TOWN OF ROSS
2010 BICYCLE AND PEDESTRIAN PLAN


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1. INTRODUCTION

The Town of Ross 2010 Bicycle and Pedestrian Plan provides for a town-wide system of bicycle paths and routes, along with bicycle-related programs and support facilities, intended to ensure bicycling becomes a viable transportation option for people who live, work and recreate in Ross. Existing and proposed bikeway network information was gathered from field surveys, the Marin County Unincorporated Areas Bicycle and Pedestrian Master Plan (2008) and the Ross General Plan *Pedestrian/Bicycle System in Ross* map.

The purpose of this Bicycle and Pedestrian Plan is to improve bicycle transportation and recreation in Ross by providing direction for future bikeway improvements and meeting the requirements of the California Bicycle-Transportation Act, such requirements are contained in Section 890 of the California Streets and Highways Code.

COMMUNITY PARTICIPATION

Public input for the 2008 draft plan was received at three countywide public meetings, the Central Marin Countywide Bicycle Master Plan Update Public Workshop (held Monday, November 13, 2006 at the San Rafael Community Center, San Rafael) and two Nonmotorized Transportation Pilot Program Public Workshops (held Thursday November 29, 2006 at the Embassy Suites Hotel, San Rafael and Monday March 12, at the San Rafael Community Center, San Rafael). Additional public input for the 2010 Bicycle and Pedestrian Plan was received at the Ross Town Council meeting of May 13, 2010, and the Ross Public Works Committee meeting of June 1, 2010. The Ross Town Council adopted the plan at its July 15, 2010, Council meeting.

2. BICYCLE AND PEDESTRIAN PLAN GOALS & POLICIES

GOALS

Goals provide the context for the specific objectives and policy actions discussed in the Bicycle and Pedestrian Plan. The goals provide the long-term vision and serve as the foundation of the plan. Goals are broad statements of purpose that do not provide specific descriptions of the goal, while policy actions provide a bridge between general policies and actual implementation guidelines, which are provided in subsequent sections.

All goals and policies are consistent with the Town of Ross General Plan 2007-2025 – "Easy and Safe Travel Throughout Ross" Transportation Element. Goal seven of the General Plan, which begins the Transportation Element, encourages bicycle travel in Ross as to mitigate traffic congestion. The Town's vision for 2025 is that bicycle routes and secure parking opportunities are provided in key areas. Policy 7.8 of the General Plan further defines this vision:

> *Encourage travel via bicycle and walking by providing and maintaining safe pedestrian and bicycle routes along main arteries in Ross. Consider links with Town destinations, surrounding area destinations and regional trails and bicycle systems. Participate in the Safe Routes to Schools Program.*

GOAL 1 INCREASED BICYCLE AND PEDESTRIAN ACCESS

Expand bicycle and pedestrian facilities and access in and between neighborhood areas, employment centers, shopping areas, schools, and recreational sites.

GOAL 2 BICYCLE TRANSPORTATION

Make the bicycle an integral part of daily life in Ross by implementing and maintaining a bikeway network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer and more convenient.

GOAL 3 PEDESTRIAN TRANSPORTATION

Encourage walking as a daily form of transportation in Ross by completing a pedestrian network that services short trips and transit, improving the quality of the pedestrian environment and increasing safety, convenience and access opportunities for all users.

OBJECTIVES

OBJECTIVE A

Implement the Bicycle and Pedestrian Plan, which identifies existing and future needs, and provides specific recommendations for facilities and programs.

Objective A Policy Actions

1. Update the Plan every five (5) years as required by Caltrans to reflect new policies and/or requirements for bicycle and pedestrian funding.
2. The Ross Public Works Committee or other official commission, as appropriate, should review all Safe Routes to Schools travel plans for consistency with the Ross Bicycle and Pedestrian Plan, with the authority to refer concerns to staff and council as necessary.
3. Coordinate between government agencies, schools, and community organizations to address bicycle and pedestrian issues of mutual concern.
4. Seek funding for bikeway projects through current local, regional, state, and federal funding programs and encourage multi-jurisdictional funding applications.

OBJECTIVE B

Complete a continuous network of bikeways that are feasible, fundable, and that serve bicyclists' needs, especially for travel to employment centers, schools, commercial districts, transit stops and terminals, and institutions.

Objective B Policy Actions

1. Implement high priority projects, such as Bike Route improvements and Safe Routes to Schools projects.
2. Prioritize completion of a continuous bikeway network across jurisdictional boundaries, connecting Ross to unincorporated areas and neighboring communities as part of a continuous East-West Bikeway.
3. Consider construction of relevant planned bikeways as an integral part of any transportation facility maintenance or construction project, as feasible.
4. Construct a network that encourages bicycling to and for recreational purposes as feasible.
5. At a minimum, construct all bikeways according to Caltrans Chapter 1000 Design Guidelines.

OBJECTIVE C

Complete a network of walkways that serves pedestrian needs, especially for short trips to schools, downtown, transit stops and terminals, and institutions.

Objective C Policy Actions

1. Pedestrian routes, particularly for school children, should be established as feasible for all neighborhoods.
2. Complete missing connections to make direct routes for walking, especially connections between residential neighborhoods and the downtown area, and schools.
3. Where feasible, identify and reduce or eliminate impediments and obstacles to walking to school.
4. Pedestrian paths in Ross should connect with other paths and trails where practical.
5. For new development or redevelopment projects, consider construction of planned pedestrian facilities as feasible.

6. Work with transit authorities to ensure that pedestrian concerns are addressed in the design of transit stops.
7. Enhance opportunities for walking for recreational purposes.

OBJECTIVE D

Maintain and improve the quality, operation, and integrity of bikeway and walkway network facilities.

Objective D Policy Actions:

1. Undertake routine maintenance of bikeway and walkway network facilities, such as sweeping bicycle lanes and sidewalks and trimming back encroaching vegetation.
2. Undertake regular inspection and periodic maintenance of bicycle and pedestrian facilities such as striping, signing and surface condition to reduce safety issues for users.
3. Ensure that construction projects minimize disruption to the cycling and walking environment and that safe, direct alternate routes are signed in advance of construction for the duration of the project. All projects undertaken by outside agencies should be coordinated with the Town to ensure compliance with this policy.
4. Ensure that repair or construction of any transportation facility does not result in the permanent removal of an existing bicycle or pedestrian facility.
5. Ensure that the pedestrian walkway network is accessible to, and usable by, persons with disabilities where feasible.

OBJECTIVE E

Provide short- and long-term bicycle parking and end-of-trip facilities in employment and commercial areas, in multifamily housing, at schools, and at transit facilities.

Objective E Policy Actions:

1. Consider requiring bicycle parking spaces as part of new development or redevelopment projects as feasible.
2. Encourage the installation of short- and long-term public bicycle parking in and around the Downtown area.
3. Work with local schools to promote bicycle commuting and to assist in purchasing and installing long- and short-term bicycle parking.
4. Require the provision of bicycle parking at all town-permitted large events to help reduce automobile traffic and parking.

OBJECTIVE F

Develop and implement safety, education and encouragement plans aimed at youth, adult cyclists, pedestrians, and motorists.

Objective F Policy Actions

1. Expand adult and youth bicycle and pedestrian education, encouragement and safety programs, particularly Share the Road programs aimed at reducing cyclist-motorist conflicts (see Section Five).
2. Promote the health and environmental benefits of walking and bicycling.

COMPLIANCE WITH RELEVANT PLANS

The 2010 Ross Bicycle and Pedestrian Plan is consistent with local, countywide and regional plans. The 2008 San Anselmo Bicycle Master Plan identifies a number of bikeways which connect to facilities proposed at the Ross-San Anselmo border. The 2001 Marin County Unincorporated Bicycle and Pedestrian Master Plan proposed a branch of an East-West Bikeway through the Town of Ross. The needs analysis from the County Plan found that the pavement and signs of the multi-use paths through Ross may be in need of improvement. The Metropolitan Transportation Commission's (MTC) 1994 Regional Transportation Plan for the San Francisco Bay Area, in which the Town of Ross is included, called for $58.8 million in bicycle and pedestrian improvements for transportation control measures.[1]

Projects and programs included in this Plan would be sponsored by the Town and will require additional feasibility analysis, design, environmental review, and public input prior to being funded and constructed. All projects and plans would, as applicable, need to conform with the Town of Ross General Plan.

[1] Metropolitan Transportation Commission, "1994 Regional Transportation Plan for the San Francisco Bay Area."

BTA COMPLIANCE CHECKLIST

In order to meet the California Bicycle-Transportation Act requirements, the 2010 Ross Bicycle Plan must include the following provisions:

Table 2-1: Ross BTA Compliance Checklist

BTA 891.2		Location Within the Plan
(a)	The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	• Table 4-2 , page 17 • Table 4-4, page 18
(b)	A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	• Figure 4-1, page 15
(c)	A map and description of existing and proposed bikeways.	• Figure 3-2, page 8; Figure 5-1, page 22.
(d)	A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	• Figure 5-1, page 22 • Bicycle Parking and End-of-trip Facilities, page 23
(e)	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals.	• Multi-Modal Connections, page 10 • Multi-Modal Connections, page 26
(f)	A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	• Encourage Provision of Shower and Changing Facilities, page 24
(g)	A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code.	• Pages 10-11 • • Safe Routes to School, page 24 • Bicycle Education and Traffic Enforcement Programs, page 26-27
(h)	A description of the extent of citizen and community involvement in development of the plan.	• Community Participation, page 1
(i)	A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans.	• Page 5
(j)	A description of the projects proposed in the plan and a listing of their priorities for implementation.	• Proposed Bikeways, page 20 • Infrastructure Project Prioritization, page 28
(k)	A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	• Cost Breakdown of Recommended Bicycle Facilities, page 29

3. EXISTING CONDITIONS

The bicycle map accompanying this Plan designates Ross' bikeways and those in adjacent unincorporated areas as Class I, II, or III in accordance with Chapter 1000 of the California Department of Transportation, Highway Design Manual – Bikeway Planning and Design. Class I Bikeways serve the exclusive use of bicycles and pedestrians. Class II Bikeways serve the preferential use of bicycles via striped lanes on paved streets shared with cars. Class III Bikeways serve bicycles on streets shared with cars connecting Class I or Class II bikeways or where other bikeway types are not feasible.

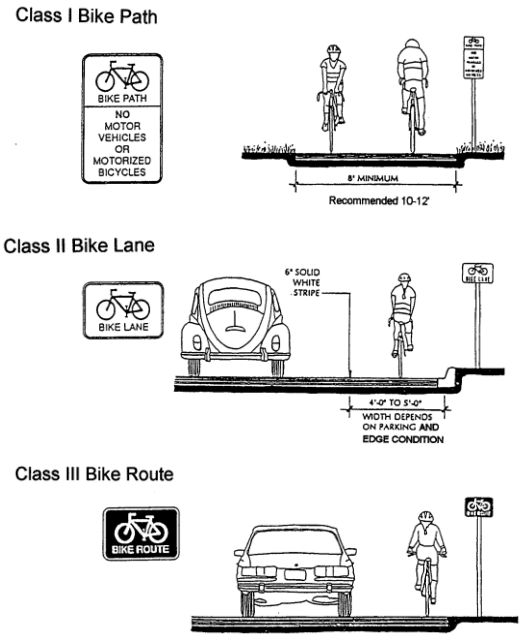
DEFINITION OF BIKEWAYS

The three types of bikeways identified by Caltrans in Chapter 1000 of the Highway Design Manual are as follows.

