trip data from the U.S. Census Bureau. Using the same estimates of VMT reduction calculated in the health benefits analysis, changes in hydrocarbon, particulate matter, nitrous oxides, carbon monoxide, and carbon dioxide were analyzed. In total, the replacement of motor vehicle trips with active transportation trips may result in an estimated 570,000 fewer pounds of CO2 emissions per year and 7,000 fewer pounds of other vehicle emissions. Based on a review of air emissions studies, each pound of emissions were assigned an equivalent dollar amount based on how much it would cost to clean up the pollutant or the cost equivalent of how much damage the pollutant causes the environment. The total reduction in vehicle emissions is equal to a savings of $7,000 in related environmental damage or clean-up per year. Other potential ecological services associated with the bicycle projects such as water regulation, carbon sequestration, carbon storage, and waste treatment exist, but the quantifiable value of these services are negligible on the overall impact of the recommended project list. **Table F-4** summarizes the annual environmental benefits for Los Altos.

Table F-4: Annual Environmental Benefits

	Baseline	Low Estimate	Mid Estimate	High Estimate
CO2 Emission Reduced (lbs)	1,425,000	1,770,000	1,995,000	2,140,000
Other Vehicle Emissions Reduced (lbs)	16,000	20,000	**23,000**	25,000
Total Vehicle Emissions Reduced (lbs)	1,441,00	1,790,000	**2,018,000**	2,165,000
Total Vehicle Emission Costs Reduced	**$17,000**	**$21,000**	**$24,000**	**$26,000**

2.1.2Transportation Benefits

The most readily-identifiable benefits of the recommended project list derive from their use as a connection between activity centers and residences. While no money may change hands, real savings can be estimated from the reduction costs associated with congestion, vehicle crashes, road maintenance, and household vehicle operations.

2.1.3 Transportation Calculations

The primary inputs into the transportation component of the impact analysis model come from five-year estimates of commute trip data from the U.S. Census Bureau.

Utilizing the same calculations for estimated increase in annual bicycle and walk trips and annual VMT reductions used in the health and environmental components, transportation-related cost savings can be calculated. By multiplying the amount of VMT reduced by established multipliers for traffic congestion, vehicle collisions, road maintenance, and vehicle operating costs, monetary values can be assigned to the transportation-related benefits. In total, an annual cost savings of $262,000 is estimated for the City. **Table F-5** summarizes the annual transportation benefits for Los Altos.

Table F-5: Annual Transportation Benefits

	Baseline	Low Estimate	Mid Estimate	High Estimate
Reduced Vehicle Miles Travelled	508,000	631,000	711,000	763,000
Reduced Traffic Congestion Costs	$36,000	$44,000	**$50,000**	$53,000
Reduced Vehicle Collision Costs	$254,000	$315,000	**$356,000**	$381,000
Reduce Road Maintenance costs	$76,000	$95,000	**$107,000**	$114,000
Household Vehicle Cost Savings	$290,000	$360,000	**$405,000**	$435,000
Total Vehicle Cost Savings	**$656,000**	**$814,000**	**$918,000**	**$983,000**

Total Benefits

If all of the projects on the Los Altos Pedestrian Master Plan recommended project list are implemented, the City could experience a total of $288,000 in health-, environmental-, and transportation-related benefits per year. Table F-6 summarizes all calculated benefits.

Table F-6: Total Additional Annual Benefits

	Low Estimate	Mid Estimate	High Estimate
Annual Health Benefits	$12,000	$19,000	$24,000
Annual Environmental Benefits	$4,000	**$7,000**	$9,000
Annual Transportation Benefits	$158,000	**$262,000**	$327,000
Total Annual Benefits	**$174,000**	**$288,000**	**$378,000**