

Town of Corte Madera Bicycle / Pedestrian Plan

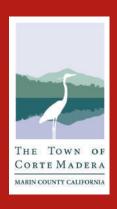
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1 Introduction

The Corte Bicycle and Pedestrian Plan provides for a recommended town-wide network of sidewalks, bicycle paths, lanes and routes, along with pedestrian- and bicycle-related programs and support facilities, intended to ensure bicycling and walking become a more integral part of transportation for people who live, work and recreate in Corte Madera. Current bikeway and pedestrian network information was gathered from meetings with the Corte Madera Bicycle/Pedestrian Advisory Committee (B/PAC) and Town staff, and combined with information on proposed routes from the previously adopted Bicycle Transportation Plan (2008). Relevant bikeway information was also gathered from the Marin County Unincorporated Area Bicycle and Pedestrian Master Plan (2008).

The purpose of this bicycle and pedestrian plan is to improve the bicycling and walking environment in Corte Madera by providing direction for future bicycle and pedestrian planning and meeting the guidelines of the California Active Transportation Program, the requirements of which are contained in Senate Bill 99 (Chapter 359, Statutes of 2013). The *Plan* looks to create a more balanced transportation system where bicycling and walking are not only viable but attractive and convenient ways to travel in and around Corte Madera.

1.1 Community Participation

The Corte Madera Bicycle and Pedestrian Advisory Committee (B/PAC), an advisory committee to the Corte Madera Town Council, allocated time from their regularly scheduled meetings in June 2014 to discuss potential updates to the Corte Madera Bicycle and Pedestrian Plan. The meeting was agendized, noticed in accordance with the Brown Act and distributed to the B/PAC's interested parties list, and was open to the public. Outside of the B/PAC meeting, public input was received at two Corte Madera Bicycle and Pedestrian Plan public workshops held on October 9, 2014 and March 12, 2015 at the Town Hall, via the NextDoor social media platform, and at a Corte Madera Women's Improvement Club meeting.

2 Plan Goals & Policies

Corte Madera strives to be one of the most walkable, bikeable, livable and age-friendly cities in California and to provide a safe, beautiful, and connected system of pedestrian and bike paths, making the healthy choice the easy choice for all ages and abilities. Walking and biking can be a healthy choice and part of the daily routine of Corte Madera's residents.

2.1 Plan Goals

The following goals were developed through community participation and staff input:

- Develop a bicycle and pedestrian environment that sustains healthy, strong communities and supports a vibrant economy.
- Improve the walkability of Corte Madera by designing streets that are accessible to people of all ages, connect major destination such as shopping centers, transit, schools, and parks, and include amenities such as seating, restrooms, and pedestrian-focused signal timing.
- Encourage students to bicycle and walk to school.
- Increase bicycle and pedestrian safety through improved intersection visibility, well-managed motor vehicle speeds, and land use codes that support active use and the perception of safety.
- Plan, design, and construct complete streets per any complete streets policy which is approved by the Town.
- Create vibrant public spaces that foster community cohesion and encourage walking and bicycling through downtown events and park amenities.
- Encourage more people to walk and bicycle outdoors by producing or promoting education and marketing programs such as wayfinding, safe routes to schools, and walking and bicycling maps.
- Increase social interaction on streets through amenities that engage residents and visitors and closed-street events.
- Complete sections of the San Francisco Bay Trail that pass through Corte Madera.
- Become a more sustainable city by replacing motor vehicle trips with active transportation trips
 in order to reduce emissions, reduce the cost of healthcare, and decrease reliance on fossil fuels
- Reduce bicycle- and pedestrian-related collisions.
 - o Reduce the total number of annual collisions by 50 percent from 2015 to 2020.
 - o Reduce the annual number of bicycle- and pedestrian-related collisions to zero.
- Seek Bicycle Friendly CommunitySM designation from The League of American Bicyclists and Walk Friendly Community designation from the University of North Carolina Highway Safety Research Center's Pedestrian and Bicycle Information Center (See Appendix E).
- Per the Town of Corte Madera General Plan (Section 4.5 of the Circulation Element) and Complete Streets Policy (expected to be approved 12/2015) developments are to incorporate convenient bicycle and pedestrian access and facilities that link to Town and regional path connections.
- The Town recognizes that evolving technology has an impact on bicycle and pedestrian facilities, including, without limitation, electric-assist bicycles and battery-assist pedestrian vehicles. It is a priority for the Town to remain current with these evolving technologies so that appropriate accommodation or legislation is implemented as needed.

2.2 Consistency with Adopted Plans and Policies

The Corte Bicycle and Pedestrian Plan is consistent with the 2009 Town of Corte Madera General Plan – Circulation element, the 2008 Marin County Unincorporated Bicycle and Pedestrian Master Plan, and the Metropolitan Transportation Commission's (MTC) Transportation 2035 Plan for the San Francisco Bay Area.

Other local or regional plans that promote walking and/or bicycling include:

- Marin Countywide Plan This plan, adopted in late 2007, provides countywide policy guidance on the integration of bicycling, walking, and accessibility into the transportation network. An update to the Marin Countywide Plan is being coordinated with the Corte Madera Bicycle and Pedestrian Plan and is scheduled to be released in 2016.
- Nonmotorized Transportation Pilot Program (NTPP) Begun in 2006 and administered through 2010, this Federal Highway Administration program allocated \$25 million to bicycle and pedestrian projects throughout Marin County. Included was an extensive public outreach and planning process to identify, rank, and select infrastructure projects and educational programs to be funded by the program.
- Healthy Eating Active Living Cities Campaign (HEAL) In 2011, Corte Madera joined other California cities in an effort to improve our community's health and reduce obesity rates. Campaign supporters believe healthy choices are essential to address the obesity epidemic among California's children and adults, currently costing the state more than \$41 million annually in healthcare and lost productivity. As part of the HEAL campaign, the Corte Madera Town Council adopted a resolution to work on and make efforts to plan and construct built environments that encourage bicycling, walking, and other forms of physical activity.
- Paradise Drive and San Clemente Drive Specific Plan Adopted in 1979, the Town of Corte Madera developed a specific plan to improve the visual identity of east Corte Madera and design Paradise Drive and San Clemente Drive to serve as gateways into the Town. One objective of the plan was to "reduce automobile trips and encourage bicycle and pedestrian access to businesses along San Clemente and Paradise Drive." To achieve that goal, the plan sets the following standards:
 - Safe, well-marked pedestrian access shall be provided from the sidewalk to the entry to each building or use. Wherever feasible, pedestrian access shall be separated from automobile access and parking and shall be marked with distinctive paving and landscaping; and
 - o Secure bicycle storage shall be provided on all streets.
- The Bay Trail Plan Completed in 1989, the Bay Trail Plan proposes the development of a regional hiking and bicycling trail around the perimeter of San Francisco and San Pablo Bays. Approximately 65 percent of the Bay Trail already exists. The Bay Trail designated a 'spine' for a continuous through-route around the Bay and 'spurs' for shorter routes to Bay resources. The goals of the Plan include providing a Class I, multi-use pathway as close to the shoreline as possible that connects to existing park and recreation facilities, creates links to existing and proposed transportation facilities, and preserves the ecological integrity of the Bays and their wetlands.

The *Town of Corte Madera General Plan* and municipal code lists several policies and objectives to help to achieve this vision which include bicycle parking requirements for new developments and citing vehicles for parking in bicycle lanes. A detailed listing of the policies can be found in **Appendix B**.

2.3 ATP Compliance Checklist

The State of California adopted Active Transportation Program (ATP) guidelines, which encourage increased use of active modes of transportation, such and bicycling and walking, and also provide guidance on drafting active transportation plans. The *Corte Madera Bicycle and Pedestrian Plan* includes the following provisions to fully comply with ATP guidelines:

Table 2-1: Corte Madera ATP Compliance Checklist

	Required Plan Elements	Location
(a)	The estimated number of existing bicycle trips and pedestrian trips in the plan area, both in absolute numbers and as a percentage of all trips, and the estimated increase in the number of bicycle trips and pedestrian trips resulting from implementation of the plan.	Table 3-3
(b)	The number and location of collisions, serious injuries, and fatalities suffered by bicyclists and pedestrians in the plan area, both in absolute numbers and as a percentage of all collisions and injuries, and a goal for collision, serious injury, and fatality reduction after implementation of the plan.	Section 3.4
(c)	A map and description of existing and proposed land use and settlement patterns which must include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, major employment centers, and other destinations.	Sections 3.1 and 3.2
(d)	A map and description of existing and proposed bicycle transportation facilities.	Chapter 4 and Section 4.6
(e)	A map and description of existing and proposed end-of-trip bicycle parking facilities.	Section 4.1.5 and Figure 4-6
(f)	A description of existing and proposed policies related to bicycle parking in public locations, private parking garages and parking lots and in new commercial and residential developments.	Section 4.7.1
(g)	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These must include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	Section 4.2

	Required Plan Elements	Location
(h)	A map and description of existing and proposed pedestrian facilities at major transit hubs. These must include, but are not limited to, rail and transit terminals, and ferry docks and landings.	N/A
(i)	A description of proposed signage providing wayfinding along bicycle and pedestrian networks to designated destinations.	Section 4.6.6
(j)	A description of the policies and procedures for maintaining existing and proposed bicycle and pedestrian facilities, including, but not limited to, the maintenance of smooth pavement, freedom from encroaching vegetation, maintenance of traffic control devices including striping and other pavement markings, and lighting.	Chapter 8
(k)	A description of bicycle and pedestrian safety, education, and encouragement 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 law impacting bicycle and pedestrian safety, and the resulting effect on accidents involving bicyclists and pedestrians.	Section 5.2
(1)	A description of the extent of community involvement in development of the plan, including disadvantaged and underserved communities.	Section 1.1
(m)	A description of how the active transportation plan has been coordinated with neighboring jurisdictions, including school districts within the plan area, and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, general plans and a Sustainable Community Strategy in a Regional Transportation Plan.	Section 2.2
(n)	A description of the projects and programs proposed in the plan and a listing of their priorities for implementation, including the methodology for project prioritization and a proposed timeline for implementation.	Chapter 6
(0)	A description of past expenditures for bicycle and pedestrian facilities and programs, and future financial needs for projects and programs that improve safety and convenience for bicyclists and pedestrians in the plan area. Include anticipated revenue sources and potential grant funding for bicycle and pedestrian uses.	Section 4.4 and Appendix A

	Required Plan Elements	Location
(p)	A description of steps necessary to implement the plan and the reporting process that will be used to keep the adopting agency and community informed of the progress being made in implementing the plan.	Chapter 7
(q)	A resolution showing adoption of the plan by the city, county or district.	Appendix H

3 Needs Analysis

3.1 Bicycle and Pedestrian Demand

The demand for bicycle and pedestrian facilities can be difficult to predict. Unlike automobile use, where historical trip generation studies, traffic counts, and planned land use development allow one to estimate future demand for travel, bicycle and pedestrian trip generation methods are less advanced and less standardized. Part of the complexity of predicting demand stems from the varied purposes for which people travel: utility trips for business and errands, commute trips, and recreational outings. Development patterns can help predict demand and are important to bicycle and pedestrian planning because changes in land use (and particularly employment areas) will affect average commute distance, which in turn affects the attractiveness of bicycling and walking as commute modes. The land use map of the *Town of Corte Madera General Plan* was last updated in 2008 and can be viewed in Figure 3-1.