Class I Bikeway. Typically called a "bike path," a Class I bikeway provides bicycle travel on a paved right-of-way completely separated from any street or highway.

Class II Bikeway. Often referred to as a "bike lane," a Class II bikeway provides a striped and stenciled lane for one-way travel on a street or highway. The Town is to pursue a 13' minimum width for combined bicycle lane/parking areas where possible.

Class III Bikeway. Generally referred to as a "bike route," a Class III bikeway provides for shared use with motor vehicle traffic and is identified only by signing. Optional Shared Roadway Bicycle Marking pavement stencils are also available for use on Class III bikeways which have on-street parallel parking (see diagram on following page).



It is important to note that bicycles are permitted on *all* roads in the State of California and in Ross (with the exception of access-controlled freeways). As such, Ross' entire street network is effectively the town's bicycle network, regardless of whether or not a bikeway stripe, stencil, or sign is present on a given street. The designation of certain roads as Class II or III bicycle facilities is not intended to imply that these are the only roadways intended for bicycle use, or that bicyclists should not be riding on other streets. Rather, the designation of a network of Class II and III on-street bikeways recognizes that certain roadways are optimal bicycle routes, for reasons such as directness or access to significant destinations, and allows the Town of Ross to then focus resources on building out this primary network. Ross' existing designated bikeway is shown in **Figure 3-1**. This Class I bikeway is a multi-user path, just over one-quarter mile in length.

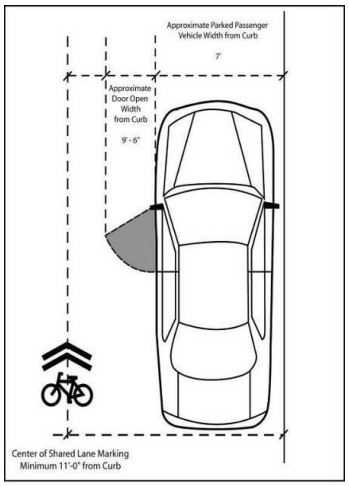
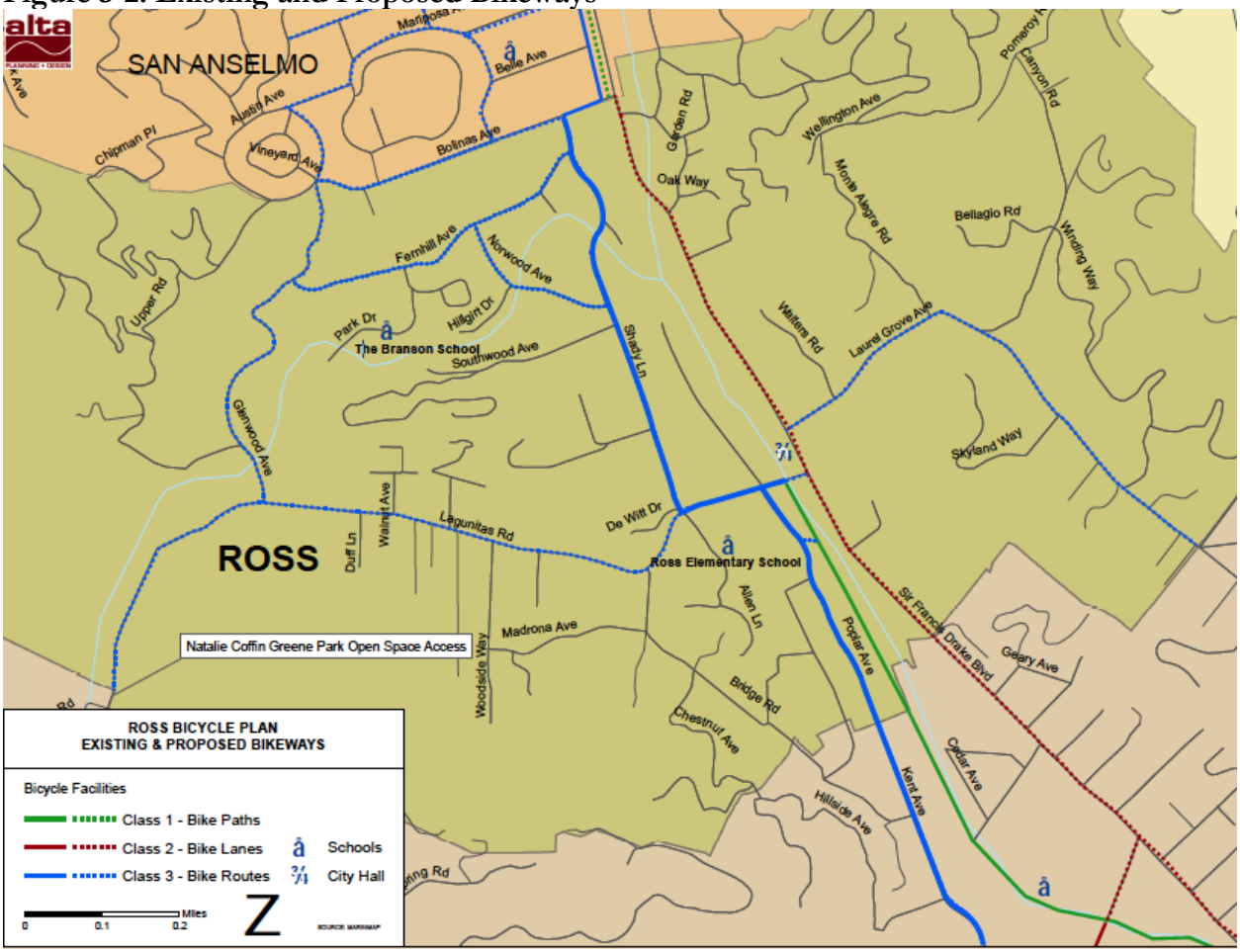


Figure 3-1: Caltrans Definition of Bikeways

Figure 3-2: Existing and Proposed Bikeways



EXISTING BIKEWAYS

The Town of Ross has five existing bikeways. The Corte Madera Creek Path is the one existing Class I multi-use path, shared with pedestrians and other non-motorized travelers. This path runs along the Corte Madera Creek at a length of just over one quarter of a mile, with its north end terminating at Lagunitas Road. Bike routes along Lagunitas Road, Ross Common, Poplar Avenue, Shady Lane and Bolinas Avenue comprise the Ross segments of the countywide Bike Routes 15 and 20. These routes have a combined length of approximately one and one-third mile.

Table 3-1: Ross Existing Bikeway Inventory

Class I Facilities - Bicycle Paths (Off-Street)				
Segment Name	**Begin**	**End**	**Class**	**Length**
Corte Madera Creek Path	Ross Town Limit	Lagunitas Rd.	I	0.27
			Total Mileage	**0.27**
Class III Facilities - Signed Bicycle Routes (On-Street)				
Segment Name	**Begin**	**End**	**Class**	**Length**
Lagunitas Rd.	Corte Madera Creek Path	Shady Lane	III	0.12
Ross Common/Poplar Ave.	Lagunitas Rd.	Ross Town Limit	III	0.34
Shady Lane	Lagunitas Rd.	Bolinas Ave.	III	0.54
Bolinas Ave.	Shady Lane	San Anselmo Ave.	III	.06
			Total Mileage	**1.06**
			Total all Facilities	**1.33**

SIGNAGE

The County of Marin has implemented a countywide route signage program which helps cyclists to navigate more easily through towns and directs visitors to popular destinations at key intersections. The Town participated in developing a link in the east/west bikeway route through Marin County by installing route signs along Poplar Avenue, Ross Common, Lagunitas Road, Shady Lane, and the Corte Madera Creek Pathway. The goal of the project is to encourage commuting by bicycle through Marin and make recreational biking more attractive to the public.

BIKEWAY SUPPORT FACILITIES

Bicycle support facilities include bicycle parking racks, lockers, and changing facilities. Any facility that assists commuting or recreational cyclists to complete their journey is also considered a support facility. Bicycle parking currently exists at local schools and at some destinations in the Ross Commons downtown area.

MULTI-MODAL CONNECTIONS

Providing bicycle access to transit allows bicyclists to extend their traveling distance. Ross residents have access to one transit service, Marin Transit, which contracts its services with Golden Gate Transit (GGT). GGT provides access to San Francisco, Southern and Central Marin, Marin County Ferry Terminals and north towards Sonoma County. Though the GGT bus stops in Ross do not have bicycle racks, up to two bicycles can fit on racks mounted to the front of all Golden Gate Transit buses less than 60 ft. long. "MCI" type buses longer than 60 ft. have been outfitted with an under floor luggage area rack, which can accommodate two bicycles. In addition, the Marin County Transit District has included an element in their long-range transit plan to upgrade all bus-mounted front bicycle racks from two to three capacity fixtures.

BICYCLE LOOP DETECTORS

The Town of Ross has no official policy regarding bicycle signal detection (BLD), although the Town complies with California Department of Transportation Policy Directive 09-06, which requires the installation of bicycle loop detectors on all new and modified approaches to traffic-actuated signals. Of the three signalized intersections in Ross on Sir Francis Drake Boulevard, only the Bolinas Avenue intersection has existing bicycle loop detectors. In the summer of 2010, the Marin County Public Works Department will be stenciling bicycle loop detector symbols on the pavement at this intersection to assist cyclists in positioning their bikes to actuate the traffic light change. The Ross Public Works Department plans to install bicycle detection sensors at the signalized Sir Francis Drake Boulevard intersections at Lagunitas Road and Laurel Avenue Grove when the intersections are improved in 2011.

BICYCLE SAFETY EDUCATION PROGRAMS

Bicycle safety education programs are perhaps one of the most important components of a bicycle plan. The Town of Ross is actively facilitating these programs through its police department's participation with the Marin Country "Share the Road" campaign and the Town's participation with the Marin Safe Routes to School Program.

ROSS POLICE/PUBLIC SAFETY

The Ross Police Department issues citations to offenders who have violated traffic safety laws either on a bicycle, in-line skates, or on a skateboard.

The Ross Police Department participates in the Marin County Bicycle Coalition's Share the Road Campaign. The campaign includes three components: checkpoints, basic street skills classes, and public presentations.

At checkpoints, uniformed police, highway patrol officers and volunteers from the bicycle coalition stop vehicles, cyclists and pedestrians and provide them with share the road flyers. Flyers contain California Vehicle

Source: Marin County Bicycle Coalition

Ross police officers spreading the word to motorists and cyclists about bicycle safety at the Ross "Share the Road" 2007 checkpoint.

Code information, codes of conduct for bicyclists and motorists, and additional safety tips to prevent road rage. Ross hosted checkpoints in 2005 - 2008.

