Groveland Active Transportation Circulation Plan

Final Plan | February 2015

TCTC

alta PLANNING + DESIGN

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Prepared for the Tuolumne County Transportation Council by Alta Planning + Design

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1 Introduction

Walking and bicycling are primary forms of transportation, exercise, and social activity. To ensure walking and bicycling as viable everyday options requires working with community members and local businesses to build a shared vision for how to accommodate facilities and to identify what is the most achievable in the short, medium, and long terms.

Studies show that these efforts are also good for a community's economic and social stability, and can make communities more attractive for tourism. For Groveland, a gateway community of Yosemite National Park, there are many opportunities to support the existing tourism by creating an environment that supports walking, bicycling, and tour bus activity.

Highly walkable downtowns, employment centers and community service nodes are essential to the long term ability to attract jobs and preserve existing neighborhoods. Such locations also bring greater community benefits as more space can be devoted to people and activities. Lastly, walkable and bikeable communities are inclusive: seniors, children, and the mobility impaired have greater access and are able to lead more independent lives.

This Active Transportation Circulation Improvement Plan provides recommended bicycle and pedestrian projects and programs for the Groveland community.

The Tuolumne County Transportation Council (TCTC) developed this plan with participation from the local community and in coordination with:

- Big Oak Flat Groveland Unified School District
- California Department of Transportation (Caltrans)
- Tuolumne County Community Resources Agency
- Tuolumne County Public Health Department
- Yosemite Chamber of Commerce

Historic downtown Groveland offers many shops, restaurants, and local businesses

1.1 Vision, Goals and Objectives

Vision Statement

The Plan envisions a bicycle and pedestrian network within Groveland that addresses the mobility needs for people of all ages and abilities, while supporting historic character, a robust tourism economy, and a more vibrant and sustainable downtown.

The following Goals, Objectives, and Policies support this vision and should guide future decisions in the Groveland community. For a list of General Plan policies relevant to this Plan, see **Section 2.1.2**.

Goal 1. Provide a safe, efficient network of bikeways and pedestrian facilities throughout Groveland.

Objective 1.A. Develop and construct a bikeway system that enhances safety and convenience of bicycling to key destinations.

- Policy 1.A.1. Provide connections to the proposed system from existing and future transit facilities in Groveland including the existing YARTS stop in Mary Laveroni Park.
- Policy 1.A.2. Integrate bicycle facilities as part of the design and construction of new roadways and, where there is available right of way, upgrades or resurfacing of existing roadways.
- Policy 1.A.3. Coordinate with Tuolumne County, Caltrans and other appropriate agencies regarding the implementation of the proposed system.
- Policy 1.A.4. Provide support facilities, such as bicycle parking and wayfinding at appropriate locations such as schools, and commercial centers.
- Policy 1.A.5 Encourage new development to accommodate bicycle activity and circulation with bikeways and support facilities.
- Policy 1.A. 6 Prioritize projects that close gaps in the bicycle network.

Objective 1.B. Develop and construct a pedestrian network that enhances safety and convenience of walking to key destinations.

- Policy 1.B.1. Provide safe and convenient access to existing and future transit facilities in Groveland including the existing YARTS stop in Mary Laveroni Park.
- Policy 1.B.2. Integrate facilities as part of the design and construction of new roadways and, where warranted, upgrades or resurfacing of existing roadways.
- Policy 1.B.3. Coordinate with Tuolumne County, Caltrans and other appropriate agencies regarding the implementation of the proposed system.
- Policy 1.B.4. Encourage new development to accommodate pedestrian activity and circulation with sidewalks and crossing facilities.
- Policy 1.B.5 Design facilities to meet the needs of all users including older adults, children, and people with disabilities.
- Policy 1.B.6 Prioritize projects that close gaps in the existing pedestrian network.

Goal 2. Ensure the timely funding and construction of bicycle and pedestrian improvements described in this plan.

Objective 2.A. Work to fund construction of bicycle and pedestrian improvements in this plan and maximize the amount of local, state, and federal funding for active transportation that can be received by Groveland and Tuolumne County.

- Policy 2.A.1. Pursue grant-funding programs for implementing the bikeway network.
- Policy 2.A.2. Partner with local agencies to pursue funding for bicycle and pedestrian projects as stand-alone grant applications or as part of larger transportation improvements.

Goal 3. Increase the number of commute, recreation, and utilitarian bicycle and walking trips.

Objective 3.A. Achieve a combined active transportation mode share of 10 percent by 2025, based on American Community Survey Journey to Work data.

- Policy 3.A.1. Accommodate the needs of all travelers through a complete streets approach to designing new transportation projects.
- Policy 3.A.2 Consider bicyclist and pedestrian needs in traffic impact fee and capital improvement program updates.

Goal 4. Increase the awareness of bicycling and pedestrian travel through encouragement, education, enforcement and evaluation programs.

Objective 4.A. Introduce and promote education, encouragement, and outreach programs for bicycle and pedestrian travel.

Policy 4.A.1. Partner with and support local groups that promote bicycle and pedestrian travel.

Objective 4.B. Support Safe Routes to Schools projects that increase the safety and numbers of students walking and biking to school.

Policy 4.B.1. Partner with local schools and organizations to support the Safe Routes to School projects recommended in this plan.

Objective 4.C. Work to incorporate active transportation into promotion of tourism and economic development.

Policy 4.C.1. Partner with tourism and economic development agencies to evaluate the existing impact and the potential for increased impact of recreational walking, running and cycling on local economies.

Policy 4.C.2. Support existing programs and establish new programs to promote Groveland as a destination for active recreation.

2 Existing Conditions

2.1 Setting

2.1.1 Overview

The Groveland Active Transportation Circulation Plan Area includes the community of Groveland, as identified by the Census-designated places (CDPs) of Groveland and Pine Mountain Lake.

Recommendations are focused on downtown Groveland and its two schools, from the intersection of Highway 120 and Merrell Road on the west to Tenaya Elementary School on the east, and up to Tioga High School on the north.

Groveland is a CDP located in southern Tuolumne County just over 3,000 feet above sea level. A designated California Historical Landmark, Groveland serves as a gateway to Yosemite National Park and the Stanislaus National Forest. The town is nestled in the rolling foothills of the Sierra Nevada mountain range, with winding mountain highways and snow during winter months.

The community of Groveland also includes the gated community of Pine Mountain Lake, located north of Highway 120 and east of Ferretti Road. Of the 2,700 homes in Pine Mountain Lake, less than one-third are occupied year-round. Most others are seasonal rentals or vacation homes.

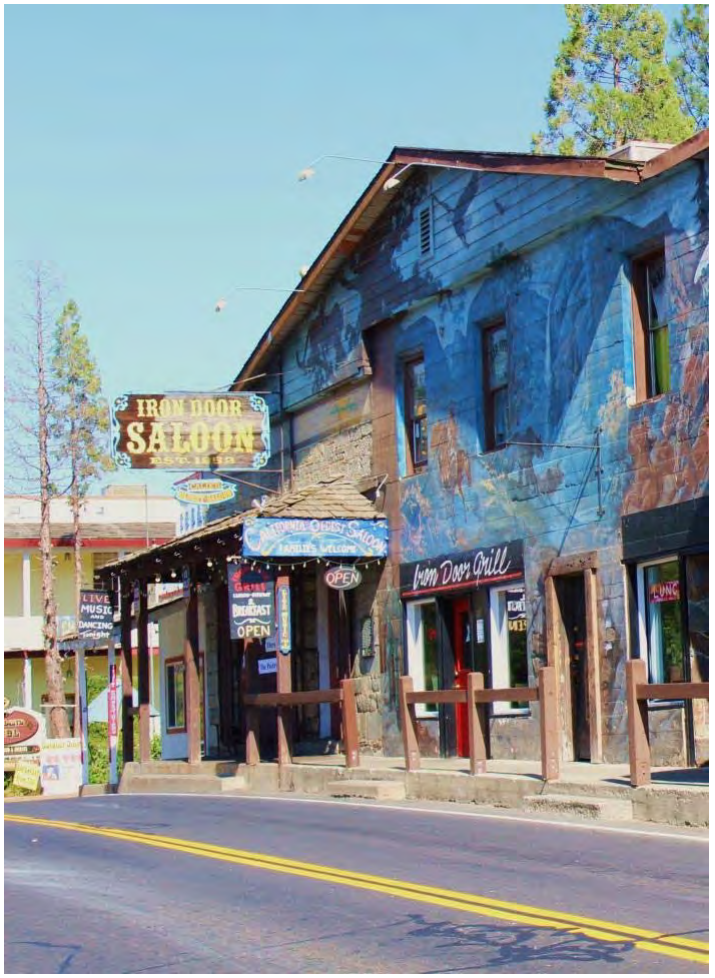
The estimated population in Groveland, including Pine Mountain Lake, is 3,397. Groveland has the highest number of residents between the ages of 40 and 44, which is slightly younger than the predominant national age group of 45 to 49 years. Groveland residents have an estimated median income of $33,772 per capita. In Pine Mountain Lake, the median income is $52,561 and the largest population segment is ages 65 to 69.

Pine Mountain Lake is a privately owned residential development in Groveland

Home to the oldest continuously-operating saloon in the state of California, Groveland hosts a number of tour groups and recreational visitors who stop for a day visit or an overnight stay on their way to Yosemite, Lake Tahoe, or the San Francisco bay area.

While the seasonal tourism generated by these national destinations supports Groveland's local economy, visitors passing through Groveland on Highway 120 can create mobility challenges for pedestrians and bicyclists. In 2013, Yosemite National Park recorded nearly four million visitors. As one of the primary routes to Yosemite from the San Francisco Bay Area and California's Central Valley, Highway 120 brings an average of 7,800 vehicles through Groveland each day.