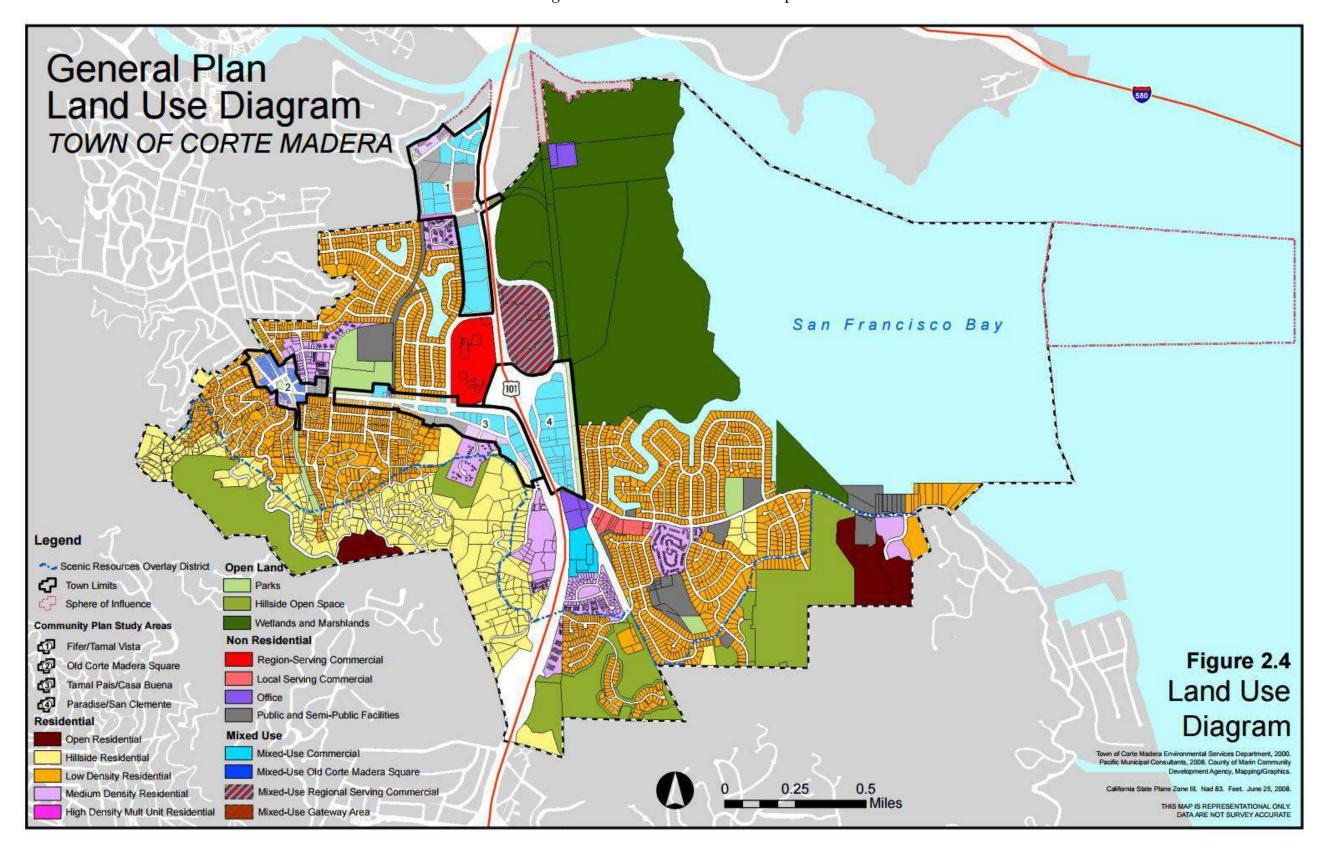
The Corte Madera bicycle and pedestrian network will connect the neighborhoods where people live in and outside of City boundaries to the places where residents and visitors work, shop, engage in recreation, or go to school. An emphasis will be placed on regional bikeways and transit connections centered on the major activity centers in Corte Madera, including:

- o Downtown commercial district
- o Civic buildings such as the community centers, senior centers, and libraries
- o Schools
- Transit stops
- o Neighborhood parks and regional recreational areas
- Shopping centers
- Major employers

A high proportion of morning and afternoon motor vehicle trips are trips to and from schools. This presents an opportunity to increase biking and walking. This presents an opportunity to increase biking and walking among students and thereby reducing congestion.

The greatest concentration of shopping, civic buildings, places of worship, major employers, and transit routes in Corte Madera are adjacent to Tamalpais Drive, Tamal Vista Boulevard, and Paradise Drive. The Town has a relatively even distribution of schools and open space. The largest park, the Camino Alto Open Space Preserve, is shared with Mill Valley to the south. The location of these amenities across Corte Madera and its neighboring jurisdictions requires the development and coordination of corridors that connect them to each other. Bicycle and pedestrian infrastructure that connect multiple activity centers is included as one of the project prioritization criteria in Chapter 6.

Figure 3-1: General Plan Land Use Map



3.2 Commute Patterns

A central focus of presenting commute information is to identify the current mode split of people that live and work in Corte Madera. Mode split refers to the choice of travel mode a person selects to travel between destinations, be it bicycling, walking, taking a bus, or driving alone or with others. One major objective of any bicycle or pedestrian investment is to increase the percentage of people who choose to bicycle or walk, rather than drive. Every saved motor vehicle trip or vehicle mile represents quantifiable reductions in air pollution and can help to reduce traffic congestion.

Journey to work and travel times to work data were obtained from the US Census Bureau's 2009-2013 American Community Survey, and are shown in Table 3-1.

Table 3-1: Journey to Work Mode Split Compared to the County, State, and Nation

Mode Nationwide		Statewide	Marin County	Corte Madera	
Bicycle	0.6%	1.1%	1.9%	0.9%	
Walk	2.8%	2.7%	2.9%	0.4%	
Public Transit	5.1%	5.2%	8.9%	8.5%	
Drive Alone 76.4% 73.3%		73.3%	65.9%	70.4%	
Carpool	9.6%	11.0%	8.9%	10.9%	
Other	5.5%	6.6%	11.5%	9.7%	

As shown, less than one percent of all employed Corte Madera residents commute to work by bicycle. However, census data does 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 Corte Madera, and therefore, are likely to undercount true cycling rates.

Although Corte Madera's bicycle commute rate is low - less than half of the Marin County average - there are many opportunities for increasing it. The number of Corte Madera commuters who take public transit to work is well above the statewide percentages (8.5 percent and 5.2 percent, respectively). In 2006, two percent of Golden Gate Transit riders arrived at bus stops by bicycle,¹ and less than one percent of Marin Transit arrived by bicycle.² If bicycle connections to Golden Gate Transit and Marin Transit stops are improved, and if these connections are coupled with improved bicycle storage, it would be possible to shift existing vehicle trips to the bus stops into bicycle trips.

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¹ Marin County Transit District. "Marin County Transit Short Range Transit Plan". March 2006.

² Marin Transit. "Marin Transit Ridecheck Report – 2011 Local Bus Survey", March 2012.

Table 3-2: Marin Ridership Information (2011)

Ridership	Figure	Notes	
Weekday Activity 1,956		2011 Ridecheck, sum of boardings and alightings within Corte Madera – Larkspur	
Weekday Bikes 15		2011 Ridecheck, number of people with bikes boarding at bus stops	

Less than one percent of all employed Corte Madera residents commute to work by foot. This is a comparatively low rate, falling below far below county, state and national averages. There are many opportunities to increase walking such as increasing the mix of land uses, reducing pedestrian barriers, installing sidewalks in high-priority areas, and improving access to bus pads.

3.3 Potential Future Air Quality Improvements

Corte Madera 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 2012, 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). Currently, the basin is classified as marginal non-attainment area for the federal eight-hour ozone standard and the federal 24-hour PM2.5 standard.

According to the BAAQMD, motor vehicles are responsible for approximately 75 percent of the smog in the basin. Reducing vehicle miles traveled (VMT) is a key goal of the BAAQMD, and fully implementing Corte Madera's bicycle and pedestrian 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 2009-2013 American Community Survey and estimates of bicycle and pedestrian mode share for students, the current number of daily bicycle and pedestrian commuters in Corte Madera is estimated to be 570 people, generating over 1,000 daily trips and saving an estimated 515 vehicle-miles travelled per weekday.

Table 3-3 quantifies the estimated reduction in VMT in Corte Madera following an increase in the bicycle and pedestrian mode share to 1.5 percent, and the estimated reduction in air pollutants based on the best available local and national data. This would result in an estimated decrease of 564 lbs/year of hydrocarbons, 152,996 lbs/year of carbon dioxide, and 393 lbs/year of nitrous oxide.