Basic Street Skills Classes are provided free of charge by the Marin County Bicycle Coalition. Classes provide information on how to avoid collisions and citations, how to ride safely, improve visibility and the legal rights of cyclists. Cyclists who have received a bicycle violation may attend this class to reduce their fine. The Marin County Bicycle Coalition also provides a Share the Road presentation for the public. The presentation is available by request, and includes information on the rights and responsibilities of cyclists and drivers and focuses on ways each group can behave courteously to avoid collisions.

SAFE ROUTES TO SCHOOLS

The Town of Ross is a participant in the Marin County Safe Routes to School Program. This countywide program began in 2000 as an effort to reduce congestion and encourage healthy exercise and transportation habits among school aged children in Marin County. The program has since expanded to its current level, with 50 schools and over 20,000 students participating countywide. Each year, the program has successfully decreased the percentage of drive-alone students at participating schools through innovative classroom activities, contests and events, and initiation of engineering improvements.

The program consists of five key components – education, engineering, encouragement, enforcement, and evaluation – which are described below.

- Education - Classroom lessons teach children the skills necessary to navigate through busy streets and show them how to be active participants in the program. **Table 3-3** shows education programs completed in Ross School.
- Engineering - The Program's licensed traffic engineer works with schools and the Town in developing a plan to provide a safer environment for children to walk and bike to school. The focus is on creating physical improvements to the infrastructure surrounding the school, reducing speeds and establishing safer crosswalks and pathways. The Town has made improvements to Laurel Grove Avenue and Shady Lane, and in the summer of 2010, will construct a pathway running the entire length of Sir Francis Drake Boulevard within the Ross Town limits and replace the Lagunitas Road Bridge with improved pedestrian access and safety.
- Encouragement - Events, contests and promotional materials are incentives that encourage children and parents to try walking and biking. **Table 3-3** shows encouragement programs completed in Ross School.
- Enforcement – Police officers, crossing guards and law enforcement officials participate throughout the Safe Routes process to encourage safe travel through the community. Targeted enforcement of speed limits and other traffic laws around schools make the trip to school more predictable for students. This plan also includes enforcement enhancements and outreach to drivers through driver safety campaigns.

- Evaluation – Program participation is regularly monitored to determine the growth in student and parent participation. **Table 3-2** shows student survey information.

Table 3-3 details the Safe Routes to School participation of the Ross School. A Safe Routes to Schools Task Force has been formed for the Ross Valley School District to create Safe Routes to Schools Travel Plans which include engineering recommendations, enforcement, driver education programs and encouragement programs. A travel plan has not yet been initiated for Ross. Chapter 5 includes proposals for growing participation in the Safe Routes to Schools Program in Ross.

Table 3-2: Ross Safe Routes to Schools Students Survey History

	Walk	Bike	Bus	Carpool	Drive Alone
Fall 2001	24%	12%	0%	7%	57%
Fall 2003	28%	15%	0%	5%	51%
Spring 2004	28%	10%	0%	9%	53%
Fall 2006	28%	14%	0%	8%	50%
Spring 2007	30%	11%	0%	6%	53%
Fall 2007	27%	12%	0%	7%	54%
Spring 2008	26%	13%	0%	8%	54%
Fall 2008	31%	17%	1%	5%	47%
Spring 2009	34%	20%	0%	3%	42%
Fall 2009	27%	15%	0%	8%	50%

Table 3-3: Ross Safe Routes to School Education and Encouragement Programs

Participants			Education											Encouragement						
2009-10	**Grades**	**Enroll.**	SL&L	WB	HS	TSG	WIM	OTB	Clubs	S.Art	Assembly	Earth	Fam M	IWALK	W2SD	SP	GFG	FRM	PPC	TF
Ross	K-8	400	X	X	X	X	**X**			X	X			X		X	2010	**X**	X	
X - Previously Completed																				
Education:																				
SL&L - Stop Look and Listen; WB - Walk Around the Block; HS - Helmet Safety; TSG – Traffic Safety Game Show; WIM – Wheels in Motion Bicycle Rodeo; OTB - On the Bike (Middle School), Clubs –Teens Go Green Clubs; S. Art - Safety Art; Assembly – Pedal Power assembly Earth - Earth Day Classes; Fam M - Family Mouse;																				
Encouragement:																				
Iwalk - International Walk to School Day, W2SD - Ongoing Walk to School Days; SP - SchoolPool; W&BA - Walk and Bike Across America; FRM - Frequent Rider Miles Contest; GFG – Go for the Green classroom contest; PPC – Pollution Punch Card																				

4. NEEDS ANALYSIS

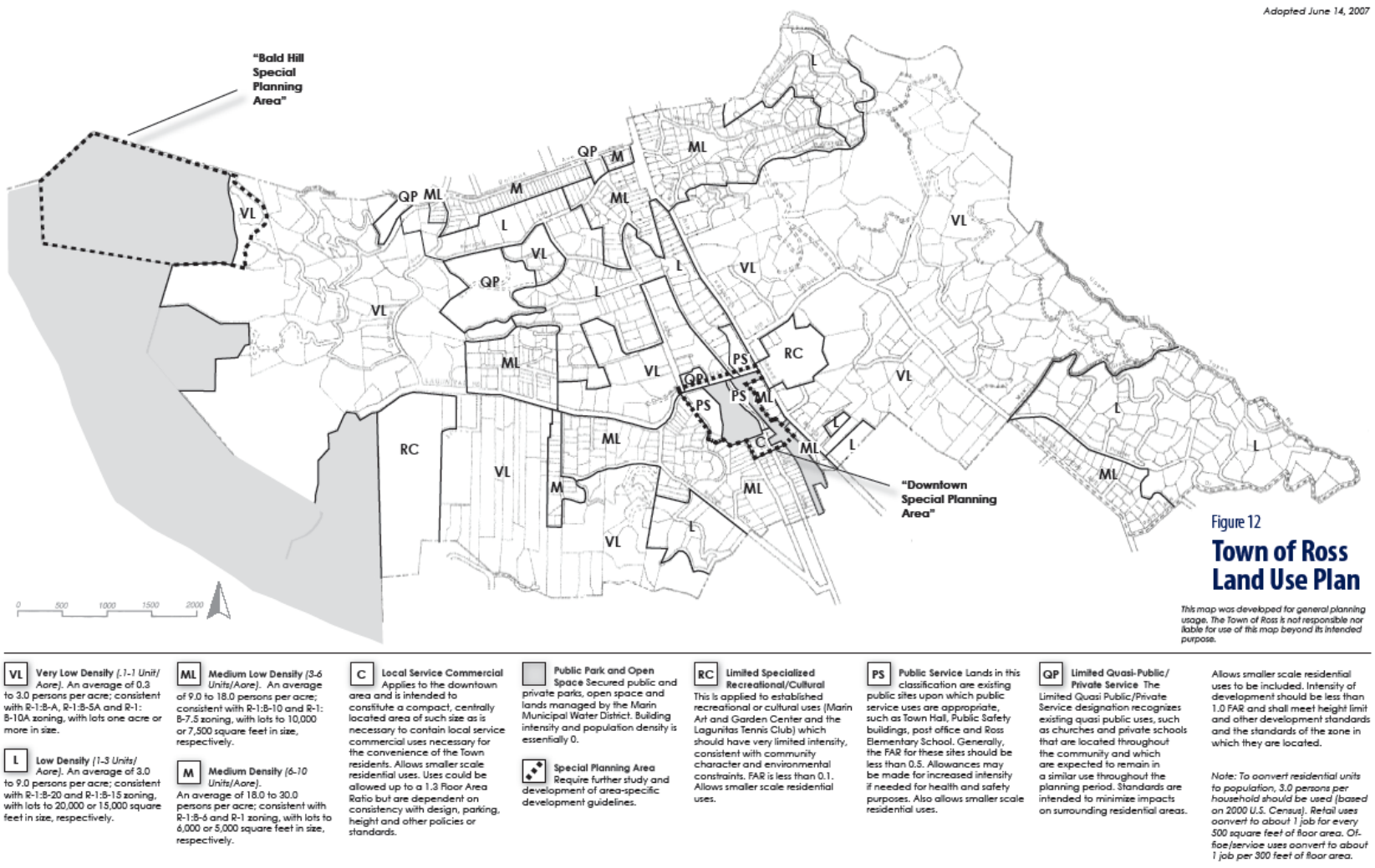
LAND USE DEMAND

The "demand" for bicycle facilities can be difficult to predict. Unlike automobile use, where historical trip generation studies and traffic counts allow one to estimate future "demand" for travel, bicycle trip generation methods are less advanced and standardized. Land use patterns can help predict demand and are important to bikeways planning because changes in land use (and particularly employment areas) will affect average commute distance, which in turn affects the attractiveness of bicycling as a commute mode. **Figure 4-1**, the land use map from the Ross General Plan, is included on the next page.

The Ross bikeways network will connect the neighborhoods where people live to the places they work, shop, engage in recreation, or go to school. An emphasis will be placed on regional bikeways and transit connections centered on the major activity centers in Ross, including:

- Ross Commons
- Civic buildings
- Post Office
- Schools
- Transit stops
- Neighborhood parks and regional recreational areas
- Shopping Areas

Figure 4-1: Ross General Plan Land Use Map



Source: Ross General Plan

COMMUTE PATTERNS

A central focus of presenting commute information is to identify the current "mode split" of people that live and work in Ross. Mode split refers to the choice of transportation a person selects to move between destinations, be it walking, bicycling, taking a bus, or driving. One major objective of any bicycle facility improvement is to increase the percentage of people who choose to bike rather than drive or be driven. Every saved vehicle trip or vehicle mile represents quantifiable reductions in air pollution and can help in lessening automobile traffic congestion.

Journey to work and travel time to work data were obtained from the 2000 US Census for Ross, Marin County, California, and the United States. The primary mode of journey to work data is shown in **Table 4-1**.

Table 4-1: Ross Commute Mode Split Compared to the State and Nation

Mode	Nationwide	Statewide	Marin County	Town of Ross
Bicycle	0.4%	0.9%	1.1%	0.0%
Walk	3.0%	3.0%	3.3%	8.0%
Public Transit	4.9%	5.3%	11.1%	6.7%
Drove Alone	78.2%	74.7%	71.8%	66.7%
Carpool	12.6%	15.1%	11.8%	5.6%
Other	0.5%	1.1%	0.6%	0.7%
Data from US Census 2000				

According to census data, very few if any Ross residents cycle to work. However, census data do not include the number of people who bicycle for recreation or for utilitarian purposes, students who bicycle to school, and bicycle commuters who travel from outside Ross, and are therefore likely to undercount true cycling rates.

Though rate of commute cycling is very low in Ross, there are many possibilities for improving it. Ross has a high percentage of commuters who take public transit to work—almost seven percent, compared with 5.3% for the state. Two percent of Golden Gate Transit riders arrive at bus stops by bicycle.[2] If bicycle connections to Golden Gate Transit stops are improved, and especially if these connections are coupled with improved bicycle storage, it would be possible to shift some vehicle trips to the bus stops into bicycle trips.

[2] Marin County Transit District. "Marin County Transit Short Range Transit Plan". March 2006.