Through this planning process the Groveland community aims to improve walking and bicycling conditions for residents, and encourage regional visitors to stop in Groveland and patronize local businesses.



Groveland's Iron Door Saloon is the oldest continuously-operational saloon in the state of California

2.1.2 Existing Plans & Policies

Tuolumne County General Plan – 1996

The General Plan serves as a blueprint for growth and development in Tuolumne County, focused on development of privately-owned parcels. While the General Plan does not propose any specific recommendations or projects within the Groveland Circulation Plan Area, it does include policies that acknowledge the need for a countywide bicycle and pedestrian network.

Relevant goals and policies from the General Plan include:

Program 1.D.d	Bicycle/Pedestrian Facilities. Identify routes for new bicycle and/or pedestrian facilities to link existing residential development to nearby commercial areas and community centers and facilities, such as schools, and to link existing and new defined communities to one another where feasible.
Goal 2.B	Encourage the use of alternative means of transportation by providing safe bicycle and pedestrian facilities between high use areas thereby reducing road congestion which improves circulation, health, and air quality within the County.
Policy 2.B.1	Actively investigate and seek alternative funding sources for bicycle and pedestrian facilities.
Policy 2.B.2	Construct bicycle and pedestrian facilities as soon as possible when funds become available.
Policy 2.B.3	Give special attention to the needs of pedestrians, bicyclists, and individuals with disabilities in the project design review process.
Program 2.B.b	Coordinate bike facility design with schools. New bicycle and pedestrian facilities should be designed to accommodate preferred safe routes to the school from nearby population centers.

The General Plan is currently being updated, with the final plan expected late 2015.

Tuolumne County Recreation Master Plan – 2002

Mandated by the 1996 General Plan, the Recreation Master Plan assesses existing recreational trail facilities in Tuolumne County and makes recommendations for improving and completing the network.

Proposed projects in the Groveland Circulation Plan Area include:

- A trail along Ferretti Road from Tioga High School to the Hetch Hetchy Right-of-Way, continuing west along the Hetch Hetchy route to Highway 120 and Merell Road.
- Hetch Hetchy Bypass Trail – A trail on the south side of Highway 120 from Ferretti Road to Tenaya Elementary School.

Tuolumne County Trails Plan – 2011

This plan provides long-range guidance for the development of a regional network of bikeways, walking paths, and equestrian trails connecting the City of Sonora and the unincorporated communities of Tuolumne County.

Specific attention is given to urban trails used for utilitarian walking and bicycling. It also proposes Groveland as a potential candidate for a 'Heritage Trail' that celebrates its history and connections to gold country and Yosemite.

The plan does not include policies for the development of trails, but does compile a comprehensive list of trail projects from other adopted plans in the County in addition to proposing some of its own.

Proposed projects in the Groveland Circulation Plan Area include:

- A bicycle facility along Ferretti Road from Highway 120 to Tioga High school. (1.9 mi)

Tuolumne County Regional Transportation Plan – 2008

The Regional Transportation Plan guides transportation investments in Tuolumne County, with the aim of developing a coordinated and balanced multi-modal network. It includes both short- and long-term recommendations for all modes of transportation, and is currently being updated.

Proposed projects in the Groveland Circulation Plan Area include:

- Improve the Hetch Hetchy Railroad Grade for bicycle and pedestrian use from Wayside Park to Deer Flat Road (0.6 miles)
- Construct new and improve existing pedestrian facilities along Highway 120 through the central downtown district. Construct combination bicycle and pedestrian facilities from Wayside Park along Highway 120 to connect with the existing route to Tenaya Elementary School originating west of Elder Lane. (0.5 miles)
- Connect Tioga High School with the Leon Rose Ballpark (Flint Court), Pine Mountain Lake Subdivision, and downtown Groveland. Widen shoulders for bicycle and pedestrian facilities from Tioga High School along Ferretti Road to Flint Court and along Ferretti Road from Flint Court to facilities beginning on Ferretti at its intersection with Pine Mountain Drive.

2.1.3 Land Use

The Tuolumne County General Plan includes land use maps and categories that guide appropriate development in the county. In Groveland, land along Highway 120 through downtown is primarily zoned for General Commercial use, with some parcels designated for Mixed Use. A small number of parcels are zoned for Heavy Commercial use. Additional General Commercial uses are allowed on parcels south and west of the intersection of Highway 120 and Ferretti Road. For a map of land use designations, see **Figure 2-1**.

The remaining land in the community is divided into a number of different residential use categories, including:

- Low Density Residential, which includes Pine Mountain Lake and the area south of downtown;
- Medium Density Residential, which includes land south of Mary Laveroni Community Park; and
- Estate Residential.

Mary Laveroni Community Park and the Groveland Community Services District parcel to the north are zoned for Public use.

2.1.4 Roadways

Groveland has two primary roadways: Highway 120 and Ferretti Road. Highway 120 runs east-west through Groveland, and Ferretti Road makes a loop to the north that intersects Highway 120 at the east end of downtown Groveland, and again several miles further east.

These streets form the core of Groveland, and are home to many of the community's businesses, civic buildings, and both schools. Both roads have narrow shoulders, often with steep slopes adjacent to the roadway.

Secondary roads provide access to buildings and parking areas off the main street.

2.1.5 Schools

There are two schools in Groveland, which is served by the Big Oak Flat-Groveland Unified School District. In addition to infrastructure conditions, drop-off and pick-up were observed on September 4, 2014 to identify challenging traffic behaviors.

Tenaya Elementary School is located on Highway 120 at the east end of town, past the intersection of Highway 120 and Elder Lane. It serves grades K-8 and has 234 students enrolled for the 2013-2014 school year.

Students do not always unload at curb side, at Tenaya Elementary. Parents stop at the earliest available location instead of pulling to the front of the loading zone.

Tioga High School is located on Ferretti Road north of Phelan Morgan Road, and has 76 students enrolled in grades 9-12.

One or two students currently walk to school at each of the local schools. No students currently bicycle. Most students are driven to school, with approximately 30 percent of students taking advantage of the free school bus available to all families.

2.1.6 Transit

The Tuolumne Trip program reimburses volunteer drivers for the mileage driven to provide rides to eligible Groveland residents, including adults over 60, those with mobility impairments, and veterans.

The Yosemite Area Regional Transportation System (YARTS) makes one stop in Groveland, in Mary Laveroni Park. Service connects riders to Sonora and the Yosemite Valley Visitor's Center, with transfers available to routes that serve Merced, Mammoth Lakes, and Lee Vining. The route that serves Groveland and Sonora operates only during the summer.

School buses serve both Tenaya Elementary School and Tioga High School, picking up students at their homes and delivering them to the school campuses. Three routes operate each morning and afternoon, and range as far as Sonora to pick up and deliver students.

Many school bus stops in Tuolumne County required an exemption from the California Highway Patrol (CHP) because the existing conditions do not meet state standards. The Big Oak Flat Groveland School District is currently in discussions with CHP regarding the exempted bus stops and the unique contexts faced in rural communities.

Additionally, a number of privately operated tour buses stop in the community.