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>

Table 3-3: Bicycle and Pedestrian Commute and Air Quality Projections

Topic	Value	Source
Population	9,326	2009-2013 American Community Survey (ACS)
Number of Commuters	4,075	2009-2013 ACS (Employed persons minus those working at home)
Number of Bicycle-to- Work Commuters	44	2009-2013 ACS
Bicycle-to-Work Mode Share	0.9%	2009-2013 ACS
Number of Walk-to- Work Commuters	18	2009-2013 ACS
Walk-to-Work Mode Share	0.4%	2009-2013 ACS
School Children Grades K-12	1,671	2009-2013 ACS
Estimated School Bicycle and Walk Commuters	485 Marin County Safe Routes to Schools, 2011 Program Evaluat percent of hand tally respondents)	
Number of College Students	378	2009-2013 ACS
Estimated College Bicycle Commuters	19	National Bicycling & Walking Study, FHWA, Case Study No. 1, 1995. Review of bicycle commute share in seven university communities (5%)
Average Weekday Marin Ridership	427	Average weekday activity as a proportion of Corte Madera's population compared to the Corte Madera – Larkspur service area and divided by two to account for getting on and off transit, Marin Transit Ridecheck Report – 2011 Local Bus Survey
Number of Daily Bike Marin Transit Users	4	Average weekday activity as a proportion of Corte Madera's population compared to the Corte Madera – Larkspur service area and divided by two (boardings and alightings), Marin Transit Ridecheck Report – 2011 Local Bus Survey

Topic	Value	Source
Estimated Total Number of Bicycle and Walk Commuters	570	Total weekday average of bike and walk to work, transit, school, college commuters
Estimated Adjusted Mode Share	6.1%	Estimated total bike and walk commuters divided by population
Total Daily Bicycle and Walking Trips	1,059	Impact Analysis, Alta Planning + Design
Reduced Vehicle Trips per Weekday	340	Impact Analysis, Alta Planning + Design
Reduced Vehicle Miles per Weekday	515	Impact Analysis, Alta Planning + Design

Potential Future Active Commuters	Value	Source
Number of Workers with Commutes 9 Minutes or Less	565	2009-2013 ACS
Number of Workers who Already Bicycle or Walk to Work	62	2009-2013 ACS
Number of Potential Bicycle Commuters (Non-Transit)	503	Calculated by subtracting number of workers who already bike or walk from the number of workers who have commutes 9 minutes or less
Future Number of New active Commuters	75	Based on capture rate goal of 15% of potential bike and walk commuters
Total Future Daily Bicycle and Walk Commuters	137	Current daily bike and walk commuters plus future bicycle commuters
Future Total Daily Bicycle or Walking Trips	274	Total future daily bicycle and walk commuters x 2 (for round trips)
Future Reduced Vehicle Trips per Weekday	216	Assumes 79% motor vehicle trip replacement

Potential Future Active Commuters	Value	Source
Future Reduced Vehicle Miles per Weekday	327	Maintains proportion of reduced vehicle trips per weekday to reduced vehicle miles per weekday from Impact Analysis, Alta Planning + Design
Future Reduced Vehicle Miles traveled per Year	119,355	Assumes 365 days per year

Future Air Quality Benefits	Value	Source
Reduced Hydrocarbons (lbs/year)	564	
Reduced Carbon Monoxide (lbs/year)	5,142	
Reduced Nitrogen Oxide (lbs/year)	393	
Reduced Carbon Dioxide (lbs/year))	152,996	EPA report 420-F-08-024 "Emission Facts: Average Annual Emissions and Fuel Consumption for
Reduced Hydrocarbons (metric tons/year)	0.28	Gasoline-Fueled Passenger Cars and Light Trucks." 2008.
Reduced Carbon Monoxide (metric tons/year)	2.57	
Reduced Nitrogen Oxide (metric tons/year)	0.20	
Reduced Carbon Dioxide (metric tons/year)	76.50	

3.4 Collision History

An analysis of the bicycle- and pedestrian-involved collision history of Corte Madera was produced using data provided by the California Highway Patrol (CHP) collision database. This data includes only collisions reported to the CHP and local police agencies and resulted in documented injuries or complaints of pain. As such, these numbers likely underestimate the total number of bicycle- and pedestrian-involved collisions that occurred in Corte Madera, particularly those that caused only minor injuries and were not reported.

In the five years between January 1, 2008 and December 31, 2012 (the most recent five-year period with available collision data), Corte Madera witnessed a total of 26 collisions that involved a bicyclist or a pedestrian. None of those collisions resulted in a fatality. Below is a detailed analysis of each type of collision.

3.4.1 Bicycle Collisions

Corte Madera has the potential to be particularly good place to ride a bicycle. Unfortunately, more bicycle riders on streets without appropriate bikeways means a higher probability of bicycle collisions, unless alternative facilities are provided. The tables summarize the number, type and location of bicycle collisions from January 1, 2008 to December 31, 2012. Over that time period, the number of bicycle collisions remained relatively consistent, ranging between four and eight collisions per year. Figure 3-2 shows the locations of each bicycle-related collision.

Table 3-4: Bicycle-related Collisions, 2008-2012

2008 2009 2010

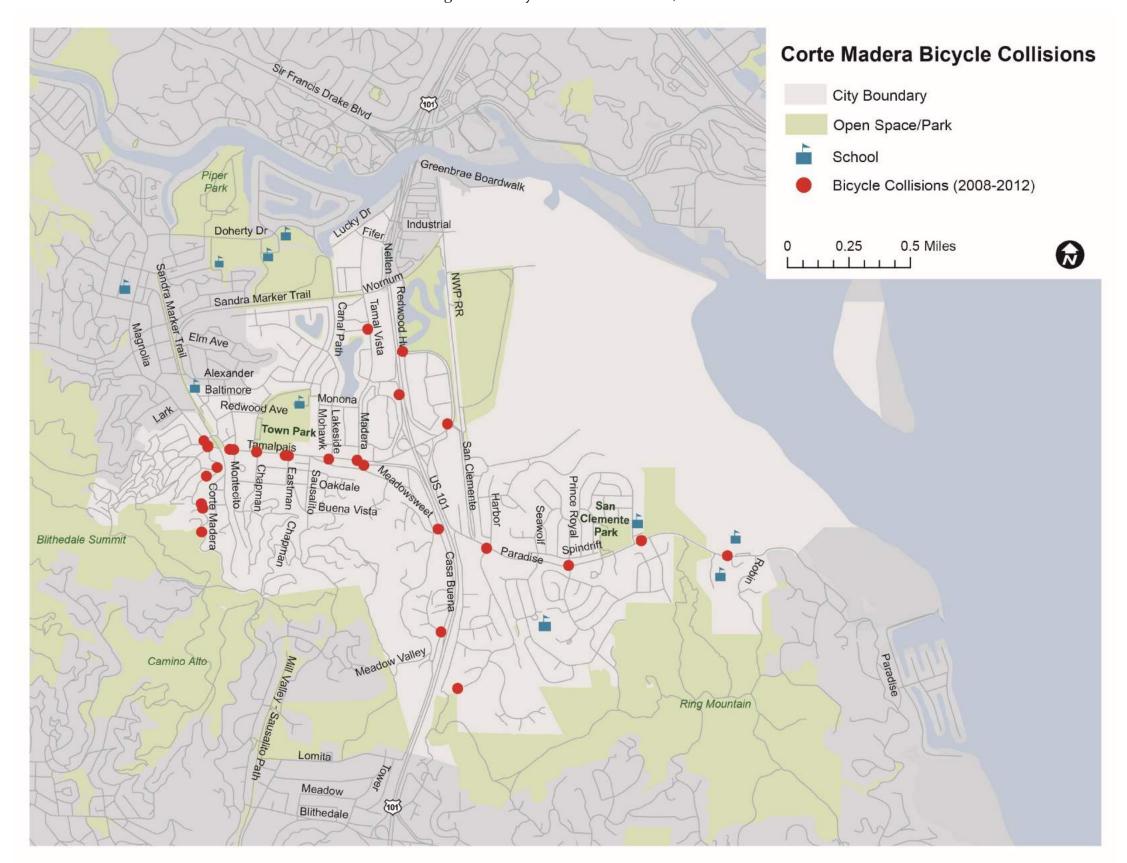
	2008	2009	2010	2011	2012	Total
Total Collisions	41	30	31	32	32	166
Total Collisions Involving a Bicyclist	7	4	4	8	4	27
Total Injuries Involving a Bicyclist	9	4	4	9	4	30
Fatal Collisions Involving a Bicyclist	0	0	0	0	0	0
Percent Bicyclists Injured per Total Collisions	22.0%	13.3%	12.9%	28.1%	12.5%	

Between 2008 and 2012, the majority of collisions occurred during daylight hours (9AM - 5PM). These are the times when the most car and bicycle traffic is traveling on the streets.

Table 3-5: Bicycle-related Collisions – Time of Day Comparison

	2008	2009	2010	2011	2012	Total
Daylight (9AM – 5PM)	5	2	3	5	2	17
Dawn & Dusk (6-9AM & 5-8PM	1	1	1	1	0	4
Night Time (8PM – 6AM)	1	1	0	2	2	6
Total	7	4	4	8	4	27

Figure 3-2: Bicycle-related Collisions, 2008-2012



3.4.2 Pedestrian Collisions

Table 3-6 identifies pedestrian collisions within Corte Madera involving injury for the last five years of available data. From January 1, 2008 to December 31, 2012, there were 60 pedestrian-related collisions. A map of the pedestrian-involved collisions is shown in **Figure 3-3**.

Table 3-6: Pedestrian-related Collisions, 2008-2012

	2008	2009	2010	2011	2012	Total
Total Collisions	41	30	31	32	32	166
Total Collisions Involving a Pedestrian	3	2	0	1	3	9
Total Injuries Involving a Pedestrian	3	2	0	1	3	9
Fatal Collisions Involving a Pedestrian	0	0	0	0	0	0
Percent Pedestrian Injured per Total Collisions	7.3%	6.7%	0.0%	3.1%	9.4%	

Between 2008 and 2012 the number of pedestrian collisions remained relatively consistent, ranging between zero and three collisions per year. No pedestrian fatalities occurred in Corte Madera over the five-year period.