POTENTIAL FUTURE AIR QUALITY IMPROVEMENTS

Ross lies within the San Francisco Bay Area Basin, which is regulated by the Bay Area Air Quality Management District (BAAQMD). According to the California Air Resources Board, as of July 2005, the air quality in the San Francisco Bay Area Basin did not meet the minimum State health-based standards for one-hour concentrations ground-level ozone and the State standards for Particulate Matter (PM10) and Fine Particulate Matter (PM2.5).[3] Currently, the Basin is classified as marginal non-attainment area for the Federal 8-hour ozone standard.

According to the BAAQMD, motor vehicles are responsible for approximately 75 percent of the smog in the Bay Area. Reducing vehicle miles traveled (VMTs) is a key goal of the BAAQMD, and fully implementing Ross's bicycle network will help achieve this goal by providing residents safe and functional ways to get to work, school, or shopping without relying on motor vehicles. Based on data from the 2000 Census and estimates of bicycle mode share for students, **Table 4-2** summarizes the estimated commute statistics of Ross. By adding the estimated number of bicycle-to-work, school, and college commuters, the current number of daily bicycle commuters in Ross was found to be 22, while the number of utilitarian cyclists more than triples that number, totaling 73.

Table 4-2: Ross Commuting Statistics (2000)

Current Commuting Statistics		Source
Ross Population	2,310	*2000 US Census*
Number of Commuters	781	*2000 US Census (Employed persons minus those working at home)*
Number of Bicycle-to-Work Commuters	0	*2000 US Census*
Bicycle-to-Work Mode Share	0.00%	*Mode share percentage of Bicycle to Work Commuters*
School Children Grades K-8	409	*2000 US Census, population ages 5-14*
Estimated School Bicycle Commuters	20	*Lamorinda School Commute Study (Fehr & Peers Associates, 1995) and San Diego County School Commute Study (1990). (5%)*
Number of College Students	42	*2000 US Census*
Estimated College Bicycle Commuters	2	*National Bicycling & Walking Study, FHWA, Case Study No. 1, 1995. Review of bicycle commute share in seven unversity communities (5%)*
Average Weekday Golden Gate Ridership	2,523	*Average of weekday system wide Golden Gate Transit boardings on Bus Routes serving Ross (Routes:)Marin Transit Data Request*

[3] BAAQMD. Ambient Air Quality Standards & Bay Area Attainment Status. Last updated July 15, 2005. <www.baaqmd.gov/pln/air_quality/ambient_air_quality.htm>

Number of Daily Bike-Golden Gate Transit Users	50	*GGT Existing Conditions System Levels Analysis Report 2005, Page 4-24*
Estimated Total Number of Bicycle Commuters and Utilitarian Riders	73	*Total of bike-to-work, transit, school, college and utilitarian bicycle commuters does not include recreation.*
Estimated Adjusted Mode Share	3.2%	*Estimated Bicycle Commuters divided by population*

Table 4-3 finds that 146 bicycle trips were made each day in Ross during 2000. The result was 88 less vehicle trips per day and 358 daily VMT saved.

Table 4-3: Estimated Bicycle Trips and VMT Reduction in Ross (2000)

Estimated Current Bicycle Trips		Source
Total Daily Bicycle Trips	146	*Total bicycle commuters x 2 (for round trips) plus total number of utilitarian bicycle trips*
Reduced Vehicle Trips per Weekday	88	*Assumes 73% of bicycle trips replace vehicle trips for adults/college students and 53% for school children*
Reduced Vehicle Miles per Weekday	358	*Assumes average one-way trip travel length of 4.6 miles for adults/college students and 0.5 mile for schoolchildren*

Table 4-4 estimates the potential future bicycle commuters if a portion of residents living within nine minutes of their employment were to bicycle to work. Applying conservative estimates, an 8% increase (future new bicycle commuters/total future bicycle commuters) in the bicycle mode share would result. This shift in mode share to bicycling could potentially reduce the number of miles driven in Ross per year by almost 140,000.

Table 4-4: Potential Future Bicycle Commuters

Potential Future Bicycle Commuters		Source
Number of workers with commutes nine minutes or less	126	*US Census 2000*
Number of workers who already bicycle or walk to work	71	*US Census 2000*
Number of potential bicycle commuters	55	*Calculated by subtracting number of workers who already bicycle or walk from the number of workers who have commutes 9 minutes or less*
Future number of new bicycle commuters	6	*Based on capture rate goal of 10% of potential bicycle riders*

Total Future Daily Bicycle Commuters	79	*Current daily bicycle commuters plus future bicycle commuters*
Future Total Daily Bicycle Trips	157	*Total bicycle commuters x 2 (for round trips)*
Future Reduced Vehicle Trips per Weekday	115	*Assumes 73% of bicycle trips replace vehicle trips*
Future Reduced Vehicle Miles per Weekday	527	*Assumes average one-way trip travel length of 4.6 miles for adults. Assumes 12 mph average bicycle speed; 23 minute average travel time. Travel time data from NHTS 2001 Trends, Table 26.*
Future Reduced Vehicle Miles per Year	139,727	*256 weekdays per year*

Table 4-5 estimates the reduction in VMT in Ross as a result of the reduction in vehicle miles estimated in Table 4-4. The estimated reduction in air pollutants is based on the best available local and national data. Using the increase in total number of work and school commuters to 79, an estimated decrease of 1 kg/day of HC, 11 kg/day of CO, and 1 kg/day of NOX would result.

Table 4-5: Future Air Quality Benefits from Increased Bicycle Commuting

Future Air Quality Benefits		Source
Reduced HC (kg/weekday)	1	*(0.0028 kg/mile)*
Reduced CO (kg/weekday)	11	*(0.0209 kg/mile)*
Reduced NOX (kg/weekday)	1	*(0.00139 kg/mile)*
Reduced CO2 (kg/weekday)	58,057	*(.4155 kg/mile)*
Reduced HC (metric tons/year)	0	*1000 kg per metric ton; 256 weekdays/year*
Reduced CO (metric tons/year)	3	*1000 kg per metric ton; 256 weekdays/year*
Reduced NOX (metric tons/year)	0	*1000 kg per metric ton; 256 weekdays/year*
Reduced CO2 (metric tons/year)	14,863	*1000 kg per metric ton; 256 weekdays/year*

Emissions rates from EPA report 420-F-00-013 "Emission Facts: Average Annual Emisisons and Fuel Consumption for Passenger Cars and Light Trucks." 2000.

This improvement in air quality could be greater assuming that if conditions for bicyclists improve and attract new Ross-based riders, the same conditions may attract bicyclists to the town whose trips originate outside of Ross. Ross' mild climate, combine with rising fuel costs, will also encourage additional cycling as more attractive routes and gap closures are accomplished.

5. PROPOSED SYSTEM

As shown in the preceding Existing Conditions chapter, Ross' current bikeway system provides opportunities for safe travel both on-street and off-street. However, significant gaps remain in the system and must be closed to provide good connectivity for cyclists riding within the Town of Ross and between neighboring communities. The priorities of the proposed system are listed in Chapter 6. Details on project alignments are found in **Table 5-1 and Figure 5-1**.

PROPOSED BIKEWAYS

There are 3.75 miles of bikeways proposed for the Town of Ross. The majority of bikeways are Class III facilities, signed bicycle routes. These bikeways on Lagunitas Road, Glenwood Avenue, Bolinas Avenue, Fernhill Avenue, Norwood Avenue, and Laurel Grove Avenue provide access to Natalie Coffin Green Park, Branson School, and inner Ross and tie into the existing main north-south Bike Routes 15 and 20. Shared Roadway Bicycle Markings are proposed for all Class III facilities, where appropriate, alongside areas of parallel parking. In addition, Share the Road Signs are recommended, as needed, along all Class III signed bicycle routes. One Class II facility, a stripped bike lane, is proposed on Sir Francis Drake Boulevard. This bikeway provides direct north-south travel through Ross. This proposed Class II bike lane may require Class III facilities on sections of the bikeway due to existing physical limitations and open drainageways. The Town will engage the services of a traffic engineer to determine the feasibility and location of Class II facilities on Sir Francis Drake Boulevard.

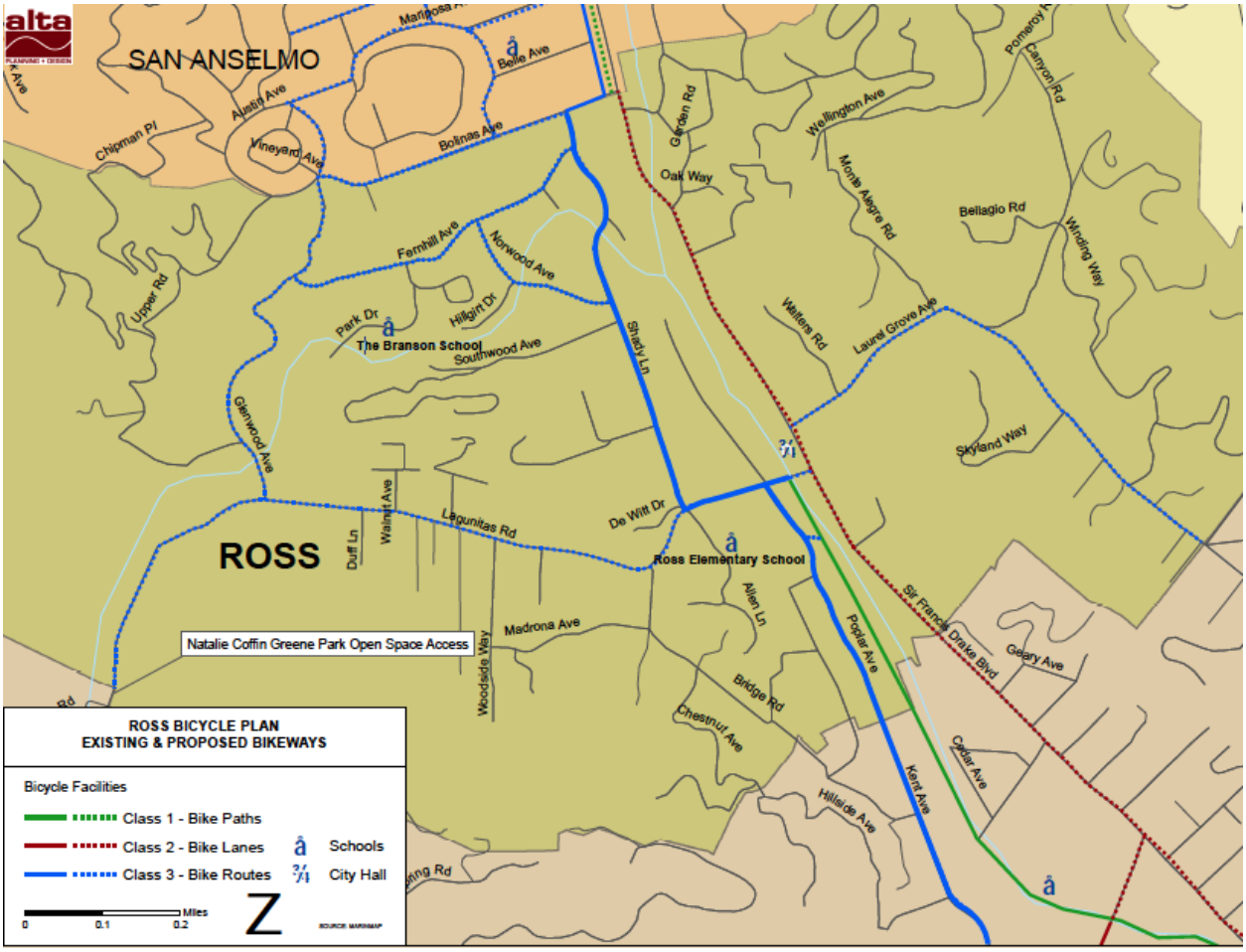
The Town has developed a Downtown Plan which may require the Class I Corte Madera Creek bikeway to terminate at the southern Ross Post Office parking lot in order to avoid traffic conflicts and improve bicycle safety. In this case, bicycle traffic will be rerouted to connect to the Ross Common bike route as shown in Figure 5.1