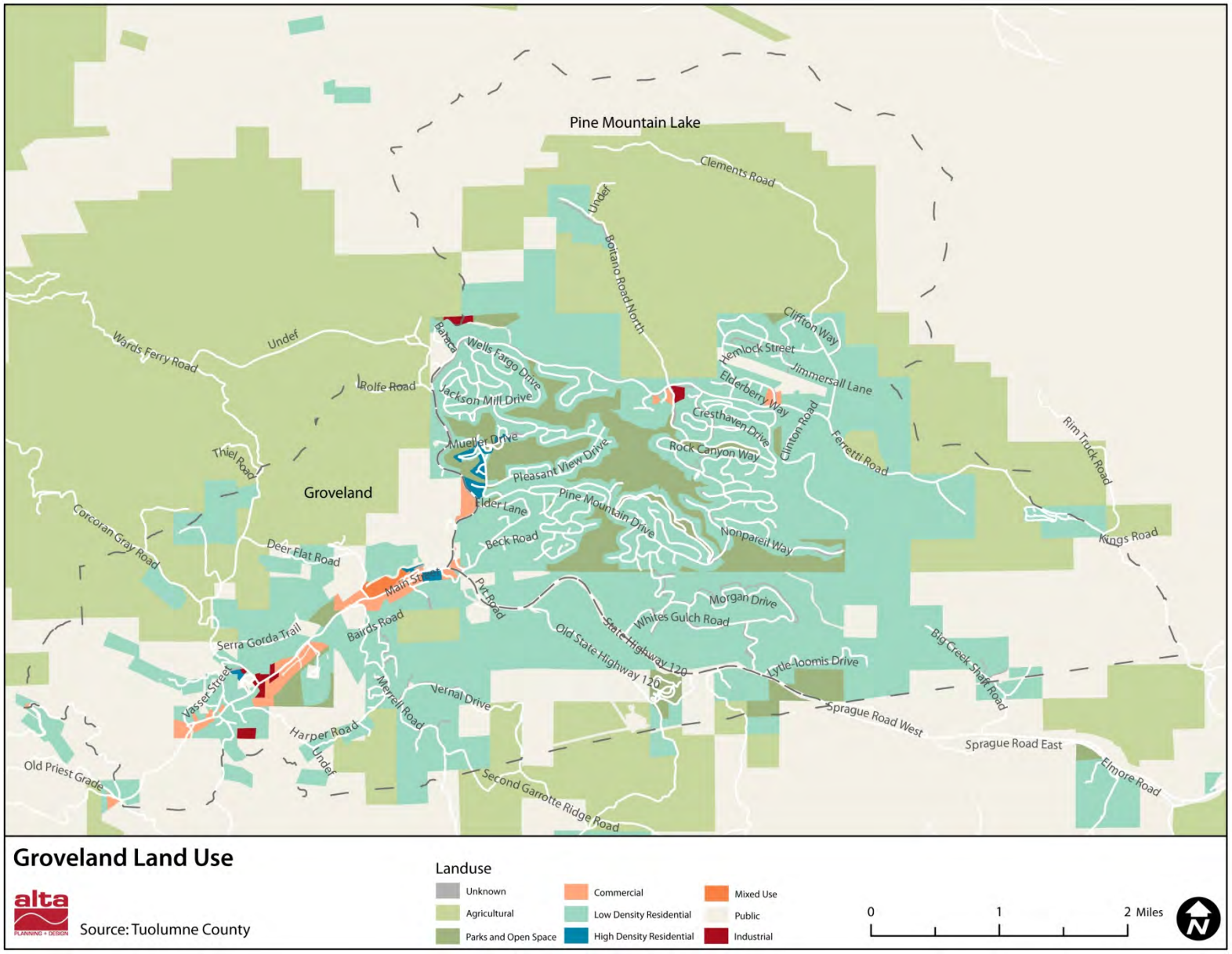


Figure 2-1: Groveland Land Use

2.2 Existing Conditions

2.2.1 Bicycle Infrastructure and Support Facilities

No bikeways currently exist in Groveland.

The Yosemite International Hostel has some bicycle racks available, and recently acquired a small fleet of bicycles for guests to use.

2.2.2 Pedestrian Infrastructure and Support Facilities

Walkways are present through portions of downtown Groveland, although they may not meet current accessibility guidelines. The walkways on the south side of Highway 120, in particular, include stairs and uneven surfaces that are not ADA compliant. Configurations vary between parcels, and include sidewalks with vertical curbs, boardwalk walkways along building fronts, and wide unmarked shoulders that are used informally as walkways. Two crosswalks are marked on Highway 120 in downtown.

A narrow sidepath exists on the north side of Highway 120 from 450 feet east of the intersection with Ferretti Road to the crosswalk in front of Tenaya Elementary School. Its separation from the roadway varies from a wide unpaved buffer with trees and grasses to a narrow strip of dirt shoulder, and in some places the paved walkway is adjacent to the paved shoulder of the highway.

One crosswalk is marked across Highway 120 in front of Tenaya Elementary School, at an uncontrolled location. Yellow transverse markings are used, and the appropriate pavement markings and warning signs alert oncoming motorists to the crossing.

There is a walkway on the east side of Ferretti Road from the Two Guys Pizza Pies driveway to Pine Mountain Drive.

For a map of existing pedestrian facilities, see **Figure 2-2**.

Types of Pedestrian Facilities

Four classes of pedestrian facilities are identified:

- Sidepath – a narrow, paved walking surface with some kind of physical separation from the roadway, such as a guard rail or landscaped strip.
- Sidewalk – A paved walking surface, often concrete, that is at least four feet wide and is separated from the roadway by a curb.
- Walkway – A paved walking surface that is too narrow to be a sidewalk.
- Boardwalk walkway – A wooden-surfaced walkway that may include stairs.

Although there are two marked crosswalks on Highway 120 in downtown Groveland, pedestrians often cross at unmarked locations

Figure 2-2: Existing Pedestrian Facilities

2.2.3 Bicycle and Pedestrian Education, Encouragement, Enforcement, and Evaluation Programs

Agency Sponsored Events

Walking Field Trips

Tenaya Elementary School students participate in walking field trips to downtown Groveland. Popular destinations include the library, fire station, post office, and Groveland Yosemite Gateway Museum.

Fire Up Your Feet

Tuolumne County Public Health has recently implemented a Fire Up Your Feet program in Groveland. Fire Up Your Feet is a national campaign led by the Safe Routes to School National Partnership. It offers resources, competition and activity ideas, and evaluation tools to participating schools to help educate and inspire students to walk or bike to school.

Health Fair

Tuolumne County Public Health also offers an annual Health Fair that includes topics related to physical activity, walking, and bicycling.

Public Events

Birding Walk

A local resident leads monthly birding walks in the Groveland Community Services District property. Each lasts about two hours in the 200 acre property, and the group has reported sightings of 131 species since 2007.

Groveland Hillclimb Bicycle Race

The Mariposa Women's Stage Race covers three days, and includes one leg through the community of Groveland. The leg begins at the bottom of the canyon at Wards Ferry and ends at the top of Deer Flat.

Groveland is home to many historic gems, including this single-cell jail house

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3 Needs Analysis

The walking, bicycling, and school travel needs of the Groveland community and visitors are diverse and are influenced by experience, confidence, age, trip type, and many other factors. This examination begins with an overview of needs by travel mode followed by community input. This chapter also reviews American Community Survey travel data and a collision analysis.

A woman crosses Highway 120 in Groveland

3.1 Pedestrians' General Needs and Preferences

Pedestrian needs encompass more than walking trips from one place to another. At some point in nearly any journey, a person walks. After disembarking from a bus or parked car, community members should be able to walk comfortably, safely, and quickly to their final destinations.

An ideal pedestrian network serves pedestrians from "8 to 80," accommodating the needs of children, the elderly, and all those in between. This "8 to 80" planning goal is best explained with a simple thought exercise:

> *Picture an 8 year old child and an 80 year old adult.*
>
> *Would you send them on a walk to the park together?*

In a walkable community, pedestrians of all ages should feel safe and comfortable traveling on foot.

Regardless of the nature of a walking trip, pedestrian needs include safety, connectivity, and accessibility to destinations. Pedestrian infrastructure should also consider those with special needs, including children, seniors and people with mobility impairments. The Americans with Disabilities Act (ADA) mandates the provision of reasonable accommodations for people whose accessibility needs require such assistance.

The most critical needs of pedestrians and possible improvements include:

Direct connections

Pedestrians must sometimes walk long distances to access adjacent destinations when the street network does not directly connect them to destinations. Pedestrian walkways and neighborhood trails that provide direct connections can improve pedestrian mobility.

Clearly Indicated Crossings

Pedestrians and motorists must be aware of the marked crossing locations for pedestrians. Crossing facilities, including crosswalks and signage, alert both motorists and pedestrians to the presence of marked crossings.

Continuous facilities

Sidewalk gaps, missing sidewalks and worn crosswalks are all barriers to pedestrian travel. Continuous facilities allow pedestrians to choose the safest and most efficient path to and from their destination, encouraging them to choose walking as their mode of transportation.

Well-designed walkways

Narrow sidewalks, sidewalks that are directly adjacent to heavy-volume roadways without vegetation or parking buffer, and sidewalks obstructed by utility boxes or lighting poles detract from the walking environment and can make it difficult or impossible for the mobility-impaired to use the sidewalk. Well-designed walkways that are adequately wide and free of obstructions give pedestrians the ability to walk safely and comfortably.

Slow traffic speeds

The likelihood of pedestrian injury or death increases dramatically with increasing motor vehicle speeds. Reducing traffic speeds significantly increases pedestrian safety, especially for children and older adults who may have difficulty seeing or judging the speed of an oncoming car.

3.2 Bicyclists' General Needs and Preferences

This Plan seeks to address the needs of all bicyclists and potential bicyclists and therefore it is important to understand the needs and preferences of all types of bicyclists.

The needs of bicyclists vary between trip purposes. For example, people who bicycle for sport purposes may prefer long and unsignalized roadways or challenging off-road trails, while bicyclists who ride with their children to school may prefer direct roadways with lower vehicular volumes and speeds. This Plan considers these differences and develops a bikeway network to serve all user types. This section describes the different types of bicyclists and the respective needs for these categories of bicyclists.

- Mountain Bikers – adults and children who ride for sport on trails that may be unpaved and include hills and descents.
- Road Bicyclists – bicycle enthusiasts who bicycle long distances for sport, often sharing the road or rural highway comfortably with motorists.
- Casual / Family / Elderly riders – adults who use bicycles for running errands, recreation, tourism, exercise, or as a family activity.
- School Children – children who bicycle to school.

An effective bicycle network accommodates bicyclists of all abilities. Casual bicyclists generally prefer roadways with low traffic volumes and low speeds. They also prefer paths that are physically separated from roadways.

3.3 General School Needs and Preferences

Safe Routes to School (SRTS) is a national effort that includes projects and programs designed to create safer, convenient, and fun opportunities to walk, bicycle, take transit, and carpool to school. Projects include infrastructure improvements that are generally focused within a two-mile radius of a school. Programs complement engineering improvements by giving students and parents the tools they need to safely and confidently walk and bicycle to school.

SRTS programs provide benefits for both students and the environment. Walking and biking to school can help with students' physical and mental health. According to the Centers for Disease Control and Prevention, children and adolescents should get at least 60 minutes of physical activity per day, which many students may not be getting. Walking, biking, and carpooling also reduce greenhouse gas emissions.

Successful SRTS programs incorporate the following Five E's:

Engineering includes bicycle and pedestrian facilities, bicycle parking, and crosswalks, as well as signage and maintenance.

Education programs improve safety and awareness. These may be delivered in schools as pedestrian or bicycle knowledge and skills programs, or provided at low or no cost through non-profit and community organizations.

Encouragement programs such as suggested routes to school maps and events such as Walk or Bike to Work and School Day reward current walkers and bicyclists and motivate more people to try walking or bicycling.

Enforcement programs that reinforce legal and respectful driving, bicycling, and walking make families feel more secure.

Evaluation programs provide a method for monitoring progress and informing future investments.