Table 3-7: Pedestrian-related Collisions – Time of Day Comparison

	2008	2009	2010	2011	2012	Total
Daylight (9AM – 5PM)	1	1	0	0	2	4
Dawn & Dusk (6-9AM & 5-8PM	2	1	0	1	1	5
Night Time (8PM – 6AM)	0	0	0	0	0	0
Total	3	2	0	1	3	9

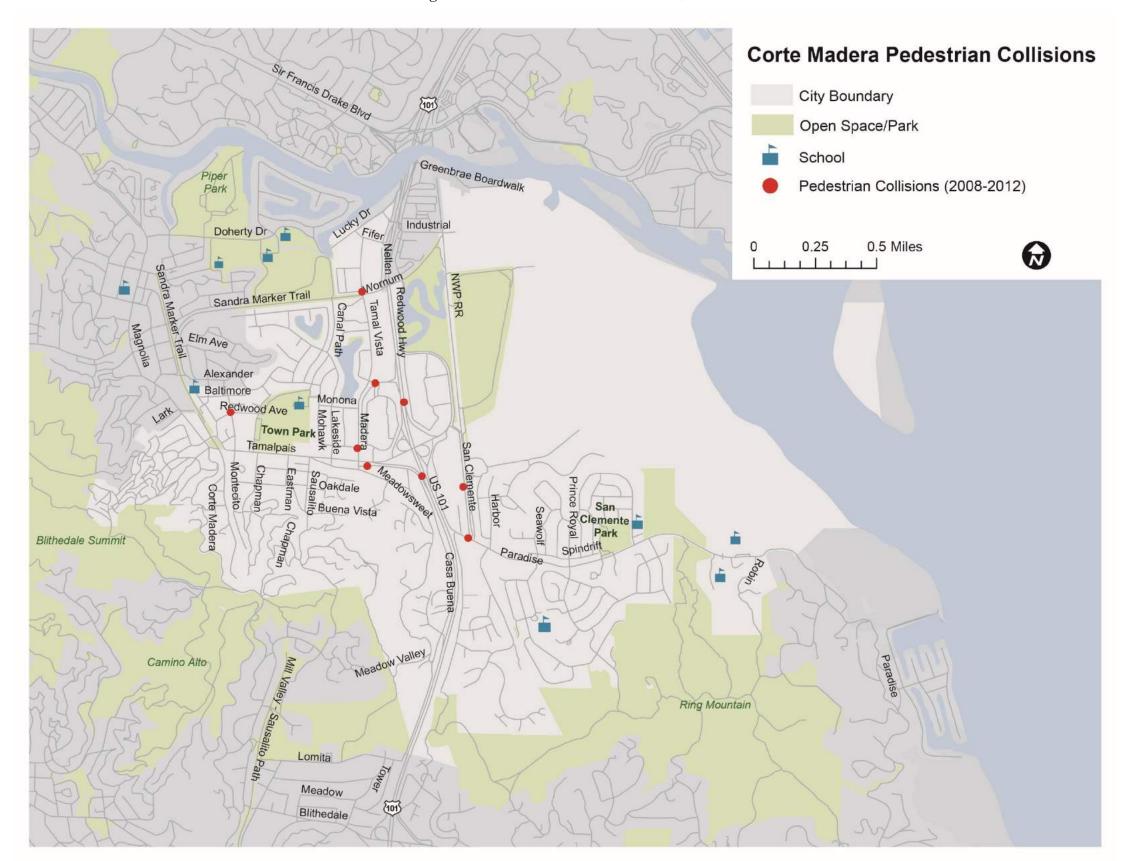
Unlike the bicycle collision time comparison, pedestrian collisions were evenly distributed between daylight and dawn and dusk hours. Countermeasures to prevent future collisions at dawn and dusk could include motorist education regarding pedestrian right-of-way, pedestrian safety education concerning visibility, and infrastructure improvements such as lighting or other means to improve visibility of pedestrians to motorists.

One-quarter of bicycle- and pedestrian-related collisions (9) occurred on or near Tamalpais Drive, with most taking place around intersections. Three of the nine collisions were the result of bicyclists being broadsided by motor vehicles. The corridor with the second most collisions was Corte Madera Avenue (8 collisions). Most of the collisions along this corridor were the result of bicyclists travelling at unsafe speeds and hitting objects or overturning their bicycles. The third most problematic corridor was Paradise Drive, in which four collisions occurred between 2008 and 2009. Half of the bicycle- and pedestrian-related collisions (2) along Paradise Drive were the result of unsafe speeds, and three out of the four collisions took place at or near an intersection.

Other data observations include:

- 1. Six collisions resulted in severe injuries and 12 collisions resulted in visible injuries.
- 2. More than 19 percent of collisions (7) were the result of unsafe speeds.
- 3. Over one-third of the collisions (13) could not be classified using the standard Statewide Integrated Traffic Records System (SWITRS) list of collision types (e.g., head-on, sideswipe, read end, broadside, etc.)

Figure 3-3: Pedestrian-related Collisions, 2008-2012



3.4.3 Collision Reduction Goal

Reducing the numbers of collisions is a goal of the *Corte Madera Bicycle and Pedestrian Plan*. Research shows that bicycle collision rates decrease with traffic riding skills education. The most experienced cyclists have the lowest collision rates, despite many more miles traveled. The B/PAC has expressed support for continued bicycle education, as well as improved bicycle infrastructure around locations where less educated bicyclists frequent, such as schools.

Between 2008 and 2012, 36 collisions occurred in Corte Madera involving either a bicyclist or a pedestrian. Section 2.1 established a goal to reduce the number of bicycle- and pedestrian-involved collisions by 50 percent between 2015 and 2020. Further, to follow a Vision Zero Initiative, Corte Madera hopes to keep the number of bicyclist and pedestrian fatalities on the city's roadways to zero through supporting policies, programs, and design that have been proven to reduce bicycle- and pedestrian-related collisions.

The Vision Zero Initiative began in Sweden with the idea that no loss of life to traffic collisions is acceptable. Since its initiation in 1997, the number of fatalities on Sweden's roadways has fallen from 541 to 314 in 2011 while the traffic volume has increased significantly. In 2014, New York City was the first city in the United States to adopt this initiative and soon San Francisco and Boston followed suit. Vision Zero policies ultimately aim to reduce fatalities to zero in communities through various programs and improvements.

3.5 Design Considerations

The Town of Corte Madera has a growing bicycle and pedestrian network requiring ongoing maintenance and rehabilitation in order to meet the growing needs of its residents. However, the Town contains many roads that were built to primarily serve the automobile, and thus do not always provide equivalent bicycle and pedestrian infrastructure. Many of the comments received from the public identified issues at commercial centers or other destinations such as schools and parks that are visited on a daily basis. These areas require bicycle and pedestrian amenities to encourage active transportation and to create a safe, inviting environment.

3.5.1 Accessibility Design Standards

The Americans with Disabilities Act (ADA) was signed into law in 1990 to protect the rights of people with disabilities. ADA protects the right to access public services and places of public accommodation, including transit. Compliance with ADA does not solely benefit those with mobility impairments; continuous and level walkways, audible countdown signals, and sidewalk transitions (i.e., curb ramps) provide safety and mobility for all users, including children and families with strollers, and bicyclists where appropriate. When evaluating whether a walkway is ADA-compliant, cities consult guidelines such as the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the Public Rights-of-Way Accessibility Guidelines (PROWAG).

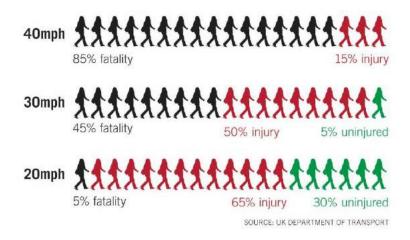
These guidelines offer specific guidance for the following:

- Pedestrian through zone: An area of the sidewalk reserved for pedestrian travel, at least 36 inches wide with periodic passing zones, and preferably 6-10 feet wide where feasible.
- Cross-slope: The slope that is perpendicular to the direction of travel, for which the maximum is two percent for pedestrian facilities.
- Running slope: The slope that is parallel to the direction of travel. Acceptable running slope depends greatly on the site conditions.
- Obstructions: Any landscaping, utility pole, or other protruding or vertical object that obstructs the pedestrian through zone.
- Gaps, grates, and other openings: Any gap in the pedestrian through zone wider than one-half inch may catch wheelchair castings, canes, crutches, inline skate wheels, and bicycle wheels.
- Accessible signals: Traffic signals that alert pedestrians through multiple media (sound, vision, tactile).

3.5.2 Traffic calming and speed limits

Vehicular speeds have significant impacts on the actual and perceived safety of the bicycle and pedestrian environment because of the likelihood of injury resulting from a crash (Figure 3-4).

Figure 3-4: Impact of Motor Vehicle Speed in Pedestrian Injury Rate



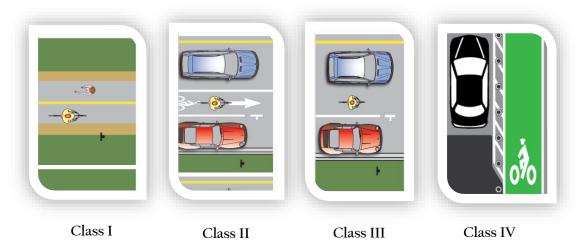
Traditional traffic calming measures, such as bulb-outs and traffic circles on neighborhood streets, are effective ways to improve safety and the sense of "sharedness" within the right-of-way. With recent California legislation, cities and towns are now also able to protect the most vulnerable road users by implementing strict speed limits around schools – without the need for an engineering and traffic study. For example, San Francisco has designated 15 miles per hour speed limit zones within 500 feet of all its elementary schools.

4 Bicycle Element

4.1 Existing Conditions

The bicycle map which accompanies this plan designates Corte Madera's bicycle routes and those in adjacent unincorporated areas by Class I, II, III, or IV in accordance with Chapter 1000 of the California Department of Transportation, *Highway Design Manual* – Bikeway Planning and Design. *Class I Bikeways* – *Shared-use Paths* serve the exclusive use of bicycles and pedestrians. *Class II Bikeways* – *Bicycle Lanes* serve the preferential use of bicycles on marked lanes on paved streets. *Class III Bikeways* – *Bicycle Routes* serve bicycles on streets connecting Class I or Class II bikeways. Protected bicycle lanes, which have recently been permitted in California, are referred in this plan as *Class IV Bikeways* – *Protected Bicycle Lanes*. This is a working title and subject to change as Caltrans and other agencies develop more detailed guidelines and standards regarding protected bicycle lanes.

- Class I Bikeway. Typically called a shared-use path, a Class I Bikeway provides bicycle travel on a paved right-of-way completely separated from any street or highway. It is usually shared with pedestrians and other active transportation users.
- Class II Bikeway. Often referred to as a bicycle lane, a Class II Bikeway provides a striped and stenciled lane for one-way bicycle travel on a street or highway.
- Class III Bikeway. Generally referred to as a bicycle route, a Class III Bikeway provides for shared
 use with motor vehicle traffic and is identified only by signing and/or pavement markings. A subset
 of this type of bikeway is a Bicycle Boulevard, which is a local street that has been optimized for
 bicycle travel by reducing motor vehicle speeds and volumes and by improving arterial crossings
 and operating speeds for bicyclists.
- Class IV Bikeway. Often referred to as protected bicycle lanes, cycle tracks, or green lanes,
 Class IV bikeways are located within a street or highway right-of-way, provide a
 designated area for one-way or two-way bicycle travel, and offer physical protection from
 adjacent motor vehicle traffic using barriers, bollards, curbing, parked cars, posts,
 planters, or other vertical elements.