Table 5-1: Proposed Bikeways

Class II Facilities - Striped Bicycle Lanes (On-Street)				
Segment Name	**Begin**	**End**	**Class**	**Length**
Sir Francis Drake Blvd.*	Bolinas Dr.	Ross Ter.	II	0.81
			Total Mileage	**0.81**
Class III Facilities - Signed Bicycle Routes (On-Street)				
Segment Name	**Begin**	**End**	**Class**	**Length**
Lagunitas Rd.	Sir Francis Drake Blvd.	Corte Madera Creek Path	III-Sharrows	0.05
Lagunitas Rd.	Shady Lane	Natalie Coffin Greene Park	III - Sharrows	0.68
Glenwood Ave.	Lagunitas Rd.	Bolinas Ave.	III - Sharrows	0.50
Bolinas Ave.	Glenwood Ave.	Shady Lane	III - Sharrows	0.34
Fernhill Ave.	Glenwood Ave.	Shady Lane	III - Sharrows	0.43
Norwood Ave.	Fernhill Ave.	Shady Lane	III - Sharrows	0.23
Laurel Grove Ave.	Sir Francis Drake Blvd.	Ross Town Limits	III - Sharrows	0.71
			Total Mileage	**2.94**
			Total all Facilities	**3.75**

*May require Class III facilities on certain sections of the bikeway.

Figure 5-1: Proposed Bikeway Network



SUPPORT FACILITIES AND PROGRAMS

Support programs and facilities are an important component of a bicycle transportation system. Bikeway facilities alone are not sufficient to increase cycling. The cycling environment needs to be improved by providing cyclists with places to store their bicycles at work locations, to shower and to change clothes. In addition, bicycle racks on buses, directional signage intended for cyclists, route maps, and educational and encouragement programs would be a great help to cyclists. Programs such as bikeway management and maintenance, and promotional and educational programs make cycling more convenient and safe. These programs create the cultural shift necessary to increase bicycle use. The following section includes general and specific recommendations for support facilities and programs.

BICYCLE PARKING AND END-OF-TRIP FACILITIES

Bicycle parking includes bike racks, lockers, and corrals. Bicycle racks allow the cyclist to lock their bicycle at one or two points. Bicycle racks may be in the open or sheltered. Bicycle lockers allow cyclists to store their bicycle inside a lockable compartment. Lockers are usually rented from the hosting jurisdiction or private operator. Bicycle corals allow cyclists to store their bicycle inside a caged area. Bicycle racks might be provided inside corals.

Increase Public Bicycle Parking Facilities

The Town will seek to provide bike racks and lockers at public destinations, including the Post Office, downtown shops, the Commons, the tennis courts, Natalie Coffin Greene Park and Town Hall. All bicycle parking should be safe, secure, and in a covered area (if possible). Large employers should be encouraged to provide secure indoor parking, covered bicycle corrals, or bicycle lockers.

Large events are sources of traffic congestion. Event-goers who live within cycling distance may be more inclined to arrive by bicycle if attended parking is provided, effectively shifting an event access mode share from automobile to bicycle.

Provide Bike Parking at Large Events

The Town will seek to provide bike parking at large Town-sponsored events, including the Town Dinner and the Fourth of July picnic, and will encourage hosts of large events, such as the Marin Art & Garden Center, Ross School, and The Branson School, to provide bike parking.

The Town will also encourage event-goers to arrive by bicycle by providing and encouraging valet bicycle parking as feasible. The Marin County and San Francisco Bicycle Coalitions have provided free bicycle parking at events in the past. The valet parking works much like a coat check: cyclists give their bicycle to an attendant, who tags the bicycle with a number and gives the cyclist a claim stub. When the cyclist returns to get her or his bicycle, she or he presents the claim stub and the attendant retrieves her or his bicycle for them. Locks are not needed. The Bicycle Coalition will also park strollers, rollerblades, electric scooters and other human- or electric-powered transportation devices. The Town could sponsor the valet parking or partner with the Marin County Bicycle Coalition and/or other providers or sponsors. Volunteers are critical to the success of such a program because they typically staff the events.

The availability of showers and changing facilities at places of employment can greatly increase the propensity of employees to cycle to work. One reason many employees do not bicycle to work is because cycling will cause them to sweat. Employers who offer shower facilities give their employees the option to cycle to work while maintaining their hygiene. Another problem experienced by bike-to-work commuters is the lack of facilities that allow them to change from their cycling attire into their work attire. Employers encourage their employees to bike-to-work if these changing facilities are provided.

Encourage Provision of Shower and Changing Facilities

The Town of Ross will encourage employers to provide bicycle parking, shower and changing facilities for employees in their development plans and as a component of all commute and traffic demand management programs.

SAFE ROUTES TO SCHOOL

Identifying and improving routes for children to walk or bicycle to school is an effective means of reducing morning traffic congestion and addressing safety problems around schools. The most effective school commute programs are joint efforts of the school district and Town or County, with the support of parent organizations. The traffic calming, route maps, and infrastructure improvements that result from an extensive Safe Routes to School plan benefit not only students walking and biking to school, but also other cyclists and pedestrians that are using routes near schools.

Continue to support the Safe Routes to School Program

The Town of Ross will continue its support of the Safe Routes to Schools program within the Ross School District. Safe Routes improvements at local schools should be coordinated with Town-wide bicycle and pedestrian infrastructure improvements to create a seamless network by which school-aged children can travel safely by bicycle and on foot.

BICYCLE FACILITY MAINTENANCE

Bicycle facility maintenance is often a chief obstacle in the implementation of local bike plans in Marin County. Some tasks, such as repairing damaged and potholed roadway surfaces, clearing plant overgrowth, and regular street-sweeping, are associated with routine roadway maintenance. However, street sweeping activities commonly transfer debris out of the roadway and into the bicycle lane. Other maintenance activities are bicycle specific, and include restriping lanes, repainting stencils, replacing signs, and maintaining bicycle parking facilities.

Develop a Bicycle Maintenance Program and Funding Source

Bikeway facility maintenance will be adequately maintained as funding permits. In addition to obtaining funds from the general revenue, the Town will pursue other methods to secure funding for bicycle facility maintenance. The Transportation Authority of Marin has undertaken development of maintenance strategies for countywide pathways which may provide insights into development of a similar program for bicycle facilities in Ross.

The Town will work with the Marin County Department of Public Works to ensure the County fulfills its responsibility to maintain the Corte Madera Creek multi-use path.

Develop a System for Bicycle Facility Safety Evaluation

The Town will ensure that a mechanism exists to evaluate the condition of bicycle facilities. The purpose of the mechanism is to alleviate potential hazards and to improve conditions for cyclists at specific intersections and locations. Training should be provided if necessary to ensure that public works and law enforcement employees recognize bicycle hazards such as:

- Improperly designed or placed drainage grates
- Cracks or seams in the pavement
- Overhanging tree limbs or other obstacles located along bikeways
- Areas where lane changes are difficult (e.g., bike lane to left turn pocket)
- Signal timing problems (e.g. green phase too short)
- Locations where vehicular traffic congestion blocks bike facilities on a regular basis.

Integrate Bicycle Maintenance into Public Works Maintenance Requests

In the future, all printed and online bicycle education materials and maps should include the Department of Public Works maintenance request email and phone number.

BICYCLE SIGNAL DETECTION

As described in Chapter 3, the Town of Ross has no official policy regarding bicycle signal detection. The following programs are intended to guide the Town's bicycle signal detection efforts to include bicycles along all designated lanes/routes and at key intersections. While detector loops and video detection facilitate faster and more convenient motorist trips, they may not facilitate cyclist travel. Detectors, if not calibrated properly or not functioning, can frustrate cyclists who are waiting for a traffic signal to change.

There are three signalized intersections in Ross on Sir Francis Drake Boulevard. The Bolinas Avenue intersection has existing bicycle loop detectors, and the Marin County Public Works Department will be stenciling bicycle loop detector symbols on the pavement to assist cyclists in positioning their bikes to actuate the traffic light change. The Ross Public Works Department is planning to install bicycle detection sensors at the signalized Sir Francis Drake Boulevard intersections at Lagunitas Road and Laurel Avenue Grove when the Lagunitas Road intersection is improved in 2011, in accordance with Caltrans Policy Directive 09-06.

Calibrate Loop Detectors and Video Detection Devices

Where appropriate, the Town will ensure that all loops and video detection devices are calibrated and operable for bicycle users.

Develop a Policy to Install Bicycle-Calibrated Loop Detectors or Video Detection with Bicycle Zones at Signalized Intersections

The Town will develop a policy of installing bicycle-calibrated loop detectors at signalized intersections on Sir Francis Drake Boulevard as streets are repaved. For new installations, Type D for lead loops in all regular travel lanes shared with bicycles is recommended. Type C loops, Bicycle Loop Detectors (BLD) are recommended for roadways with Class II bicycle lanes.

Expanded video detection zones are recommended for roadways with Class II bikeways, or with parallel Class I bikeways. Video image detection should sense bicycles in all approach lanes, in addition to the left side of right-turn channelization islands. Some video systems can estimate approach speed, and this capability could be used to extend the green time for slow objects assumed to be bicycles.

Apply Pavement Stenciling to Indicate Detection Areas

All detector loops and video detection areas with cyclist activity will be marked with a pavement stencil. One such stencil example is the Caltrans Standard Plan A24C bicycle detection marking. This stencil shows cyclists where to stop and activate the loop or video detection. Stencils should be repainted as needed along with other roadway markings. Information on how loop and video detection works should be included in a Town sponsored bicycle safety brochure.

MULTI-MODAL CONNECTIONS

Making transit accessible to cyclists extends the ridership catchment areas of transit. Providing accommodations for bicycles at transit stations and on the transit modes encourages cyclists to use transit. In the case of Ross, the town is served by Golden Gate Transit Bus lines. Integrating bicycles with GGT includes bicycle parking facilities at transit stops and racks or other devices to secure bicycles on buses.

Further Integrate Bicycles and Transit

The Town of Ross will support the Marin County Transit District and Golden Gate Transit to continue to expand bicycle access to buses. Bicycle travel to transit stops and stations should be enhanced to make bicycle and transit travel as convenient as possible. Key components to enhancing transit-bike connections include: providing bicycle parking at transit stops, including bike racks at key bus stops and transfer points; providing educational materials regarding transit and bikes-on-transit, including maps to and from stations and stops, and providing bicycle maintenance stands at stations.