Downhill curves to the east of Groveland contribute to higher motorist speeds through downtown

3.4 Community Participation

The Groveland community has played a key role in understanding the existing conditions, community needs, and the development of recommendations contained in this Plan. The Yosemite Chamber of Commerce and the Groveland Area Prosperity Council generated support for this planning process, and helped develop community solutions.

There have been ongoing efforts to improve conditions for pedestrians and bicyclists in Groveland by TCTC, Caltrans, and Tuolumne County. This Plan is a continuation of these efforts.

3.4.1 Public Meetings

The development of this Plan began with a stakeholder meeting held at the Hotel Charlotte in Groveland on August 26, 2014. Thirteen community members were invited, to provide input on challenges and opportunities for improvement. The stakeholder group includes representatives from the local business community and schools. A second stakeholder meeting and a community-wide workshop was held on Januray 15, 2015 to review recommendations and inform the proposed Plan.

Community input gathered from the meetings can be organized in a number of categories, as follows.

Community Identified Global Needs

Currently, an average of 7,800 vehicles pass through Groveland each day on Highway 120. Some of these stop in the community, but many are passing through on the way to Yosemite National Park or the Stanislaus National Forest.

Many mountain bicyclists also travel to the Groveland region to take advantage of the trails in the surrounding foothills.

Community members expressed a desire to capture more of these potential tourism dollars by providing wayfinding to convenient parking and encouraging visitors to shop, dine, or stay in Groveland.

Community Identified Pedestrian Improvement Needs

Sidewalks: Community members expressed a need for infill of sidewalk gaps in the historic downtown area, creating a continuous pedestrian environment that unifies Groveland.

Crossing Improvements: Community members expressed a need for:

- Preserving the marked crossings in downtown
- Enhanced crossings at uncontrolled locations near schools
- Streetscape improvements and placemaking (community based approach to activating public space)

Community Identified Bicycle Improvements

Class I Multi-Use Paths: Community members expressed a need for Class I Multi-Use Paths connecting residential areas to shopping and schools. One suggested path would make use of the Hetch Hetchy Railroad Grade to connect Ferretti Road with the west end of town via a parallel route north of Highway 120.

3.5 Attractors and Generators

Walking and bicycling can be viable means of transportation if schools, downtown centers, and parks are accessible from residential neighborhoods. These "attractors" and "generators" are outlined below and will be used to inform project recommendations.

Parks and Community Centers

Downtown Groveland has a number of public destinations, including Mary Laveroni Park near the intersection of Highway 120 and Ferretti Road. Additional civic buildings located downtown include the visitors' center, library, Groveland Yosemite Gateway Museum, the post office, and the 'Little House,' a community gathering hall and senior center.

Schools

Groveland has two schools that serve the community. Tenaya Elementary School includes grades K-8 and is located on Highway 120 east of Downtown Groveland. Tioga High School offers classes for students in grades 9-12 and is located north of Downtown Groveland on Ferretti Road.

Shopping and Retail Centers

Groveland is a landmark historic town in California, located on scenic Highway 120 near the edge of Yosemite National Park. In addition to the residents of the community, businesses in Groveland serve many tourists who either stay in Groveland to be near the national park, or stop in town as they pass through. Guided tours often point visitors to the Iron Door Saloon, the oldest continually-operational saloon in the state of California.

Shopping and retail in Groveland is concentrated along Highway 120 from Deer Flat Road to Ferretti Road. Local businesses include real estate and rental agencies, hotels, restaurants and bars, and boutique shops.

Regional Destinations

Groveland lies on Highway 120, a popular route for tourists visiting Yosemite National Park and the Stanislaus National Forest.

Yosemite National Park is an internationally recognized destination and is a World Heritage Site. Over 3.7 million people visit each year.

Stanislaus National Forest is a popular recreation destination that attracts visitors for fishing, hiking, and camping.

These destinations bring millions of visitors to the Groveland area each year.

Downtown Groveland is home to many historic shops, local restaurants, and hotels that serve visitors to nearby Yosemite National Park

3.6 Current Commuting Patterns

Census data provides local information on the number and percent of workers commuting to work by bicycle and on foot, and can be used to compare trends and differences between jurisdictions.

Since 2010, Groveland has been classified as a 'Census-Designated Place' (CDP) with data collected and aggregated for the community. Prior to 2010, Groveland was part of a combined Groveland-Big Oak Flat CDP, which makes historical comparisons challenging given the previously combined and no longer combined data. For this effort, we only looked at data after 2010 to allow for comparisons. Pine Mountain Lake is a separate CDP, but was combined with the Groveland CDP for the purposes of this analysis.

The most recent complete data is for 2012, providing three time periods for comparison in this analysis. Data on modes of transportation used by commuters in Groveland is displayed in **Table 3-1**.

Table 3-1: Mode of Transportation to Work in Groveland

Mode	2010	2011	2012
Drive alone	79%	80%	81%
Carpool	14%	18%	16%
Transit	1%	1%	-
Bicycle	-	-	-
Walk	2%	-	-
Work from home	4%	1%	3%

Almost all Groveland residents travel to work in a car. In 2012, 81 percent of workers drove alone and an additional 16 percent carpooled with one or more people.

In the three years where data was available, no Groveland residents bicycled to work. In 2010 one percent of workers walked to their jobs, but none did in 2011 or 2012. Given the rural environment and long distances between homes and work destinations, the low mode shares are unsurprising.

3.7 Visitor Traffic

Groveland is also a Gateway to Yosemite National Park and experiences traffic impacts from visitors driving to Yosemite. Caltrans traffic reports estimate approximately nearly 5,000 AADT (annual average daily traffic) during peak season (May-September) goes through Groveland on Main Street-Hwy 120.

3.8 Collision Analysis

3.8.1 Overview of Collision Data

This section reviews reported collision data from the Statewide Integrated Traffic Records System (SWITRS) from 2008-2012 to identify where collisions occurred and what conditions contributed to collisions in Groveland. This analysis will inform the Plan's recommendations.

Few collisions occurred in Groveland during this five-year span. For a map of collision locations, see **Figure 3-1**.

Pedestrian-Involved Collisions

From 2008 to 2012, there were three pedestrian-involved collisions in the Groveland area. All three occurred in 2009, and resulted in injuries to the pedestrians involved. There were no reported fatalities during this time.

One collision was the result of a runaway vehicle when a motorist tried to park unsafely, causing severe injuries to a 75 year old female pedestrian.

Both other collisions occurred when pedestrians were crossing Highway 120 outside of marked crosswalks, and both pedestrians were determined 'at fault' for the collisions. A 25 year old male was struck downtown, and a 42 year old female was struck near Memorial Drive. Both pedestrians were injured, neither severely.

Weather and visibility were not primary factors in the collisions, as they occurred during daylight hours on clear days. None of the parties involved were under the influence of drugs or alcohol.

Because collisions occurred when pedestrians were crossing the roadway in potentially unsafe locations, this data suggests a need for better pedestrian facilities and education for both pedestrians and motorists.

Bicycle-Involved Collisions

From 2008 to 2012, four bicycle-involved collisions occurred in Groveland: one each in 2008 and 2010, and two collisions in 2011. All four collisions occurred in residential or unpopulated areas east of downtown Groveland. The four bicyclists involved had varying levels of injuries, none fatal.

One of the reported incidents was classified as a 'non-collision,' where a 14 year old male bicyclist fell or crashed making a turn while traveling on the wrong side of the road, but there was no second party involved.

Two of the collisions were the result of bicyclists failing to obey traffic laws—one was traveling on the wrong side of the road and made an unsafe turn, and the other failed to obey a stop sign. The bicyclists were 21 and 11 years old, both male, and both were deemed at fault.

In the fourth collision, a 51 year old male bicyclist was sideswiped in a felony hit-and-run, and was not deemed at fault. The bicyclist was injured in the collision, but not severely.

The unsafe bicycling behaviors that contributed to these collisions indicate a need for bicycle safety education in the community, in addition to raising motorist awareness of bicyclists.

3.8.2 Youth Collisions

None of the pedestrian-involved collision victims was under the age of 18, but two bicycle-involved collisions affected youth bicyclists.

Neither of the young bicyclists was wearing a helmet, which California state law requires for riders under 18 years old. Both were also violating traffic laws when the collisions occurred, with one riding on the wrong side of the road and the other failing to stop at a stop sign.

This indicates a need for bicycle education targeted at young bicyclists, with an emphasis on rules of the road and the importance of wearing a helmet.