Several variations exist for these four classifications, including paved and unpaved Class I bikeways; buffered, parking buffered, and unbuffered Class II bikeways; stenciled, signed, and bike boulevard Class III bikeways; and parking protected, elevated, one-way, and two-way Class IV bikeways.

In addition to these variations, advisory bicycle lanes are becoming popular on streets with limited right-of-way. Advisory bicycle lanes are bicycle lanes into which motor vehicles may legally encroach; therefore, the line demarcating the lane is dashed instead of solid. An advisory bicycle lane is often, but not always, used in conjunction with centerline removal. An advisory bicycle lane should only be used when a mandatory bicycle lane cannot be used. Advisory bicycle lanes should be considered when the street width is inadequate for mandatory bicycle lanes or where cars are likely to encroach on a bicycle lane as it approaches a bike box. Advisory bicycle lanes should not be used where they are likely to be blocked by parked motor vehicles.

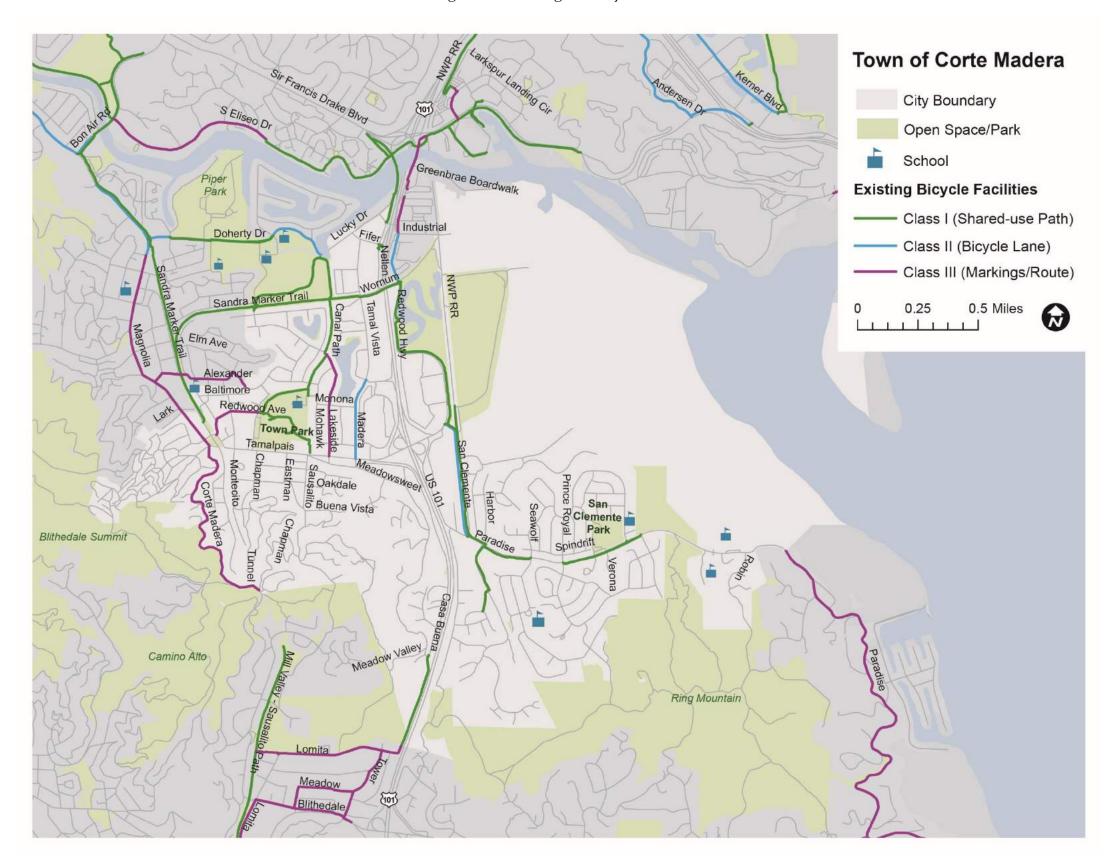
It is important to note that bicycles are permitted on *all* roads in the State of California and in Corte Madera (with the exception of designated freeways). As such, Corte Madera's entire street network is effectively the city's bicycle network, regardless of whether or not a bikeway stripe, stencil, or sign is present on a given street. The designation of certain roads and paths as Class I, II, III or IV bicycle facilities is not intended to imply that these are the only spaces intended for bicycle use, or that bicyclists should not be riding on other streets. Rather, the designation of a network of Class I, II, III and IV bikeways recognizes that certain roadways and paths are optimal bicycle routes, for reasons such as directness or access to significant destinations, and allows the Town of Corte Madera to then focus resources on building out this primary network. The Town's existing network of designated bikeways is shown in Table 4-1. Specific facility segments are discussed in more detail below. Corte Madera has a total of 8.4 miles of existing bikeways.

Table 4-1: Existing Bikeway Mileage by Type

Class	Bikeway Type	Total Mileage
I	Shared-use Path	5.2
II	Bicycle Lanes	0.8
III	Bicycle Routes	2.4
IV	Protected Bicycle Lanes	0.0
	Total Bikeways	8.4
	Total Roadways (centerline miles)	61.8
	Bikeway to Roadway Ratio	7.4

Connectivity between the east and west sides of Town is a common concern among Town residents. US-101 geographically divides the Town with the population almost evenly split on either side. Approximately 55 percent of the Town's population resides west of US-101 and 45 percent of the population resides on the east side. Access across US-101 is limited to the Tamalpais Drive interchange, the Wornum Drive underpass, and the pedestrian overcrossing north of Wornum Drive. A high quality bicycle network will help bridge the divide created by US-101. Other components of a high quality active transportation network inclues improved safety, connectivity, directness, comfort, and attractiveness.

Figure 4-1: Existing Bikeway Network



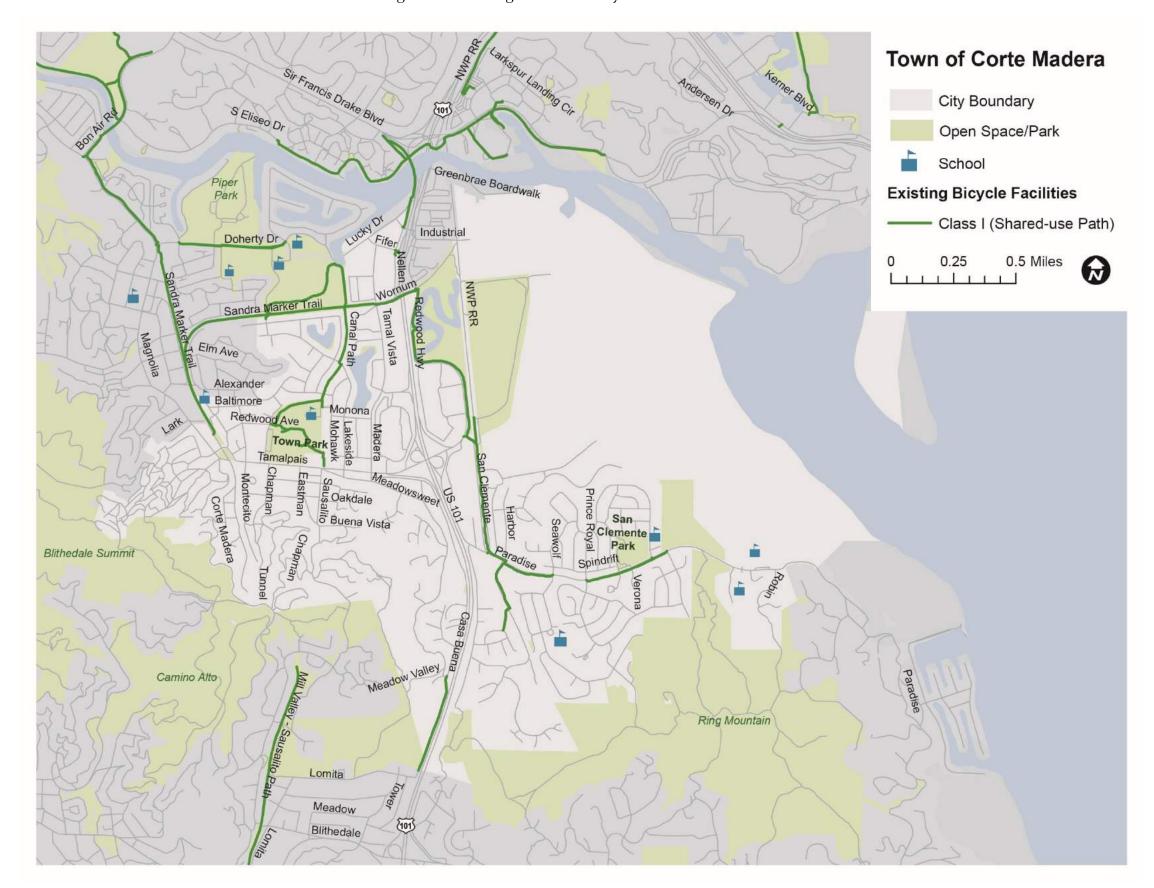
4.1.1 Existing Class I Bikeways: Multi-Use Paths

There are a total of approximately 5.2 miles of Class I Bikeways throughout the Town of Corte Madera. Table 4-2 gives the name and location of each Class I segment and Figure 4-2 shows the trails and shared-use paths.