BICYCLE EDUCATION AND TRAFFIC ENFORCEMENT PROGRAMS

The leading cause of bicycle-motorist collisions is lack of bicycle safety education among youngsters. For example, the most common type of bicycle accident reported in California is younger persons (between 8 and 16 years of age) riding on the wrong side of the road during evening hours. Further,

studies of accident locations around California consistently show the greatest concentration of accidents is directly adjacent to elementary, middle, and high schools.

Continue and Expand Bicycle Education Programs

Existing bicycle education programs will be continued as funding permits. With the passage of Measure A funding for Safe Routes to Schools, the program will continue to be available to Ross schools and can be expanded to include non-participating schools. Measure A funding also provides Safe Pathways funding, which provides an incentive for Safe Routes programs to develop infrastructure improvement concepts. For adult education, the Town will work with law enforcement and the Marin County Bicycle Coalition to publicize local adult bicycle education and safety programs, including Share the Road and Street Skills classes.

Motorists are commonly unaware of the rights afforded to bicyclists. As such, many motorists mistakenly believe that bicyclists do not have a right to ride in travel lanes. Nor are they aware of that they are required to "share the road" with bicyclists.

Educate Motorists and Cyclists about Bicycle Laws

Ross is a participant in the Marin County "Share the Road" campaign, and will continue to participate. This campaign sets checkpoints throughout Marin, stopping cyclists and motorist to distribute bicycle safety brochures. Most education and encouragement programs and activities will likely be cooperative efforts between the Town of Ross, the Ross Police Department, the Marin County Sheriff's office, the County of Marin, the Transportation Authority of Marin and local bicycle groups such as the Marin County Bicycle Coalition.

Cyclists, both children and adults, are many times unaware of the requirements set forth in the California Vehicle Code. They must comply and obey traffic laws while sharing the road with motor vehicles on public roadways. In Ross, many cyclists frequently fail to stop for posted stop signs, ride single file, or ride as far to the right side of the paved roadway as practical. Often large groups of cyclists tend to impede the normal flow of vehicular traffic when violating some of these very basic rules.

Enforce Traffic Bicycle Laws

Bicyclists on public roadways have the same rights and responsibilities while sharing the road with automobiles and will be held to the same rules and regulations as any other motorist on the road. The members of the Ross Police Department enforce existing traffic laws in an effort to ensure the safety of drivers and bicyclists. Bicyclists who fail to stop for posted stop signs, ride single file or ride as close to the right edge of the roadway as practical may be cited when necessary to ensure the safe, orderly passage of traffic on Ross streets.

6. PLAN IMPLEMENTATION

This chapter identifies steps towards implementation of the facilities and programs proposed in this plan, the estimated costs for the proposed improvements and maintenance, and strategies on funding and financing.

IMPLEMENTATION PROCESS

The steps between the network improvements and concepts identified in this Plan and the final completion of the improvements will vary from project to project, but typically include:

1. Adoption of the Town of Ross 2010 Bicycle and Pedestrian Plan by the Ross Town Council.
2. Preparation of a Feasibility Study involving a conceptual design (with consideration of possible alternatives and environmental issues) and cost estimate for individual projects as needed.
3. Secure, as necessary, outside funding and any applicable environmental approvals.
4. Consider the parking needs of businesses and residents in the development of new bicycle lanes through a thorough community engagement process
5. Approval of the project by the Town Council, including the commitment by the latter to provide for any unfunded portions of project costs.
6. Completion of final plans, specifications and estimates, advertising for bids, receipt of bids and award of contract(s).
7. Construction of Project.

INFRASTRUCTURE PROJECT PRIORITIZATION

Once a bikeway system has been identified, the greatest challenge is to identify the top priority projects that will offer the greatest benefit to bicyclists if implemented. The project prioritization in the following section was developed based on the following planning criteria.

- Continuity – Does the project provide new or significantly improved connectivity on established corridors or between major activity areas that does not currently exist or is not currently usable by the general public?

- Gap Closure – Does the project provide a new connection between major activity centers or on a major corridor that currently either does not exist or has convenience/safety issues?

- Demand Patterns – Does the project serve a significant existing or potential demand, as evidenced by (a) counts or observed activity, (b) comments from the public, (c) connectivity and proximity to major generators, and/or (d) projections from an acceptable demand model?

- Safety – Does the project address a significant safety concern in a community as evidenced by collision data, field observations, and/or public perception and comments?

- Project Readiness – Are the key feasibility issues of the project (right-of-way, environmental impacts, engineering issues, cost issues, neighborhood support) understood and not expected to negatively affect or delay the project? Has any formal feasibility study, engineering or design been conducted?

- Multi-Modal Integration – Does the project provide enhanced connectivity to existing transit services?

- Cost/Benefit analysis – Will the project provide the greatest benefit to cyclists for the amount invested to build it?

It is important to remember that the lists of bikeway projects and programs are flexible concepts that serve as guidelines to those responsible for implementation. The overall system and segments may change over time as a result of changing bicycling patterns and implementation constraints and opportunities.

COST BREAKDOWN OF RECOMMENDED BICYCLE FACILITIES

A summary and breakdown of cost estimates for the recommended bicycle network detailed in this plan is presented in **Tables 6-1** below. It is important to note the three following assumptions about the cost estimates. First, all cost estimates were completed in 2008 and are highly conceptual, since there is no feasibility or preliminary design completed, and second, the design and administration costs included in these estimates may not be sufficient to fund environmental clearance studies. Finally, costs estimates are a moving target over time as construction costs escalate quickly.

Table 6-1 details the estimated costs of each bikeway segment. There are five total proposed bikeway segments, one of which is a recommended Class II facility and four of which are recommended Class III facilities. The total length of the recommended bikeway system is 3.75 miles at an estimated cost of $76,400. Note that estimated costs for Class III signed bike routes include standard Bike Route signs as well as Share the Road signs and Shared Roadway Bicycle Markings, as appropriate.

All of the projects are recommended to be implemented over the next two to twenty years, or as funding is available. The more expensive projects may take longer to implement. In addition, many funding sources are highly competitive, and therefore impossible to determine exactly which projects will be funded by which funding sources. Timing of projects is also difficult to pinpoint, due to the dependence on competitive funding sources and, timing of roadway and development, and the overall economy.

MAINTENANCE OF BICYCLE FACILITIES

Maintenance costs for the bikeway network should be relatively low because it is the County of Marin's responsibility to maintain the Class I Corte Madera Creek multi-use path. The existing and recommended bikeway network is predominately made up of on-street bike lanes and routes that

will be treated as part of the normal roadway maintenance program. As part of the normal roadway maintenance program, extra emphasis should be put on keeping the bike lanes and roadway shoulders clear of debris and keeping vegetation overgrowth from blocking visibility or creeping into the roadway.

Table 6-1: Proposed Bikeways Cost Estimates

Class II Facilities - Striped Bicycle Lanes (On-Street)					
Segment Name	**Begin**	**End**	**Class**	**Length**	**Cost**
Sir Francis Drake Blvd.*	Bolinas Dr.	Ross Ter.	II	0.81	$24,900
			Total Class II Bicycle Lanes Mileage	**0.81**	
			Total Class II Bicycle Lanes Estimated Cost		**$24,900**
Estimated base cost of Class II Bicycle Lane is $30,700/mile.					
Class III Facilities - Signed Bicycle Routes (On-Street)**					
Segment Name	**Begin**	**End**	**Class**	**Length**	**Cost**
Lagunitas Rd.	Sir Francis Drake Blvd.	Corte Madera Creek Path	III- Sharrows	0.05	$900
Lagunitas Rd.	Shady Lane	Natalie Coffin Greene Park	III - Sharrows	0.68	$11,900
Glenwood Ave.	Lagunitas Rd.	Bolinas Ave.	III - Sharrows	0.50	$8,800
Bolinas Ave.	Glenwood Ave.	Shady Lane	III - Sharrows	0.34	$6,000
Fernhill Ave.	Glenwood Ave.	Shady Lane	III - Sharrows	0.43	$7,500
Norwood Ave.	Fernhill Ave.	Shady Lane	III - Sharrows	0.23	$4,000
Laurel Grove Ave.	Sir Francis Drake Blvd.	Ross Town Limits	III - Sharrows	0.71	$12,400
			Total Class III Bicycle Routes Mileage	**2.94**	
			Total Class III Bicycle Routes Estimated Cost		**$51,500**
Estimated base cost of Class III Signed Bicycle Route is $12,600/mile.					
Estimated base cost of Class III Signed Bicycle Route with Shared Roadway Bicycle Markings is $17,500/mile.					
			Total Bikeways Mileage	**3.75**	
			Total estimated cost of bikeway network improvements	**$76,400**	

*May be Class II Facilities on some sections of the bikeway.

**Some cost savings may be possible if County of Marin Bicycle Route Guide Signage is used.

MARKETING THE BICYCLE PLAN

The success of the Ross Bicycle and Pedestrian Plan depends largely on the community's acceptance and promotion of the Plan's contents. Town departments and committees should incorporate the policies, objectives and spirit of the Bicycle and Pedestrian Plan into their respective projects and responsibilities. The following steps will help ensure the plan becomes a living document, helping shape Ross' future.

- Distribute copies of the Plan to members of the Advisory Design Review Group.
- Distribute copies of the Plan to the Town of Ross' Planning, Police, and Public Works Departments.

- Provide copies of the Town of Ross bicycle facilities map to local schools, bicycle and recreational groups, transit agencies, bicycle shops and major employers.
- Post the plan on the Town's website.
- Publish an article about the creation of the plan in The Morning After and the Ross Valley Reporter.

FUNDING OPPORTUNITIES

FEDERAL FUNDING SOURCES

The primary federal source of surface transportation funding—including bicycle and pedestrian facilities—is SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. SAFETEA-LU is the fourth iteration of the transportation vision established by Congress in 1991 with the Intermodal Surface Transportation Efficiency Act (ISTEA) and renewed in 1998 and 2003 through the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 (SAFETEA). Also known as the federal transportation bill, the $286.5 billion SAFETEA-LU bill was passed in 2005 and authorized Federal surface transportation programs for the five-year period between 2005 and 2009.

SAFETEA-LU funding is administered through the State (Caltrans and the State Resources Agency) and regional planning agencies. Most, but not all, of these funding programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. SAFETEA-LU programs require a local match of 11.47%. SAFETEALU funding is intended for capital improvements and safety and education programs and projects must relate to the surface transportation system.

Specific funding programs under SAFETEA-LU include:

- Congestion Mitigation and Air Quality (CMAQ) – Funds projects that are likely to contribute to the attainment of national ambient air quality standards
- Recreational Trails Program—$370 million nationally through 2009 for non-motorized trail projects
- Safe Routes to School Program—$612 million nationally through 2009
- Transportation, Community and System Preservation Program—$270 million nationally over five years
- Federal Lands Highway Funds—Approximately $1 billion dollars are available nationally through 2009

FUNDING GLOSSARY

CTC *California Transportation Commission*

FHWA *Federal Highway Administration*

MPO *Metropolitan Planning Organization*

RTIP *Regional Transportation Improvement Program*

RTP *Regional Transportation Plan*

RTPA *Regional Transportation Planning Agency*

SAFETEA-LU *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users*

STIP *State Transportation Improvement Program*

FEDERAL LANDS HIGHWAY FUNDS

Federal Lands Highway Funds may be used to build bicycle and pedestrian facilities in conjunction with roads and parkways at the discretion of the department charged with administration of the funds. The projects must be transportation-related and tied to a plan adopted by the State and MPO. Federal Lands Highway Funds may be used for planning and construction.