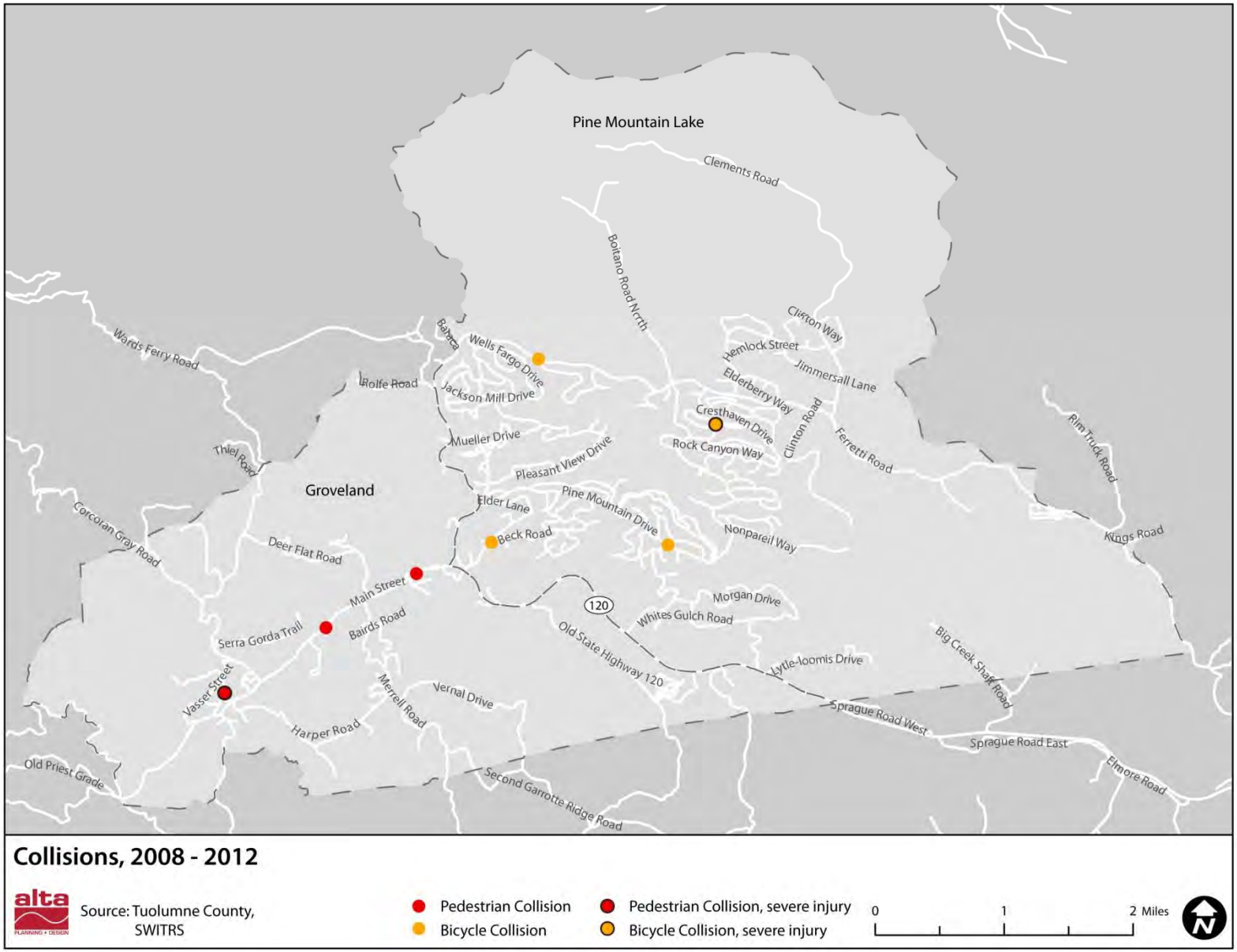

Figure 3-1: Bicycle and Pedestrian Collisions

3.9 Summary of Needs Findings

Community Members Report

- Few people currently walk and bike in Groveland, with many citing the narrow roads and lack of facilities
- More people would like to walk and bike for utilitarian purposes such as shopping and errands, and commuting to work or school.
- Many roads are too narrow for cars and bicycles to comfortably share space, and also lack shoulders and continuous sidewalks making it challenging to walk
- A need to complete the sidewalk network downtown
- Most students live too far from their school to walk or bike, and fewer than 50 percent take advantage of the school bus

Data Indicates

- Most residents currently drive to work
- Seven bicycle or pedestrian-involved collisions have been reported in the last five years.
- The majority of collisions were deemed the fault of the bicyclist or pedestrian which may indicate a need for education on biking and walking with traffic

Narrow roads can make walking uncomfortable in Groveland

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4 Recommendations

The following chapter presents recommended bicycle and pedestrian infrastructure projects, along with recommendations for programs to support and promote walking and bicycling in Groveland. These projects were identified through the plans reviewed in **Chapter 2** and input received from the community through stakeholder meetings and a public workshop.

The recommendations in this chapter set the foundation for improving safety for those who walk or bicycle to key community destinations, with a focus on economic development opportunities within Groveland.

4.1 Project Program

The following section includes recommended project programs and design guidance intended to improve conditions for walking and bicycling in Groveland.

Develop and Implement a Wayfinding Program (Priority Project)

A good walking and bicycling environment not only includes sidewalks or bicycle facilities, but also includes an easily navigable network. Community wayfinding assists pedestrian and bicyclist residents, tourists and visitors find key community destinations. Signs may also include "distance to" information, which displays mileage to community destinations, as seen in **Figure 4-1**.

As a community that serves as a gateway to Yosemite National Park, providing signs directing travelers to convenient parking in Groveland could encourage more vehicles to stop and enjoy the historic town. Directions to vehicle parking can be a component of Groveland's wayfinding program.

Recommendation

This Plan recommends the development of a pedestrian wayfinding program that offers guidance to destinations including schools, parking, Mary Laveroni Park, the Yosemite National Park Ranger Station, landmarks, and civic buildings.

Figure 4-1: Sample Wayfinding Sign

4.2 Infrastructure Projects

This section presents the recommended infrastructure projects identified to improve safety, improve walkability, improve bicycling conditions, and create a sense of place.

Planning-level cost estimates are included for each recommended improvement. **Table 4-1** presents the cost assumptions used to determine project cost estimates. Unit costs are typical or average costs experienced by California cities. While they reflect typical costs, unit costs do not consider project-specific factors such as intensive grading, landscaping, right-of-way acquisition, or other location-specific factors that may increase actual costs.

The recommendations have been organized into short and long term improvements and are shown in **Figure 4-2** through **Figure 4-5** and **Table 4-2**.

The short-term improvements are those that meet the following criteria:

- Project can be incorporated as part of an existing planned project
- Project does not require further study
- Project is a maintenance project
- Project does not require significant grading or fill

Short-term projects are considered priority and are intended for implementation within five years.

The long-term improvements are those that meet the following criteria:

- Project requires require further study
- Project requires additional outreach or consensus
- Project requires survey or other means to determine property ownership
- Project requires an easement
- Project may require funding from additional sources

Long-term projects are intended for implementation in 5-20 years, but may be implemented sooner if feasible.

Table 4-1: Unit Cost Assumptions

Item	Unit Cost	Unit
Advance yield line	$300	EA
Bicycle parking – rack	$300	EA
Bicycle parking – e-locker	$3,500	EA
Crosswalk – high visibility	$1,200	EA
Curb ramp with truncated domes	$1,400	EA
Curb striping	$2	LF
Gateway monument	TBD	EA
Path (Caltrans Class I: 10’ paved, 2’ shoulders)	$642,720	MI
Pavement striping (per stripe)	$2	LF
Pedestrian scale lighting	$415	LF
Rectangular rapid-flashing beacon	$15,000	EA
Remove asphalt pavement	$0.25	SF
Sidewalk	$125	LF
Signs	$300	EA
Shoulder widening	TBD	SF
Speed Feedback Sign	$5,000	EA