Table 4-2: Existing Class I Bikeways - Shared-use Paths

Route	Begin	End	Class	Length
Sandra Marker Trail/Wornum Pathway (Larkspur/Corte Madera)	Redwood Highway	Corte Madera City Limit	I	0.3
Alto Hill Pathway (Mill Valley/Corte Madera/County/Caltrans)	Casa Buena Drive	Corte Madera City Limit	I	0.34
High Canal Bridge Pathway Section 1 (Corte Madera/Larkspur)	Tamalpais Drive	Lakeside Drive	I	0.54
High Canal Bridge Pathway Section 2 (Corte Madera/ Larkspur)	Wornum Way	Corte Madera City Limit	I	1.59
NWP Railroad Path (Corte Madera)	Serra Street	Tamalpais Drive	I	0.04
NWP Railroad Path (Larkspur/Corte Madera)	Redwood Avenue	Corte Madera City Limit	I	0.22
Redwood Highway/San Clemente Drive Paths	Sandra Marker Trail	Paradise Drive	I	1.2
Redwood Highway/San Clemente Drive Paths	Prince Royal Drive	Westward Drive	I	0.35
Sandra Marker Trail Access Pathway – Apache Avenue	Apache Avenue	Corte Madera City Limit	I	0.03
Tamalpais Drive Sidepath	Chapman Drive	Sausalito Street	I	0.21
Town Park Pathway	High Canal Bridge Pathway	Mohawk Avenue	I	0.35
Total Mileage				

Figure 4-2: Existing Class I Bikeways – Shared-Use Paths



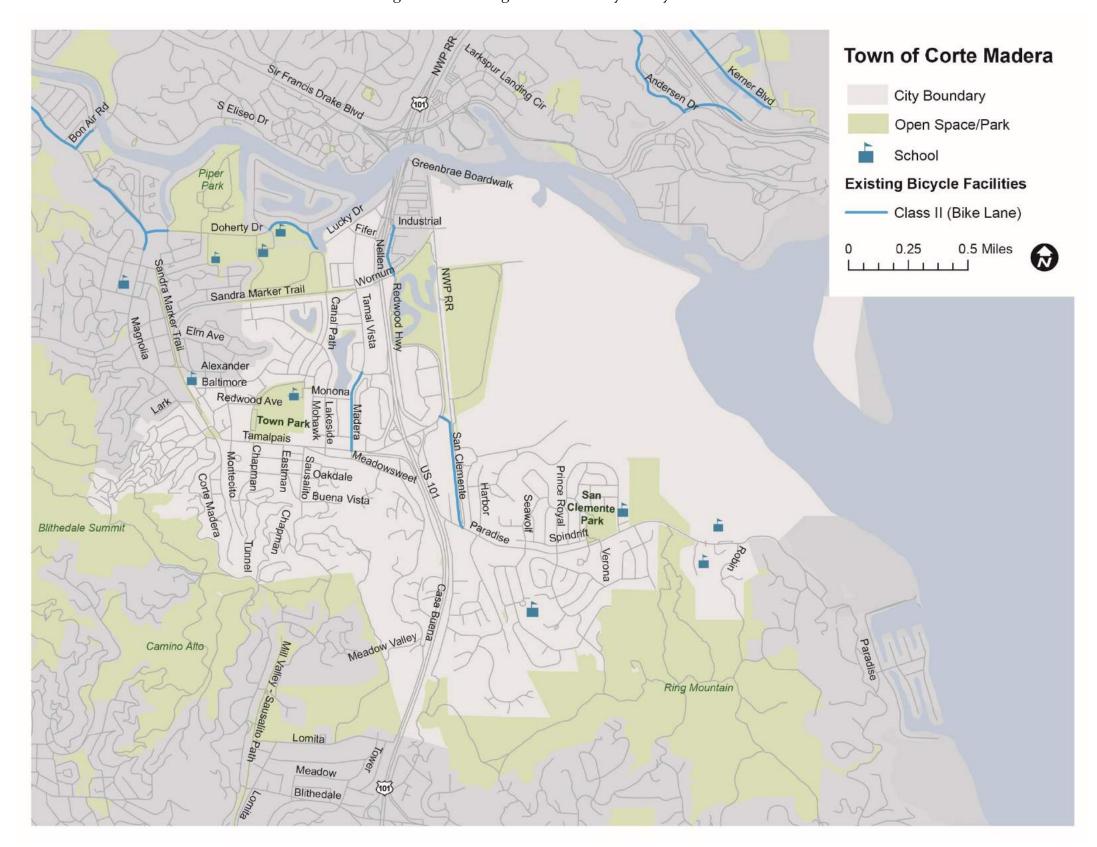
4.1.2 Existing Class II Bikeways: Bicycle Lanes

Corte Madera has less than one mile of Class II Bikeways (Bicycle Lanes). Figure 4-3 shows Corte Madera's Class II Bikeway network, and details of the on-street bicycle lanes are listed in Table 4-3.

Table 4-3: Existing Class II Bikeways – Bicycle Lanes

Route	Begin	End	Class	Length
Madera Boulevard	Council Crest Drive	Tamalpais Drive	II	0.34
San Clemente Drive	Tamalpais Drive	Paradise Drive	II	0.49
	-	Total N	Mileage	0.83

Figure 4-3: Existing Class II Bikeways – Bicycle Lanes



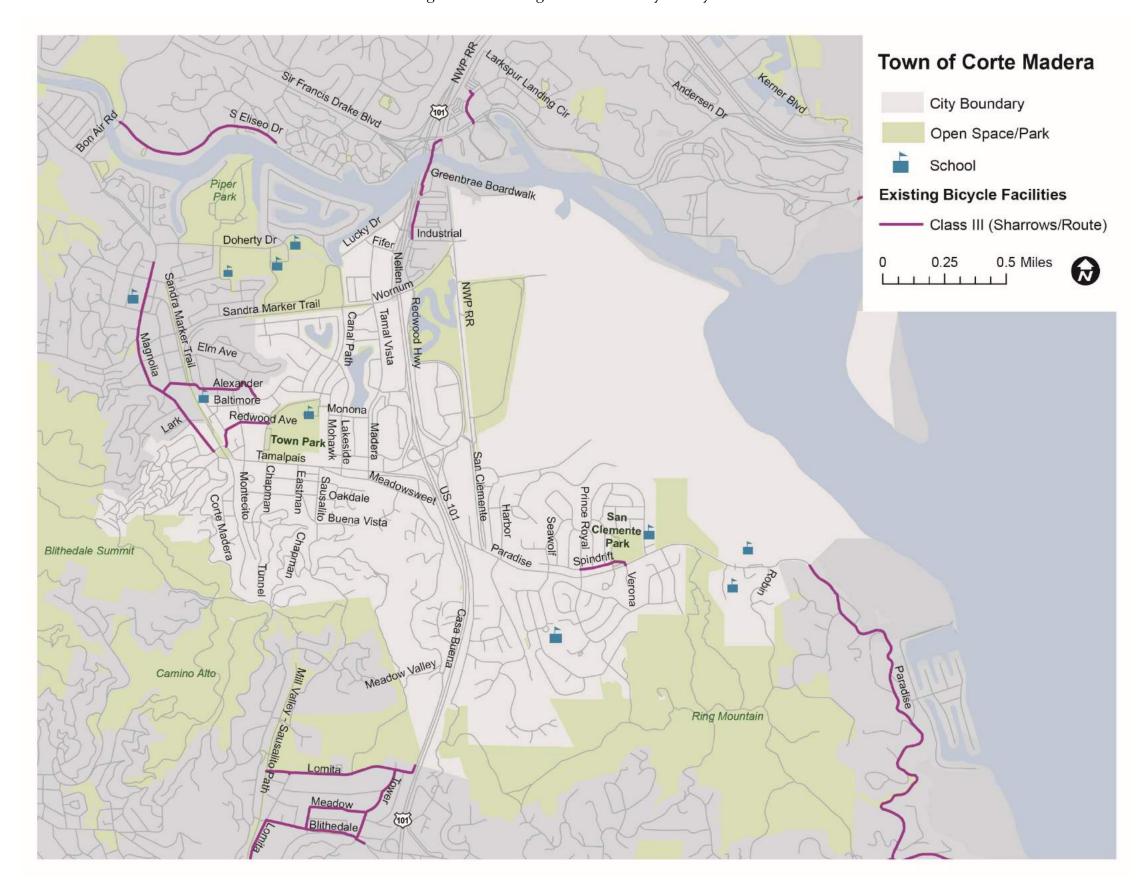
4.1.3 Existing Class III Bikeways: Bicycle Routes

There are a total of 2.37 miles of Class III Bikeways in the Town of Corte Madera, much of which was completed between 2008 and 2014. Figure 4-4 shows the Class III Bikeways in the Town, and details of the segments are listed in Table 4-4.

Table 4-4: Existing Class III Bikeways – Bicycle Routes

Route	Begin	End	Class	Length
Corte Madera Avenue	Bahr Lane	Chapman Drive	III	1.14
Lakeside Drive	Birch Avenue	Tamalpais Drive	III	0.82
Redwood Avenue	Tamalpais Drive	Pixley Avenue	III	0.25
Spindrift Passage	Prince Royal Passage	San Clemente Park (east	III	0.16
		end)		
Total Mileage				

Figure 4-4: Existing Class III Bikeways – Bicycle Routes



4.1.4 Existing Bikeway Signage

Marin County is implementing a countywide bicycle route signage program. The Town of Corte Madera is committed to developing a link in the north/south bikeway route through Marin County (Route 5). The goal of the program is to encourage commuting by bicycle through Marin and to make recreational biking more attractive to the public. The bikeway route network can be viewed at http://www.marinbike.org/map.

The County of Marin received \$189,000 in grant funding for a bikeway signage program. Improved wayfinding will help cyclists identify destinations at key intersections and navigate the bicycle network more easily. The Marin Public Works Directors Association selected a uniform sign for the County, including a logo of Mount Tamalpais in the background.