TRANSPORTATION, COMMUNITY AND SYSTEM PRESERVATION PROGRAM

The Transportation, Community and System Preservation (TCSP) Program provides federal funding for transit oriented development, traffic calming and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services and trade centers. The program is intended to provide communities with the resources to explore the integration of their transportation system with community preservation and environmental activities. TCSP Program funds require a 20% match.

REGIONAL SURFACE TRANSPORTATION PROGRAM

The Regional Surface Transportation Program (RSTP) is a block grant program which provides funding for bicycle and pedestrian projects, among many other transportation projects. Under the RSTP, Metropolitan Planning Organizations, such as MTC, prioritize and approve projects which will receive RSTP funds. TAMC distributes the RSTP funds to local jurisdictions. Metropolitan planning organizations can transfer funding from other federal transportation sources to the RSTP program in order to gain more flexibility in the way the monies are allocated. In California, 62.5% of RSTP funds are allocated according to population. The remaining 37.5% is available statewide.

REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM

The Regional Transportation Improvement Program (RTIP) is a derivative of the STIP program and identifies projects which are needed to improve regional transportation. Such projects may include bicycle and pedestrian facilities, safety projects and grade separation, among many others. RTIP project planning, programming and monitoring may be funded up to .5% of total RTIP funds in urbanized regions and 2% of total RTIP funds in non-urbanized regions. Each RTPA prepares a RTIP, consisting of projects to be funded through STIP. The RTPA's Regional Transportation Plan helps prioritize projects for the RTIP. RTIPs must be approved by the CTC. Projects to be funded by RTIP funds must be identified in the current or next Regional Transportation Plan.

RECREATIONAL TRAILS PROGRAM

The Recreational Trails Program of SAFETEA-LU provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized as well as motorized uses. In California, the funds are administered by the California Department of Parks and Recreation. In FY 2010, California's funding apportionment was $4,680,480. RTP projects must be ADA compliant. RTP funding requires a 12% local match. Recreational Trails Program 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 of easements or property for trails;
- State administrative costs related to this program (limited to seven percent of a State's funds); and

- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds).

The current RTP authorization expired on Sept. 30, 2009.

LAND AND WATER CONSERVATION FUND

Land and Water Conservation Fund is a federally funded program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Priority development projects include trails, campgrounds, picnic areas, natural areas and cultural areas for recreational use. The Fund is administered by the National Parks Service and the California Department of Parks and Recreation and has been reauthorized until 2015.

Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. Applicants must fund the entire project, and will be reimbursed for 50% of costs. Property acquired or developed under the program must be retained in perpetuity for public recreational use. The grant process for local agencies is competitive, and 40% of grants are reserved for Northern California.

In 2009, approximately $1.2 million was awarded for projects throughout the state. Program guidelines are currently being rewritten and the next anticipated application deadline is Fall 2010.

RIVERS, TRAILS AND CONSERVATION ASSISTANCE PROGRAM

The Rivers, Trails and Conservation Assistance Program (RTCA) is a National Parks Service program which provides technical assistance via direct staff involvement, to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based upon criteria which include conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation and focusing on lasting accomplishments.

STATEWIDE FUNDING SOURCES

The State of California uses both federal sources and its own budget to fund the following bicycle and pedestrian projects and programs.

BICYCLE TRANSPORTATION ACCOUNT

The Bicycle Transportation Account (BTA) provides state funding for local projects that improve the safety and convenience of bicycling for transportation. Because of its focus on transportation, BTA projects, including trail, must provide a transportation link. Funds are available for both planning and construction. BTA funding is administered by Caltrans and cities and counties must have an adopted Bicycle Transportation Plan in order to be eligible. Town Bicycle Transportation Plans must be approved by the local MPO prior to Caltrans approval. Local agencies must provide a 10% match. Caltrans awarded $7.2 million to BTA projects in FY 09/10.

WILDLIFE CONSERVATION BOARD PUBLIC ACCESS PROGRAM

The Wildlife Conservation Board Public Access Program provides funding for the acquisition of lands or improvements that preserve wildlife habitat or provide recreational access for hunting,

fishing or other wildlife-oriented activities. In most years the Wildlife Conservation Board (WCB) receives approximately $1 million for minor capital outlay and local assistance grants. Grant funding applications for public access are accepted on a year-round basis. The WCB meets four times each year, normally in February, May, August, and November to consider approval of funding for projects. Projects eligible for funding include interpretive trails, river access, and trailhead parking areas. The State of California must have a proprietary interest in the project. Local agencies are generally responsible for the planning and engineering phases of each project.

CALIFORNIA CONSERVATION CORPS

The California Conservation Corps (CCC) is a public service program which occasionally provides assistance on construction projects. The CCC may be written into grant applications as a project partner. In order to utilize CCC labor, project sites must be public land or be publicly accessible. CCC labor cannot be used to perform regular maintenance, however, they will perform annual maintenance, such as the opening of trails in the spring.

SAFE ROUTES TO SCHOOL (SR2S)

California was the first state in the country to legislate a Safe Routes to School (SR2S) program. This occurred in 1999 with the enactment of AB 1475. In 2007, AB 57 was passed which extended the program indefinitely. The goals of the program are to reduce injuries and fatalities to school children and to encourage increased walking and bicycling among students. The program achieves these goals by constructing facilities that enhance safety for pedestrians and bicyclists, primarily students in grades K-12 who walk or bicycle to school. By enhancing the safety of the pathways, trails, sidewalks, and crossings, the likelihood of attracting and encouraging other students to walk and bike increases. On April 15, 2010, Caltrans announced a call for Cycle 9 SR2S projects. The amount of funding available $24.25 million and is contingent upon being included in the 2010/11 State Budget Act.

ENVIRONMENTAL JUSTICE: CONTEXT SENSITIVE PLANNING GRANTS

The Caltrans-administered Environmental Justice: Context Sensitive Planning Grants promotes context sensitive planning in diverse communities and funds planning activities that assist low-income, minority and Native American communities to become active participants in transportation planning and project development. Grants are available to transit districts, cities, counties and tribal governments for planning-related activities. This grant is funded by the State Highway Account at $3 million annually state-wide.

OFFICE OF TRAFFIC SAFETY (OTS) GRANTS

The California Office of Traffic Safety distributes federal funding apportioned to California under the National Highway Safety Act and SAFETEA-LU. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Grants are available for programs that increase safety awareness and skills among pedestrians and bicyclists. Proposals may encompass activities such as safety programs, education, enforcement, traffic safety and bicycle rodeos, safety helmet distribution, and court diversion programs for safety helmet violators. Eligible grantees are: governmental agencies, state colleges, and state universities, local Town 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.

COMMUNITY BASED TRANSPORTATION PLANNING DEMONSTRATION GRANT PROGRAM

This fund, administered by Caltrans, provides funding for projects that exemplify livable community concepts including bicycle and pedestrian improvement projects. Eligible applicants include local governments, MPO's and RPTA's. A 20% local match is required and projects must demonstrate a transportation component or objective. There are $3 million dollars available annually statewide.

COASTAL CONSERVANCY NON-PROFIT GRANTS PROGRAM

The Coastal Conservancy provides grants to non-profit organizations for projects which provide access to the California coast and preserve coastal lands, including the construction of trails, public piers, urban waterfronts, and other public access facilities.

REGIONAL FUNDING SOURCES

Regional bicycle and pedestrian grant programs come from a variety of sources, including SAFETEA-LU, the State budget and vehicle registration fees.

AB 2766 MOTOR VEHICLE EMISSION REDUCTION GRANT PROGRAM

The Bay Area Air Quality Management District provides a grant program in accordance with Assembly Bill 2766 which authorized air districts in California to impose a two to four dollar motor vehicle registration fee to be used for the purpose of reducing motor vehicle emissions in order for air districts to meet their responsibilities under the California Clean Air Act. Projects include bicycle facility improvements, safety and enforcement. Proposals must demonstrate the relationship between reduced motor vehicle emissions and improved air quality.

TRANSPORTATION FOR LIVABLE COMMUNITIES PROGRAM

The Transportation for Livable Communities Program (TLC) provides grant monies to public agencies to encourage land use decisions that support compact, pedestrian and bicycle friendly development near transit hubs. MTC administers the TLC program with funds from the Regional Surface Transportation Project.

TRANSPORTATION ENHANCEMENT PROGRAM

The Transportation Enhancement Program provides funds for the construction of projects, beyond the scope of typical transportation projects, which enhance the transportation system. Transportation Enhancement Projects may include landscaping, bicycle facilities and streetscape improvements. Transportation Enhancement projects are programmed as part of the STIP. Annual apportionment averages around $800,000.

TRANSPORTATION FUND FOR CLEAN AIR PROGRAM (TFCA)

TFCA funds are generated by a four dollar surcharge on automobile registration fees in the nine-county Bay Area. Approximately $20 million is collected annually which funds two programs: 60 percent of the TFCA monies go to the Regional Fund and 40 percent go to the County Program Manager Fund.

The Regional Fund is administered by the Bay Area Air Quality Management District (BAAQMD). Pedestrian infrastructure improvements are eligible for TFCA funds through the Smart Growth funding category.

BAAQMD, TFCA Program: www.baaqmd.gov/pln/grants_and_incentives/tfca/

REGIONAL BICYCLE AND PEDESTRIAN PROGRAM (RBPP)

The RBPP was created in 2003 as part of the long range Transportation 2030 Plan developed by the Bay Area Metropolitan Transportation Commission. The program—currently funded with Congestion Mitigation and Air Quality funds—funds regionally significant pedestrian and bicycle projects, and bicycle and pedestrian projects serving schools or transit. $200 million dollars are committed to this program over the 25-year period. Seventy five percent of the total funds are allocated to the county congestion management agencies based on population. The remaining 25 percent of funds are regionally competitive, with the county CMAs recommending the projects to be submitted to MTC for funding consideration.

Metropolitan Transportation Commission, RBPP Program

www.mtc.ca.gov/planning/bicyclespedestrians/regional.htm#bikepedprog

SAFE ROUTES TO TRANSIT (SR2T)

Regional Measure 2 (RM2), approved in March 2004, raised the toll on seven state-owned Bay Area bridges by one dollar for 20 years. This fee increase funds various operational improvements and capital projects which reduce congestion or improve travel in the toll bridge corridors.

Twenty million dollars of RM2 funding is allocated to the Safe Routes to Transit Program, which provides competitive grant funding for capital and planning projects that improve bicycle and pedestrian access to transit facilities. Eligible projects must be shown to reduce congestion on one or more of the Bay Area's toll bridges. The competitive grant process is administered by the Transportation and Land Use Coalition and the East Bay Bicycle Coalition. Competitive funding is awarded in five $4 million grant cycles. The first round of funding was awarded in December 2005. Future funding cycles will be in 2007, 2009, 2011 and 2013.