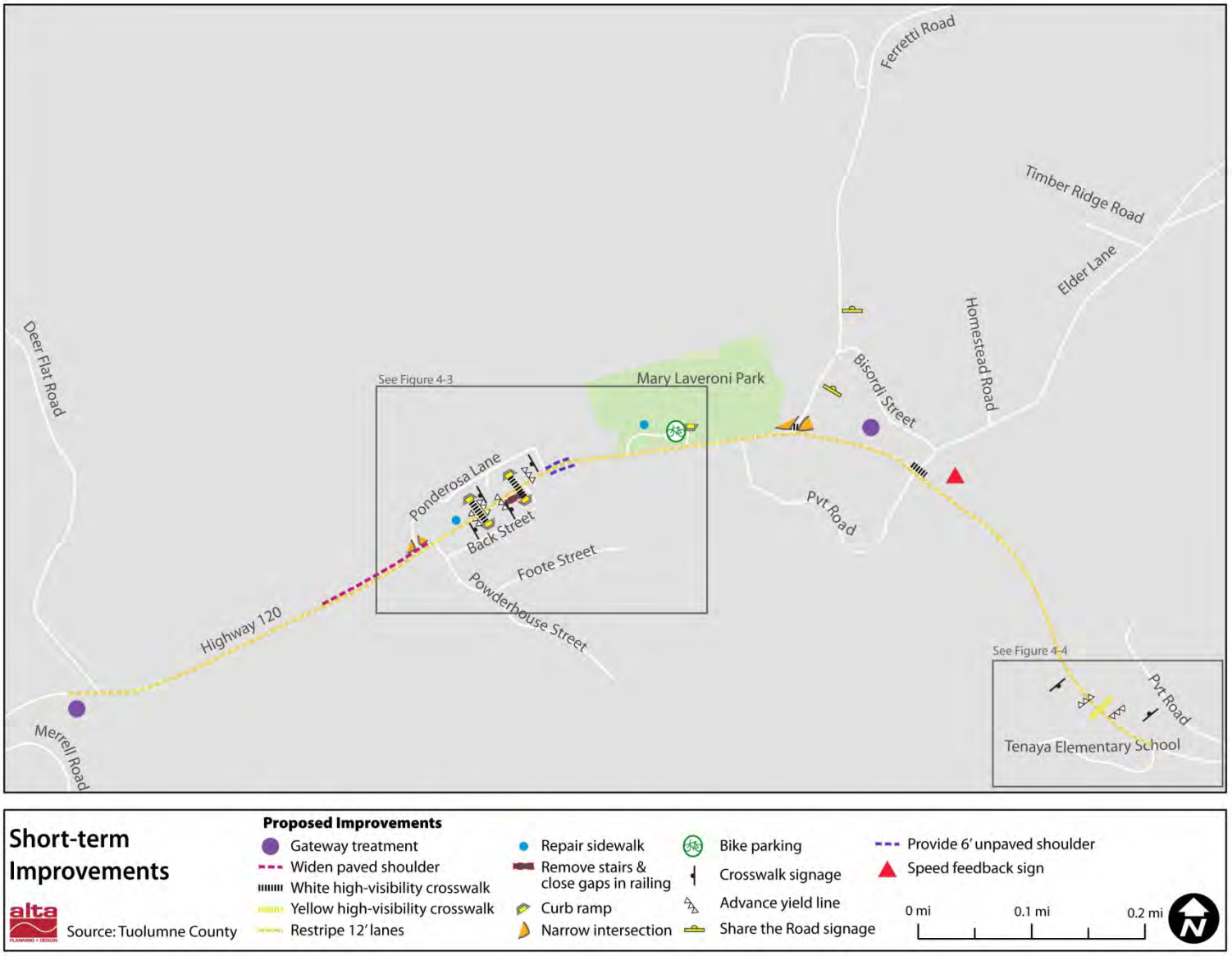
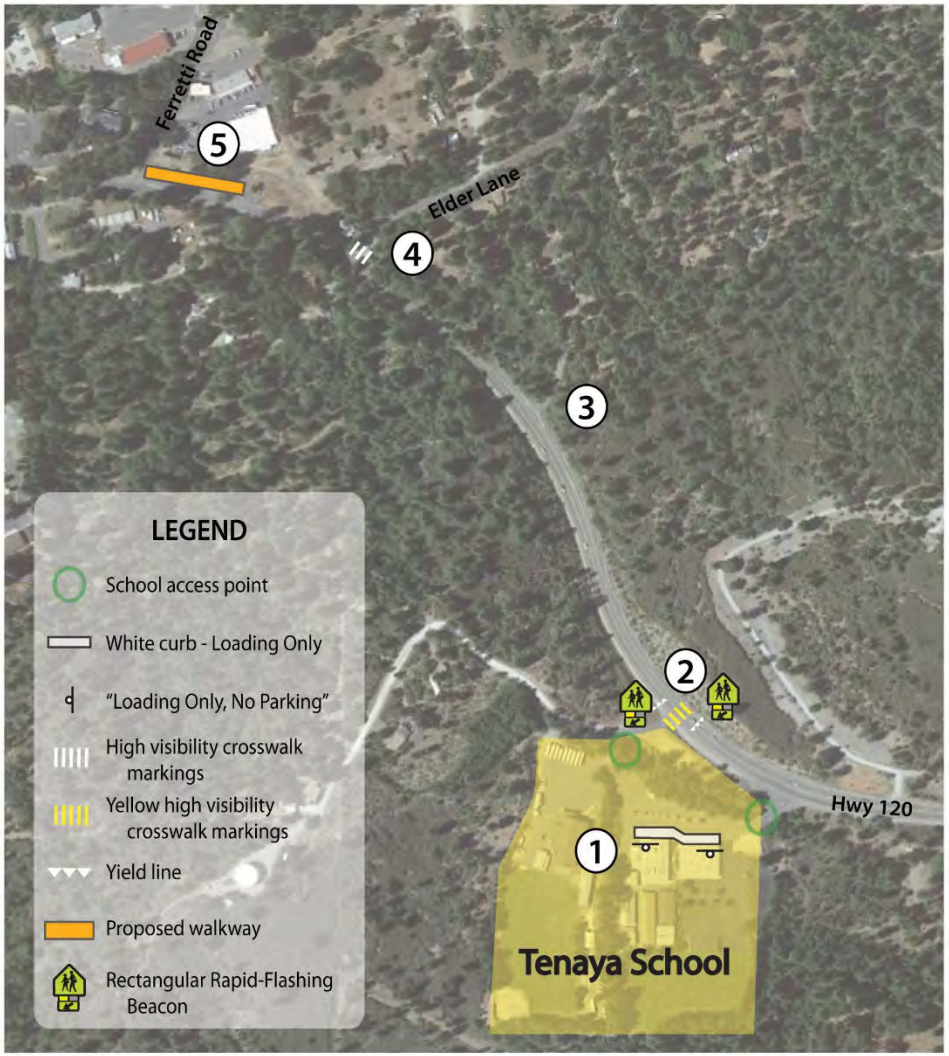


Figure 4-2: Recommended Short-Term Improvements

Figure 4-3: Recommended Short-Term Improvements Downtown

Tenaya Elementary Improvement Plan



1 Loading Loop
- Restripe curb as white for loading zone
- Install "Loading Only, No Parking" signs

2 Highway 120 at School Frontage
- Restripe crosswalk as yellow high visibility with yield lines
- Install rectangular rapid-flashing beacon (potentially solar powered)

3 Walkway on Highway 120
- Remove weeds and debris from walkway

4 Highway 120 at Elder Lane
- Stripe crosswalk across Elder Lane

5 Highway 120 at Ferretti Road
- Work with adjacent property owners to extend walkway to Ferretti Road (currently ends 450 feet east of the intersection)

Programs
- Consider working at the state level to develop bus stop standards appropriate for rural communities
- Educate parents and students about the importance of unloading at curbside
- School staff stationed at loading zone should enforce curbside loading, and encourage parent drivers to pull forward
- Conduct a school bus marketing campaign during Back to School and spring events
- Incorporate pedestrian traffic safety education as part of walking field trips