Figure 4-5: Marin County Bikeway Sign

4.1.5 Existing Bicycle Support Facilities

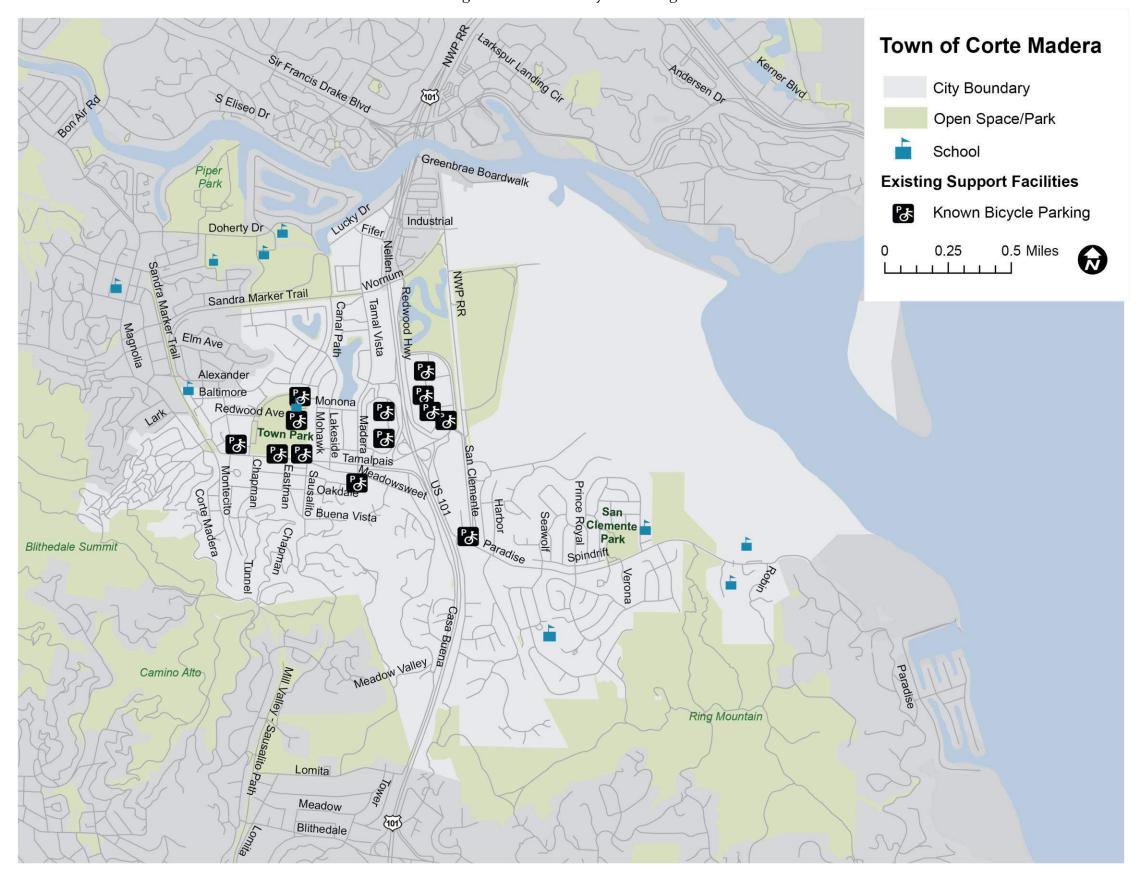
Bicycle support facilities include bicycle parking racks, lockers, and changing facilities. Any facility that assists commuting or recreational cyclists to complete their journey is also considered a support facility. See Figure 4-6 for known bicycle parking map. Parks can also serve as bicycle support facilities. Corte Madera has an extensive system of parks and open space areas. Most parks are equipped with water and restrooms, however not all parks have bicycle parking.

Bike racks are located at a limited number of destinations, including:

- Neil Cummins School
- Town Park
- Corte Madera Community Center
- Café Verde
- Town Center at Corte Madera
- The Village at Corte Madera
- Corte Madera Public Library
- Corte Madera Town Hall
- City Cycle Marin
- Market Place Shopping Center

The Town of Corte Madera has adopted official design standards for bicycle parking. More details on these standards and requirements are provided in **Appendix** C.

Figure 4-6: Known Bicycle Parking



4.2 Multi-Modal Connections

Providing bicycle access to public transit extends the range of destinations reached by transit riders and thereby broadens potential transit and bicycle ridership. Corte Madera residents have access to scheduled transit service provided by Marin Transit and Golden Gate Transit, which provides service to San Francisco, southern and central Marin, Marin County ferry terminals and north to Sonoma County. Few bus stops within the Town of Corte Madera have bicycle racks located at the stops. 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, with many buses now accommodating three bikes. Additionally, all buses longer than 60 feet are outfitted with racks that allow two bicycles to ride in the underfloor luggage area.

4.3 Traffic Signal Bicycle Detection

The Town of Corte Madera has no official policy regarding bicycle signal detection at traffic signals. The Town's current practice is to use the more sensitive Type D loop detectors, a form of in-the-pavement magnetic field detection device, as head loops at all new installations or as existing loop detectors are replaced during maintenance activities. Type D loop detectors are sensitive enough to detect both bicycles and automobiles without accidently picking up vehicles in adjacent lanes. Unfortunately, Type D loop detectors are more expensive to install than other common detection devices and present some maintenance issues. At intersections with video detection systems, separate video detection zones for bicycles are created, particularly on side streets where bicycle routes intersect major streets that rest on the green phase (i.e. creating a rest on red condition for the bikeway user). This is less of an issue for bikeways on primary streets where the signals are programmed to rest in green, but separate video detection zones for bicycles are usually provided on these roads as well. In other areas where loops are utilized, special dipole or other sensitive loop designs are used where bikes in bike lanes would not be detected by the vehicle loop systems. Table 4-5 lists the current locations for bicycle detection in Corte Madera.

Table 4-5: Existing Traffic Signal Bicycle Detection Locations

Main Street	Cross Street
Redwood Highway	Corte Madera Avenue
Redwood Highway	Wornum Drive
Tamal Vista Boulevard	Fifer Avenue

4.4 Recent Expenditures on Bikeways

Table 4-6 shows a summary of bicycle facility projects constructed since the 2008 bicycle plan was adopted.

Table 4-6: Past Expenditures on Bikeways 2008-2014

Segment	Begin	End	Class	Length	Cost Estimate	Status
Sandra Marker Trail Access Pathway – Apache Avenue	Apache Avenue	Corte Madera Town Limit	I	0.03	\$329,700	Completed
Corte Madera Avenue	Bahr Lane	Chapman Drive	III	1.14	\$199,800	Completed
Spindrift Passage	Prince Royal Passage	San Clemente Park (east end)	III	0.16	\$10,000	Completed
Lakeside Drive	Birch Avenue	Tamalpais Drive	III	0.82	\$10,400	Completed
			Total	2.15	\$549,900	

4.5 Existing Bicycle Programs

Education is an important element in promoting bicycling and walking while also improving safety. People often assume that as bicycling and walking becomes more popular modes of transportation, the number of collisions will increase, but other communities have demonstrated the opposite. Although improving the quality of Corte Madera's pedestrian and bicycle facilities will improve safety, infrastructure cannot do it alone; it must be combined with proper education of youth, adults, seniors, bicyclists, pedestrians, and motorists.

4.5.1 Central Marin Police

Central Marin police officers have historically targeted hazardous bicycle behaviors and issued bicycle citations. Bicycle enforcement activities have been funded through grants and were the result of growing concern for the safety of bicyclists on public streets. Activities have included a Traffic Safety Week, production and distribution of pamphlets, newspaper and newsletter articles, additional bicycle signage – especially near schools and critical intersections, and periodic presence of police officers at schools during morning and afternoon peak periods.

Central Marin Police also participate in Marin County Bicycle Coalition's Share the Road Campaign, which includes three components: checkpoints, basic street skills classes, and public presentations. At checkpoints, uniformed police and volunteers stop vehicles, bicyclists, and pedestrians and provide them with Share the Road flyers. Flyers contain information on California Vehicle Code, codes of conduct, and additional safety tips.

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 bicyclists. Bicyclists who have received a bicycle violation may attend this class to reduce their fine to \$50.

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 bicyclists and motorists.

4.5.2 Safe Routes to Schools

The countywide safe routes to schools programs began in 2000 as an effort to reduce congestion and encourage healthy exercise and transportation habits among children and school staff in Marin County. The program has since expanded to its current level, with over 50 participating schools. Corte Madera currently has two schools, Neil Cummins Elementary School and the Cove school in the program. Overall, a 2011 evaluation of the TAM Safe Routes to Schools programs from Spring 2008 to Spring 2011 showed an increase in the number of students using an active mode (bicycling, walking, skating, etc.) to travel to school (25 percent in 2008 to 30 percent in 2011).

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. Education programs completed at Neil Cummins Elementary School between 2010 and 2011 are listed below:
 - Stop, Look, and Listen
 - Walk Around the Block
 - Bicycle and Traffic Safety
- 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.

- Encouragement Events, contests and promotional materials are incentives that encourage children and parents to try walking and biking. Encouragement programs completed at Neil Cummins Elementary School between 2010 and 2011 are listed below:
 - International Walk to School Day
 - Walk and Roll Wednesdays
 - Spring Contests
- 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.

4.6 Proposed Bikeway Network

As shown in the preceding section, Corte Madera's current bikeway network provides some opportunities for safe travel both on-street and off-street. However, significant gaps remain in the system, and closing these gaps is critical to providing good connectivity for bicyclists riding both within the Town of Corte Madera and attempting to travel to neighboring communities. The Class I, II, III, and IV projects were developed through input gathered at two public workshops, through an online survey, and from the B/PAC.

A summary of potential costs for the recommended bikeway network is presented in Table 4-7. The cost of the recommended projects is estimated to be about \$3,785,000 for Class I Bikeways, \$2,450,000 for Class II Bikeways, \$195,000 for Class III Bikeways, \$80,000 for Class IV Bikeways, and \$411,000 for other bicycle-related projects. The combined cost for all bikeways is between approximately \$6,921,000. It is important to note the three following assumptions about the cost estimates. First, all cost estimates are 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, and as such, the costs presented should be considered as rough order of magnitude only.

All 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 something difficult to pinpoint exactly, due to the dependence on competitive funding sources and, timing of roadway and development, and the overall economy.

Table 4-7: Recommended Bikeway Project Cost Estimates - Summary

Туре	Length	Total Cost
Class I*	3.25	\$3,785,000
Class II	3.63	\$2,450,000
Class III	4.79	\$195,000
Class IV	0.34	\$80,000
Other	N/A	\$411,000
Total*	12.01	\$6,921,000

^{*}Excludes proposed multi-jurisdictional Class I projects listed in Table 4-9.

4.6.1 Proposed Class I Bikeways: Shared-Use Paths

Class I Bikeways recommended in the plan focus on filling critical gaps in the off-street network and providing access to key destinations. For example, the re-opening of the Alto Tunnel was identified by members of the public as a high priority so that bicyclists and pedestrians could travel a north-south link from Corte Madera to neighboring communities. Along the same theme, an extension of the shared-use path parallel to San Clemente Drive and a spur from the trail extension to Wornum Drive would provide greater north-south connectivity and access to Larkspur Landing, and an extension of the Class I facility along Paradise Drive would help create safe routes to three primary schools. Details of the proposed segments can be found in Table 4-8.

Table 4-8: Proposed Class I Bikeways: Shared-use Paths

Route	Begin	End	Class	Length	Cost	Description
"Tunnel Lane Route" (parallel to Montecito Drive)	I st Street	Approximately 800' north of the south Madera Town Limit/ north entrance of Alto Tunnel	I	0.41	\$300,000	Project #1: Resurface existing informal path from 1st Street to the north entrance of Alto Tunnel.
"NWP RR Path"	450' north of San Clemente Drive	North Corte Madera Town Limit	I	0.81	\$500,000	Project #2: Consider extending existing paved Class I bikeway that runs parallel to San Clemente Drive north along NWP rail bed to north Town Limit. Environmental permits may be required.
Corte Madera Town Park Pathway	300' north of Tamalpais Drive	Hickory Avenue	I	0.23	\$260,000	Project #3: Extend Canal Path south from Hickory Avenue towards Tamalpais Drive.
High Canal Path	275' north of Lakeside Drive	Sandra Marker Trail	I	0.23	\$200,000	Project #4: Pave a small section of unpaved pathway along the canal; paving will be with decomposed granite or asphalt (project has BTA funding; design may be modified to reflect public input). Decomposed granite substitution will need approval by the funding agency.
"San Clemente Creek Path"	San Clemente Drive	Channel Drive	I	0.24	\$400,000	Project #5: Consider paving informal path connecting San Clemente Drive to culs-de-sac that terminate the north ends of Echo Avenue, Harbor Drive, and Channel Drive; study feasibility of bridge crossing San Clemente Creek to Golden Hind Passage.