Transportation and Land Use Coalition, SR2T Program:

www.transcoalition.org/c/bikeped/bikeped_saferoutes.html

THE BAY TRAIL PROJECT

The Bay Trail Grant program offers competitive grants to local governments, special districts and qualified nonprofit groups to build or design new Bay Trail segments. The program is structured to: speed Bay Trail construction by targeting high-priority, ready to build sections and closing critical gaps; leverage state dollars with significant matching funds and in-kind contributions; foster partnership by encouraging cooperative partnerships and creative design solutions; and employ the California Conservation Corps for construction, landscaping and maintenance where possible. The

amount of available funding varies, depending on State bonds and grants to the Bay Trail Project. Beginning Fall 2007 the Bay Trail has a new funding program that will distribute $2.5 million in Proposition 84 funds for the planning and construction of Bay Trail spine segments in the 9-county area. Another $2.5 million grant program is anticipated in 2009.

Bay Trail Project Grant Program: http://baytrail.abag.ca.gov/grants_2003.htm

LOCAL FUNDING SOURCES

TDA ARTICLE 3

Transportation Development Act (TDA) Article 3 funds are state block grants awarded annually to local jurisdictions for transit, bicycle and pedestrian projects in California. Funds for pedestrian projects originate from the Local Transportation Fund (LTF), which is derived from a ¼ cent of the general state sales tax. LTF funds are returned to each county based on sales tax revenues. Eligible pedestrian and bicycle projects include: construction and engineering for capital projects; maintenance of bikeways; bicycle safety education programs (up to 5% of funds); and development of comprehensive bicycle or pedestrian facilities plans. A Town or county is allowed to apply for funding for bicycle or pedestrian plans not more than once every five years. These funds may be used to meet local match requirements for federal funding sources. 2% of the total TDA apportionment is available for bicycle and pedestrian funding.

MEASURE A – LOCAL ROADS

The funds (approximately $43.9 M) will be distributed on an annual basis to each city, town, and Marin County based on a combination of miles of roads to be maintained and population. Each project will be required to consider the needs of all roadway users. Where feasible, locally defined bicycle and pedestrian projects will be implemented at the time a roadway is improved. Improvements could include striping and signing for bicycle lanes and bikeways, sidewalk improvements, curb ramps, and other accessibility and safety improvements.

MEASURE A – SAFE PATHWAYS FUNDING

Safe Pathways to School is the capital improvement element of the Transportation Authority of Marin's Safe Routes to Schools program. Where the Safe Routes program identifies circulation improvements needed for safe access to schools, the Safe Pathways program will provide funding for the engineering, environmental clearance, and construction of pathway and sidewalk improvements in all Marin County communities, including safety improvements at street crossings.

Safe Pathway projects are expected to attract matching funds from other sources and may be used in combination with road funds to accelerate pathway improvements in school areas.

Safe Pathways Projects are selected based on performance criteria that focus on improving safety throughout the County. All projects will come from approved Safe Routes plans, supported by parents, school officials, and the local jurisdiction.

- Relieves an identified safety or congestion problem along a major school route
- Completes a "gap" in the bicycle and pedestrian system along a major school route
- Maximizes daily uses by students and others

- Attracts matching funds
- Respects geographic equity

MARIN NONMOTORIZED TRANSPORTATION PILOT PROGRAM

Marin County is one of four communities nationally that has been selected by Congress to participate in a Nonmotorized Transportation Pilot Program under Section 1807 of the 2005 federal transportation bill, SAFETEA-LU. Section 1807 provides for $25 million to each of the four communities. The legislation states that "The Secretary shall establish and carry out nonmotorized transportation pilot program to construct, in the following four communities selected by the Secretary, a network of nonmotorized transportation infrastructure facilities, including sidewalks, bicycle lanes, and pedestrian and bicycle trails, that connect directly with transit stations, schools, residences, businesses, recreation areas, and other community activity centers:

1. Columbia, Missouri
2. Marin County, California
3. Minneapolis-St. Paul, Minnesota
4. Sheboygan County, Wisconsin

The purpose of the program shall be to demonstrate the extent to which bicycling and walking can carry a significant part of the transportation load, and represent a major portion of the transportation solution, within selected communities."

The County of Marin initiative is known as WalkBikeMarin, and its goal is to encourage walking and bicycling as everyday transportation as a way to make Marin more healthy, livable, and environmentally sustainable. A number of infrastructure improvements, planning projects, and educational programs have been funded through the pilot program, including the Sir Francis Drake Boulevard pathway project in Ross, the bicycle loop detector improvement project at the Sir Francis Drake Boulevard and Bolinas Avenue intersection, and the Street Smarts campaign.

A key outcome of the pilot program is a 'before' and 'after' study to document travel habits in each community. This will measure the effect of the pilot program investments and the results will be reported to Congress. This report will help decide whether or not this pilot program will be expanded to more communities in the next Federal transportation funding package.

NON-TRADITIONAL FUNDING SOURCES

AMERICAN GREENWAYS PROGRAM

Administered by The Conservation Fund, the American Greenways Program provides funding for the planning and design of greenways. Applications for funds can be made by local regional or state-wide non-profit organizations and public agencies. The maximum award is $2,500, but most range from $500 to $1,500. American Greenways Program monies may be used to fund unpaved trail development.

CALIFORNIA CENTER FOR PHYSICAL ACTIVITY GRANT PROGRAM

The California Center for Physical Activity runs several programs related to walking and offers small grants to public health departments. Grants are in the amount of $4,999 dollars or less and are offered intermittently.

REQUIREMENTS FOR NEW DEVELOPMENTS

With the increasing support for "routine accommodation" and "complete streets," requirements for new development, road widening and new commercial development provide opportunities to efficiently construct pedestrian facilities.

IMPACT FEES

One potential local source of funding is developer impact fees, typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may attempt to reduce the number of trips (and hence impacts and cost) by paying for on- and off-site pedestrian improvements designed to encourage residents, employees and visitors to the new development to walk rather than drive. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical to ensure legal soundness.

MELLO-ROOS COMMUNITY FACILITIES ACT

The Mello-Roos Community Facilities Act was passed by the Legislature in 1982 in response to reduced funding opportunities brought about by the passage of Proposition 13. The Mello-Roos Act allows any county, Town, special district, school district or joint powers of authority to establish a Community Facility Districts (CFD) for the purpose of selling tax-exempt bonds to fund public improvements within that district. CFDs must be approved by a two-thirds margin of qualified voters in the district. Property owners within the district are responsible for paying back the bonds. Pedestrian facilities are eligible for funding under CFD bonds.

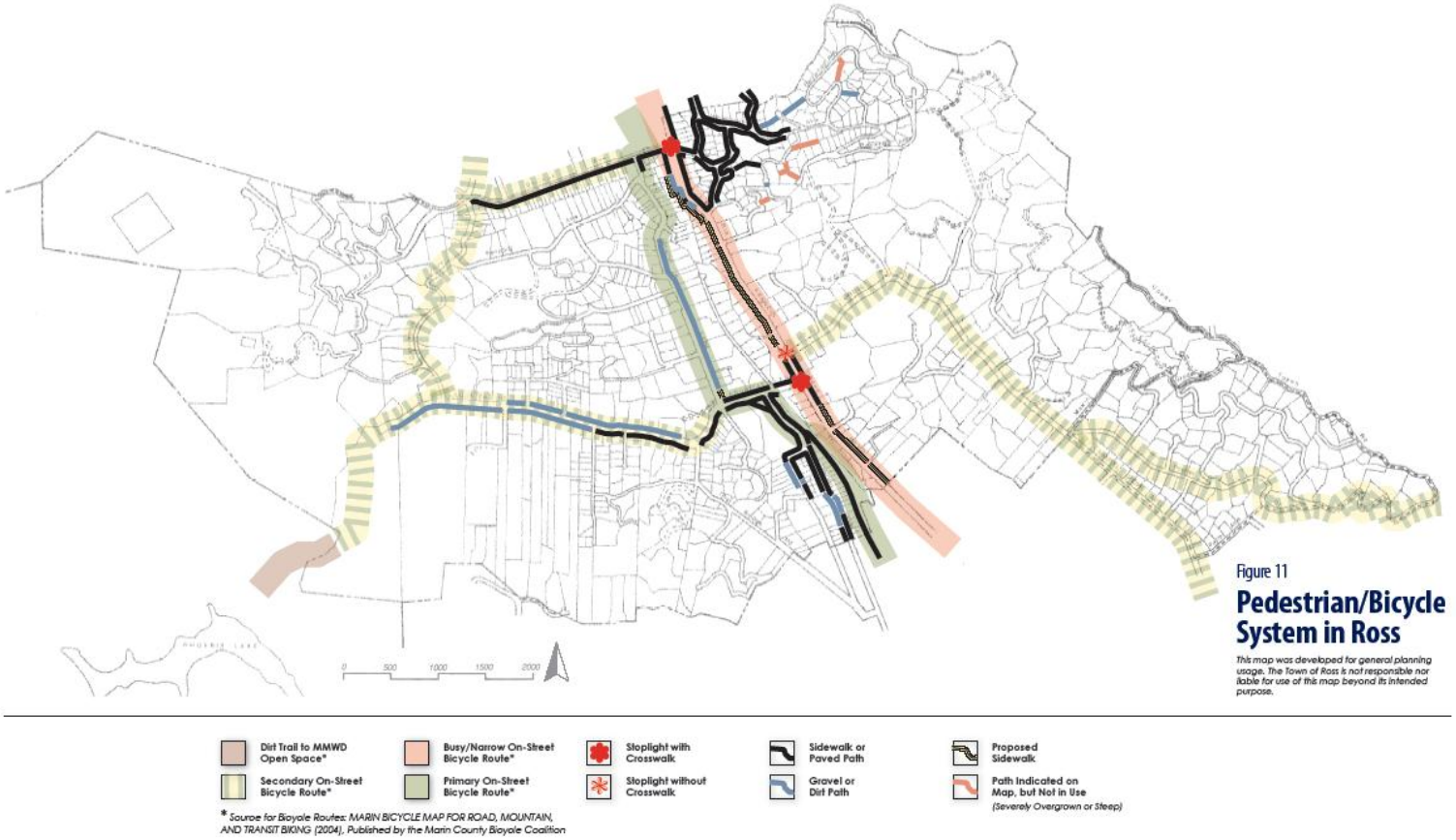
VOLUNTEER AND PUBLIC-PRIVATE PARTNERSHIPS

Volunteer programs may substantially reduce the cost of implementing some of the proposed pathways. Use of groups such as the California Conservation Corp (who offers low cost assistance) will be effective at reducing project costs. Local schools or community groups may use the bikeway or pedestrian project as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right of way where needed. A local construction company may donate or discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a bikeway and help construct and maintain the facility.

Other opportunities for implementation will appear over time that may be used to implement the system.

APPENDIX A

Figure A-1: Pedestrian and Bicycle System in Ross



Source: Ross General Plan 2007-2025