Figure 4-4: Recommended Short-Term Improvements Tenaya Elementary

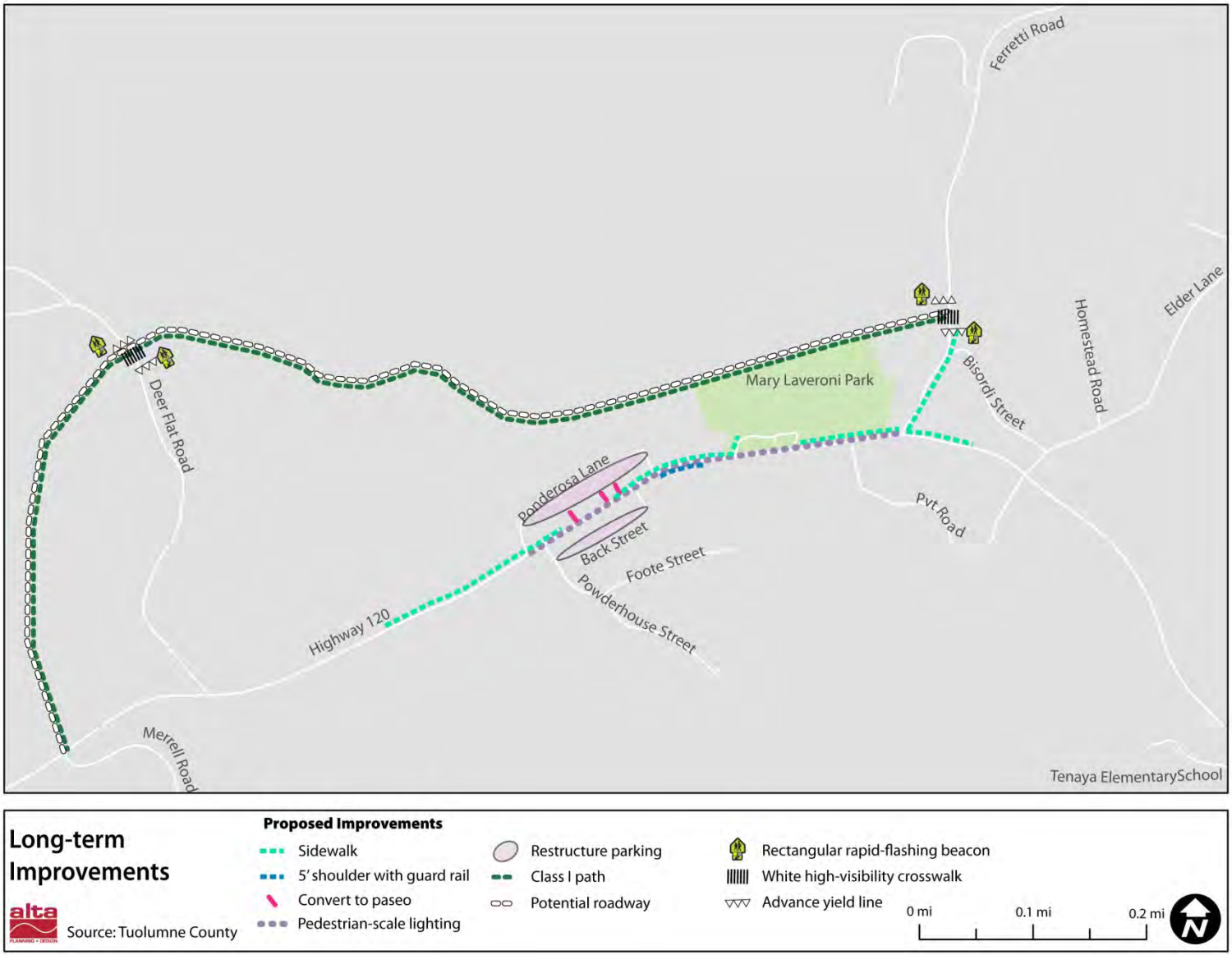


Figure 4-5: Recommended Long-Term Improvements

Table 4-2: Recommended Improvements

Location	Start/End or Reference Location	Improvement	Description	Estimated Length	Estimated Cost	Lead Agency	Priority
Ferretti Rd	900 feet north of Highway 120 to Highway 120	Signage	Install 'Share the Road' signs to alert motorists to pedestrians walking along roadway	N/A	$600	Tuolumne County	Short-Term
Groveland Community Center	Near front entrance	Bike Parking - Racks	Install 3 bicycle racks.	N/A	$900	Tuolumne County	Short-Term
Groveland Library	Near front entrance	Bike Parking - Racks	Install 3 bicycle racks.	N/A	$900	Tuolumne County	Short-Term
Highway 120	350 feet east of Ferretti Rd on the north side of Highway 120	Gateway	Install gateway monument.	N/A	Varies	Tuolumne County	Short-Term
Highway 120	250 feet east of Deer Flat Rd to Tenaya Elementary School entrance	Restriping	Restripe vehicle lanes to 12 feet wide.	6,700 feet	$53,600	Caltrans	Short-Term
Highway 120	Existing crosswalk 300 feet west of Tenaya Elementary School driveway	Crosswalk – Enhancement	Restripe crosswalk as yellow high visibility with advance yield lines, advance warning signs, and an RRFB.	N/A	$17,400	Caltrans/Tuolumne County	Short-Term
Highway 120	Drainage culvert 70 feet west of Hopper St	Shoulder	Provide 6-foot unpaved shoulders previously identified by and in conjunction with planned maintenance project. *Notes: from memo to Caltrans.*	30 feet	TBD	Caltrans	Short-Term
Highway 120	250 feet east of Deer Flat Rd on the south side of Highway 120	Gateway	Install gateway monument.	N/A	Varies	Tuolumne County	Short-Term
Highway 120	Crosswalk 295 feet east of Ponderosa Ln	Crosswalk – Relocate & Enhance	Relocate to 350 feet east of Ponderosa Lane. Stripe as high visibility crosswalk with advance yield lines, advance warning signage, and curb ramps.	N/A	$5,200	Caltrans/Tuolumne County	Short-Term
Highway 120	Elder Ln	Crosswalk	Stripe high visibility crosswalk across Elder Ln.	N/A	$1,200	Tuolumne County	Short-Term

Location	Start/End or Reference Location	Improvement	Description	Estimated Length	Estimated Cost	Lead Agency	Priority
Highway 120	East of Elder Ln	Speed Feedback Sign	Install speed feedback sign for westbound traffic.	N/A	$5,000	Tuolumne County	Short-Term
Highway 120	Ferretti Rd	Intersection Narrowing	Narrow intersection and reduce turning radii by removing asphalt on northwest corner.	700 sq feet	$175	Tuolumne County	Short-Term
Highway 120	Ferretti Rd	Crosswalk	Stripe high-visibility crosswalk across Ferretti Rd.	N/A	$1,200	Tuolumne County	Short-Term
Highway 120	Ponderosa Ln	Intersection Narrowing	Narrow Ponderosa Ln intersection width to 30 feet *Note: TBD based on outcomes from Tour Bus Parking Study.*	N/A	TBD	Caltrans/ Tuolumne County	Short-Term
Highway 120	350 feet west of Ponderosa Ln to Powder House St, north side	Shoulder	Provide 5' paved shoulder	450 feet	TBD	Caltrans/Tuolumne County	Short-Term
Highway 120	Sidewalk on north side, 170 feet east of Ponderosa Ln	Sidewalk – Repair	Repair existing sidewalk. *Note: long term improvements at this location may be affected by the Tour Bus Parking Study findings.*	N/A	Varies	Tuolumne County	Short-Term
Highway 120	Sidewalk on south side in front of 18761 Main St (Iron Door Saloon Grill)	Sidewalk - Improvements	Remove three sets of stairs down to roadway and close gaps in railing along sidewalk.	N/A	TBD	Tuolumne County	Short-Term
Highway 120	Crosswalk 245 feet west of Hopper Ln	Crosswalk - Enhancement	Relocate to 135 feet west of Hopper St on the north side, to Back Street on the south side. Stripe as high visibility crosswalk with advance yield lines, advance warning signage, and curb ramps. Install RRFB.	N/A	$20,200	Caltrans/Tuolumne County	Short-Term
Mary Laveroni Park	West end of decomposed granite pathway at driveway	Curb Ramp	Install curb ramp.	N/A	$1,400	Tuolumne County	Short-Term
Mary Laveroni Park	Sidewalk on north side of parking area	Sidewalk - Repair	Repair existing sidewalk.	N/A	Varies	Tuolumne County	Short-Term

Location	Start/End or Reference Location	Improvement	Description	Estimated Length	Estimated Cost	Lead Agency	Priority
Mary Laveroni Park	Transit stop/Park and ride	Bike Parking - Lockers	Install 2 e-lockers for long term bicycle parking.	N/A	$7,000	Tuolumne County	Short-Term
Mary Laveroni Park parking area	West side of parking lot	Sidewalk	Install sidewalk from end of existing sidewalk around parking area to the fire station driveway at Highway 120.	100 feet	$12,500	Tuolumne County	Short-Term
Tenaya Elementary School	Loading loop	Paint Curb	Repaint curb as white for loading and install 'Loading only, no parking' signs	130 feet	TBD	School District	Short-Term
Back Street	Existing parking areas	Formalize Parking	Formalize parking along Back Street to maximize parking yield	N/A	TBD	Tuolumne County/Property Owners	Long-Term
Driveways	Access for rear-parking north of Highway 120	Paseos	Remove vehicle access driveways and convert to pedestrian paseos, in conjunction with development of shared parking.	N/A	TBD	Tuolumne County	Long-Term
Existing parking	North of Highway 120 between Ponderosa Ln and Hopper St	Shared Parking	Consider reorganizing existing parking to maximize efficiency, and develop shared parking with access via Hopper St and Ponderosa Ln. *Notes: existing parking is designated for specific businesses, making effective use of parking challenging.*	N/A	TBD	Tuolumne County/Property owners	Long-Term
Ferretti Rd	Hetch Hetchy Railroad Grade, 300 feet north of Bisordi St	Crosswalk	Install high visibility crosswalk with advance yield lines.	N/A	$1,800	Tuolumne County	Long-Term
Ferretti Rd	Hetch Hetchy Railroad Grade, 300 feet north of Bisordi St	Rectangular rapid-flashing beacon	Install rectangular rapid-flashing beacon.	N/A	$15,000	Tuolumne County	Long-Term
Ferretti Rd	East side, 900 feet north of Highway 120 to Highway 120	Sidewalk	Install sidewalk to connect existing walkway to Highway 120 facilities. *Notes: this project would require significant grading and environmental analysis.*	900 feet	$112,500	Tuolumne County	Long-Term

Location	Start/End or Reference Location	Improvement	Description	Estimated Length	Estimated Cost	Lead Agency	Priority
Hetch-Hetchy Railroad Grade	Highway 120 at Merrell Rd to Ferretti Rd	Roadway	See Community Resources Agency for design details.	See Community Resources Agency for design details.	See Community Resources Agency for cost estimates	Tuolumne County	Long-Term
Hetch-Hetchy Railroad Grade	Highway 120 at Merrell Rd to Ferretti Rd	Class I	Install a Class I shared-use path. Future connections from downtown to the Trail will be considered with development of the Trail. Provide enhanced crossing at Deer Flat Road with high-visibility crosswalk markings and RRFB.	1.15 miles	$756,000	Tuolumne County	Long-Term
Highway 120	North side, between Ponderosa Ln and end of existing sidewalk 180 feet east of Ponderosa Ln	Sidewalk	Install sidewalk.	180 feet	$22,500	Tuolumne County	Long-Term
Highway 120	Hopper St to Mary Laveroni Park, north side	Sidewalk	Install sidewalk.	350 feet	$43,750	Caltrans/ Tuolumne County	Long-Term
Highway 120	18744 Main St (Dori's Tea Cottage) to Hopper St, north side	Sidewalk	Install sidewalk. *Notes: Would require removal of parking in front of Iron Door General Store and Iron Door Flower Shop, creating an opportunity for outdoor dining, outdoor flower shop displays, and placemaking efforts.*	220 feet	$27,500	Caltrans/ Tuolumne County	Long-Term
Highway 120	Drainage culvert 70 feet west of Hopper St	Shoulder	Provide 5 foot shoulder with guard rail on both sides of roadway. *Notes: from memo to Caltrans. Assumption is 6-foot shoulder provided in short-term will become a guard rail occupying 1 foot, leaving 5 feet clear for pedestrians.*		TBD	Caltrans	Long-Term

Location	Start/End or Reference Location	Improvement	Description	Estimated Length	Estimated Cost	Lead Agency	Priority
Highway 120	North side, between Ferretti Rd and end of existing walkway 335 ft east of Ferretti Rd	Sidewalk	Work with property owners to install sidewalk.	335 feet	$41,875	Tuolumne County	Long-Term
Highway 120	North side, from western entrance of Mary Laveroni Park parking area to Ferretti Rd	Sidewalk	Install sidewalk. Will require grading, retaining wall, and railing (tree removal may be necessary).	710 feet	$88,750	Tuolumne County	Long-Term
Highway 120	18580 Main St (Yosemite National Bank) driveway to Ponderosa Ln, north side	Sidewalk	Install sidewalk.	650 feet	$81,250	Tuolumne County	Long-Term
Highway 120	Ponderosa Ln to Ferretti Rd	Pedestrian Scale Lighting	Install pedestrian-scale lighting.	1,900 feet	$788,500	Tuolumne County	Long-Term

4.3 Design Guidance

Sidewalk Design

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.

Downtown Groveland's sidewalks (where existing) are narrow and often blocked by planters, retail signs, and other obstacles. For sidewalks to be comfortable and useful, they should be sufficiently wide and clear of obstacles. This is accomplished by organizing sidewalks into three zones that serve specific functions. The lighting or furniture zone, closest to the roadway, provides space for street lighting, sandwich boards advertising local businesses, or other features. The frontage or café zone, adjacent to the building front, offers an opportunity for outdoor dining or displays. Between these, a minimum of four feet must be kept clear to provide a 'through zone' wide enough to meet accessibility requirements. See **Figure 4-6**.

Recommendation

This Plan recommends where available right-of-way exists sidewalks be organized similar to shown in Figure 4-6 to ensure comfortable, accessible walkways. This can also be accomplished in Groveland where available space is constrained by being contentious placement of where furniture, planters and other items are placed so a clear, obstruction free walk area is maintained.

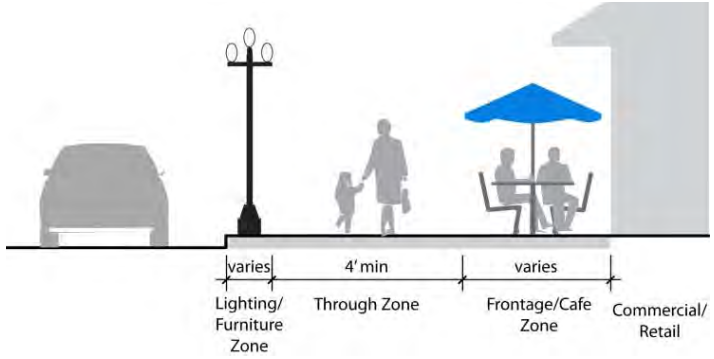


Figure 4-6: Sidewalk Zones

Bicycle Parking

Bicycle parking can be categorized into short-term and long-term parking. Bicycle racks are the preferred device for short-term bike parking. These racks serve people who leave their bicycles for relatively short periods of time, typically for shopping or errands, eating or recreation. Bicycle racks provide a high level of convenience and moderate level of security. Long-term bike parking includes bike lockers and bike rooms, and serves people who intend to leave their bicycles for longer periods of time and are typically found in commercial buildings. These facilities provide a high level of security but are less convenient than bicycle racks.

Groveland currently has short-term bike parking at the Yosemite International Hostel.

Recommendation

This Plan recommends the County adopt bicycle parking design guidelines that meet the following criteria. The racks shown in **Figure 4-7** are the recommended standard rack types, offering two points of contact for the bicycle frame and allowing users to lock both the frame and one wheel using a standard U-lock.

This Plan also recommends the County adopt bicycle parking requirements for new development, meeting the minimums recommended in the Association of Pedestrian and Bicycle Professionals *Bicycle Parking Guidelines* Second Edition.

U-Rack | *Post and Loop* | *Horseshoe* | *Lightning Bolt™ or Varsity Rack™*

Figure 4-7: Recommended Types of Bicycle Racks

School Bus Stop Standards

School bus stop standards are established on a statewide basis, and may not address the unique challenges faced by rural communities. Because many students in Groveland rely on the school bus to get to school each day, providing safe and accessible bus stops that comply with state standards will be an important component of the transportation network.

Recommendation

This Plan recommends the County consider working at the state level to develop bus stop standards appropriate for rural communities.

4.4 Programs

Pedestrian, bicycle, and Safe Routes to School (SRTS) programs, such as education and enforcement programs, are essential in increasing the desirability and safety of walking and biking. Programs support a pedestrian and bicycle friendly culture, and encourage more people to walk or bike. Many programs can be categorized according to the "Four E's":

- **Education** programs are designed to improve safety and awareness. They can include in-classroom or after school programs that teach students how to safely cross the street or bicycle in the road. They may also include brochures, posters, or other information that targets pedestrians, bicyclists, or drivers.
- **Encouragement** programs provide incentives and support to help people leave their car at home and try walking or bicycling instead. Bicycle encouragement programs, in particular, target "interested but concerned" bicyclists who would like to ride a bike but who may not be confident in their skills or in their interactions with motorists.
- **Enforcement** programs enforce legal and respectful walking, bicycling, and driving. They include a variety of tactics, ranging from police enforcement to neighborhood signage campaigns.
- **Evaluation** programs are an important component of any investment. They help measure project success at meeting the goals of this plan and to identify adjustments that may be necessary.

This section presents a number of recommendations aimed to improve the walking and bicycling environment and encourage more community members to try walking and bicycling.

4.4.1 Education

Student Bicycle and Pedestrian Traffic Safety Education Classes (Priority Program)

Student education programs are an essential component of a Safe Routes to School effort. Students are taught traffic safety skills that help them understand basic traffic laws and safety rules. Potential pedestrian education curriculum elements include traffic sign identification and how to use a crosswalk.

Typical school-based bicycle education programs educate students about the rules of the road, proper use of bicycle equipment, biking skills, street crossing skills, and the benefits of biking. Education programs can be part of a Safe Routes to School program. These types of education programs are usually sponsored by a joint City/County/School District committee that includes appointed parents, teachers, student representatives, administrators, police, active bicyclists and engineering department staff.

Tuolumne County Public Health currently provides some traffic safety education programs in the area.

Recommendation

This Plan recommends the community pursue a comprehensive Safe Routes to School Program that includes annual youth pedestrian and bicycle safety education classes. Tuolumne County Public Health is an existing partner of TCTC; consider pursuing this program as a joint effort.

Sample programs:

- Marin County Safe Routes to Schools Curriculum: http://www.saferoutestoschools.org/curriculum.html
- Alameda County Walk and Roll K-5 Educator Guide: http://www.alamedacountysr2s.org/programs/education-safety/

Family Bicycling Workshops

Bicycling workshops offer opportunities for students, parents, and community members to learn valuable bicycle safety skills and become safe, confident bicyclists. They often include a bicycle safety check, helmet giveaway and fit check, and hands-on instruction for pulling out of driveways, bicycling in traffic, safe turning, and identifying and managing hazardous situations.

Tuolumne County Public Health has conducted similar workshops in other areas of the county.

Recommendation

This Plan recommends the implementation of a family bicycling workshop program, in coordination with Tuolumne County Public Health.

4.4.2 Encouragement

Walking School Buses

Walking school buses are organized groups of children walking to school with an adult. They address parental concerns about children walking to school alone. In addition, shifting parents away from driving to school may reduce congestion, improve air quality, and encourage active communities. http://guide.saferoutesinfo.org/walking_school_bus/index.cfm

This sort of program is appropriate for families who live within a mile of school and where there are parent champions who are willing to lead the walking school bus.

Recommendation

This Plan recommends the School Districts and Public Health consider the development of walking school buses.

Walk and Bike to School Days

Walk and Bike to School Day is a special event encouraging students to try walking or bicycle to school. Walk and Bike to School Day can be held yearly, monthly, or even weekly— depending on the level of support and participation from students, parents, and school and local officials. Some schools organize more frequent days—such as Walk and Roll Fridays—to give people an opportunity to enjoy the event on a regular basis. Parents and other volunteers accompany the students and staging areas can be designated along the route to school where groups can gather and walk or bike together. These events can be promoted through press releases, articles in school newsletters, and posters and flyers for students to take home and circulate around the community.

Recommendation

This Plan recommends the school district and Public Health consider the development of monthly walk and bike to school days.

School Bus Marketing Program

Although school buses are available for all students who attend Tenaya Elementary and Tioga High Schools, it is estimated that between 30 and 50 percent of students use this service.

Increasing the number of students who take the bus to school will reduce congestion as fewer parents drop children off in family cars. This reduction in traffic offers many benefits, including increased safety, improved air quality, and reduced travel costs to families.

A marketing campaign can encourage more students to take advantage of the school bus, and make parents aware of this travel option.

Recommendation

This Plan recommends the school district conduct a school bus marketing campaign during Back to School events each fall, and during Spring events.

Existing Tuolumne County Public Health Programs

Tuolumne County Public Health currently participates in the Safe Routes to School National Partnership's Fire Up Your Feet program, which encourages walking and bicycling among students and families.

Public Health also hosts an annual Health Fair that includes some information and resources to encourage walking and bicycling as part of a healthy, active lifestyle.

Recommendation

This Plan recommends Tuolumne County Public Health continue these programs.

4.4.3 Enforcement

Speed Feedback Signs and Trailers (Priority Program)

Speed feedback signs and trailers can be used to reduce speeds and enforce speed limit violations in known speeding problem areas. Both the signs and trailers display the speed of approaching motorists along with a speed limit sign.

These can be used as both an educational and enforcement tool. By itself, it serves as effective education to motorists about their current speed compared to the speed limit. Because speed feedback trailers can be easily moved, they are often deployed on streets where local residents have reported speeding problems.

Recommendation

This Plan recommends the County consider speed feedback signs and trailers in areas with reported speeding challenges. One priority location has already been identified through community input during this planning process: Highway 120 east of downtown Groveland.

Loading Zone Enforcement

Enforcement of loading zone behavior can create a safer environment for parents and students as they arrive and depart school each day. School staff or community volunteers can enforce curbside loading and unloading, ask drivers to pull forward in the loading zone, and educate parent drivers who may be unfamiliar with the desired loading zone behaviors.

Recommendation

This Plan recommends the School District consider implementing a loading zone enforcement and education program at Tenaya Elementary School.

4.4.4 Evaluation

Student Hand Tallies and Parent Surveys

Student hand tallies and parent surveys are part of any comprehensive Safe Routes to School effort. While distributing and collecting parent surveys is very time- and labor-intensive, hand tally data are relatively easy to collect and can be analyzed quickly. The National Center for Safe Routes to School provides Student Hand Tally and Parent Survey forms and will enter the data from those forms. This can be a cost effective way to understand how families get to and from school and the reasons for their mode choice.

Recommendation

This Plan recommends conducting student hand tallies and parent surveys with all Safe Routes to School projects.

http://www.saferoutesinfo.org/data-central/data-collection-forms