Route	Begin	End	Class	Length	Cost	Description
New Shared- Use Path	East end of Madera Boulevard	Wornum Drive	I	0.37	\$650,000	Project #6: Study feasibility of constructing Class I shared-use path from east end of Madera Boulevard north to Wornum Drive along the 101 freeway (requires procurement of easements).
Conow Street	Meadowsweet Drive	Casa Buena Drive	I	0.09	\$50,000	Project #7: Construct Class I shared-use path on Conow Street from Meadowsweet Drive to Casa Buena Drive.
Paradise Path No. 1	San Clemente Drive	Prince Royal Passage	I	0.40	\$500,000	Project #8: Widen the existing sidewalk on the north side of Paradise Drive to create a Class I multi-use path. Right-of-way may need to be acquired. The project is partially funded by Measure A (formerly HIP). Currently applying of funding
Sandra Marker Trail Access Pathway – Hart Street	Sandra Marker Trail	Palm Avenue	I	0.02	\$25,000	Project #9: Resurface the existing short, informal path between the bend in Hart Street and the Sandra Market Trail.
On the perimeter of the San Clemente Park Parking Lot	Spindrift Passage	Paradise Drive	I	0.02	\$25,000	Project #10: Create Class I multi-use path from east end of Spindrift Passage along the west boundary of the San Clemente Park parking lot to Paradise Drive.
Paradise Path No. 2	Westward Drive	Upland Circle	I	0.35	\$850,000	Project #11: Construct a Class 1 multi-use path along the south side of Paradise Drive from Westward Drive to Upland Circle (Safe Pathways funding has been secured). Parking, utilities, right-of-way and wetland issues exist.

Route	Begin	End	Class	Length	Cost	Description
Wornum Drive	Tamal Vista Boulevard	Redwood Highway Frontage Road	I	0.08	\$25,000	Project #12: Study feasibility of a Class I multi-use path on the north side of Wornum Drive from Nellen Avenue to Redwood Frontage Road and the widening of the existing Class I multi-use path on the south side of Wornum Drive from Tamal Vista Boulevard to Redwood Highway Frontage road. Currently applying for funding.
Total Class I				3.25	\$3.785 mil	

Table 4-9: Multi-Jurisdictional Proposed Class I Bikeways: Shared-use Paths

Route	Begin	End	Class	Length	Cost	Description	Lead Agency
North-South Greenway (southern segment)	Wornum Drive	Intersection of NWP RR/ Industrial Way/ Town Limit	I	0.28	\$4.7 - \$5.6 million	Project #13: Construct Class I shared-use path from Redwood Highway at intersection of Corte Madera Creek to the intersection of Wornum Drive and Redwood Highway.	County of Marin
Mill Valley – Corte Madera Bikeway	N/A	N/A	I	TBD	TBD	Project #14: Continue exploration of potential options identified in 2009 Mill Valley – Corte Madera Bikeway Study	County of Marin
Total Class I				0.28	\$4.7 - \$5.6 mil		

4.6.2 Proposed Class II Bikeways: Bicycle Lanes

Corte Madera's bikeway network does not currently have many Class II Bicycle Lanes. Residents identified the need for bicycle lanes along three roadway segments that would provide improved east-west connectivity and one roadway segment to facilitate north-south bicycle travel.

The highest priority Class II facility is along Tamalpais Drive from Corte Madera Avenue to San Clemente Drive. This project would require lane reconfiguration but would serve as a main bicycle artery between shops, schools, and parks on the west side of Corte Madera and open space and homes on the east side of Corte Madera.

Other priority Class II bikeway facilities include bike lanes on both sides of the street on Casa Buena Drive from Sanford to Meadowsweet, and northbound on Tamal Vista Boulevard from Fifer Avenue to Madera Boulevard. Details of all the bicycle lane proposals can be found in Table 4-10.

Table 4-10: Proposed Class II Bikeways: Bicycle Lanes

Route	Begin	End	Class	Length	Cost	Description
Tamalpais Drive	San Clemente Drive	Redwood Avenue	II	1.02	\$85,000	Project #15: Stripe Class II bicycle lanes in both directions on Tamalpais Drive from San Clemente Drive to Redwood Avenue. Study feasibility of buffered bicycle lanes or Class IV bikeways from Madera Boulevard to Redwood Avenue.
Redwood Avenue	Corte Madera Avenue	Tamalpais Drive	II	0.06	\$10,000	Project #16: Study feasibility of including Class II bicycle lanes.
Casa Buena Drive	Sanford Street	Meadowsweet Drive	II	1.04	\$2.2 million	Project #17: Study and construct Class II bicycle lanes in both directions along full length of Casa Buena Drive. Coordinates with sidewalk project within same limits.
Redwood Highway	Wornum Drive (east end)	Tamalpais Drive/ San Clemente Drive	II	0.74	\$60,000	Project #18: Stripe Class II bicycle lanes in both directions from Wornum Drive to the intersection of Tamalpais Drive and San Clemente Drive.
Sanford Street	Tamalpais Drive	Meadowsweet Drive	II	0.03	\$10,000	Project #19: Study potential for Class II bicycle lanes on the full length of Sanford Street.
Tamal Vista Boulevard	Fifer Avenue	Madera Boulevard	II	0.59	\$45,000	Project #20: Study and construct feasibility of Class II bicycle lanes in northbound direction on Tamal Vista Boulevard. Currently applying for funding.
Lucky Drive	Doherty Drive	Fifer Avenue	II	0.15	\$40,000	Project #21: Stripe Class II bicycle lanes on Lucky Drive from existing Class II bicycle lanes on Doherty Drive to Fifer Avenue.

Route	Begin	End	Class	Length	Cost	Description
Total Class II				3.63	\$2.45 mil	

4.6.3 Proposed Class III Bikeways: Bicycle Routes

Several potential Class III Bicycle Routes were identified by residents. Limited right-of-way along Casa Buena Drive, Corte Madera Avenue, and Chapman Drive make them a prime candidates for bicycle route designation. Additional signage along Corte Madera Avenue and Chapman Drive would help minimize unsafe bicycling speeds. Details of the proposed segments can be found in Table 4-11.

Table 4-11: Proposed Class III Bikeways: Bicycle Routes

Route	Begin	End	Class	Length	Cost	Description
Monona Drive	Mohawk Avenue	Madera Boulevard	III	0.15	\$5,000	Project #22: Stencil Class III bicycle route on Monona Drive from Mohawk Avenue to existing Class II bicycle lanes on Madera Boulevard. This project will help connect the Town Park and Neil Cummins Elementary School with homes and Town Center.
Seawolf Passage	Paradise Drive	Spindrift Passage	III	0.12	\$5,000	Project #23: Stencil Class III bicycle route on Seawolf Passage from Paradise Drive to Spindrift Passage. Study potential for additional traffic calming features.
Chapman Drive	Stetson Ave.	Corte Madera Avenue	III	0.86	\$35,000	Project #24: Stencil and sign Class III bicycle route on Chapman Drive from Stetson Avenue to Corte Madera Avenue.
Meadowsweet Drive	Tamalpais Drive	Casa Buena Drive	III	1.28	\$40,000	Project #25: Stencil Class III bicycle route on Meadowsweet Drive from Tamalpais Drive to Casa Buena Drive.
Paradise Drive	San Clemente Drive	Town Limit	III	1.40	\$50,000	Project #26: Stencil Class III bicycle route on Paradise Drive from San Clemente Drive to the east Town limit.
Sausalito Street	Tamalpais Drive	Buena Vista Avenue	III	0.21	\$10,000	Project #27: Stencil Class III bicycle route on Sausalito Street from Tamalpais Drive to Buena Vista Avenue. Alternatively, study potential for advisory bicycle lanes along Sausalito Street as a traffic calming measure.

Route	Begin	End	Class	Length	Cost	Description
Tamal Vista Boulevard	Fifer Avenue	Madera Boulevard	III	0.63	\$20,000	Project #28: Stencil Class III bicycle route on Tamal Vista Boulevard in the southbound direction from Fifer Avenue to Madera Boulevard. Also study potential speed limit reductions, traffic calming measures, and Class II bicycle lanes. Currently pursuing funding.
Nellen Avenue	Fifer Avenue	Lucky Drive	III	0.14	\$30,000	Project #29: Stencil Class III bicycle route with greenback sharrows and improve driveways along westside of Nellen Avenue to make ADA-compliant.
Total Class III				4.79	\$195,000	

4.6.4 Proposed Class IV Bikeways: Protected Bicycle Lanes

Limited space along Nellen Avenue and portions of Madera Boulevard present an opportunity to implement Class IV protected bicycle lanes. Residents identified these routes as important connections to transit, and the added vertical protection provided by Class IV facilities would make transit more accessible by bicycle for people of all ages and abilities. Details of the proposed segments can be found in Table 4-12.

Table 4-12: Proposed Class IV Bikeways: Protected Bicycle Lanes

Route	Begin	End	Class	Length	Cost	Description
Nellen Avenue	Wornum Drive	Fifer Avenue	IV	0.17	\$25,000	Project #29: Study Class IV protected bicycle lane on Nellen Avenue from Wornum Drive to Fifer Avenue.
Wornum Drive	Tamal Vista Boulevard	Nellen Avenue	IV	0.08	\$25,000	Project #30: Study Class IV protected bicycle lane on Wornum Drive from Tamala Vista Boulevard to Nellen Avenue. Currently apply for funding.
Madera Boulevard	Tamal Vista Boulevard/ Council Crest Drive	US-101 on/off ramps	IV	0.09	\$30,000	Project #31: Study potential for Class IV bicycle lanes on Madera Boulevard from Tamal Vista Boulevard/ Council Crest Drive to US-101 on/off ramps. Also, study potential traffic mitigation measure.
Total Class IV					\$80,000	

4.6.5 Other Proposed Projects

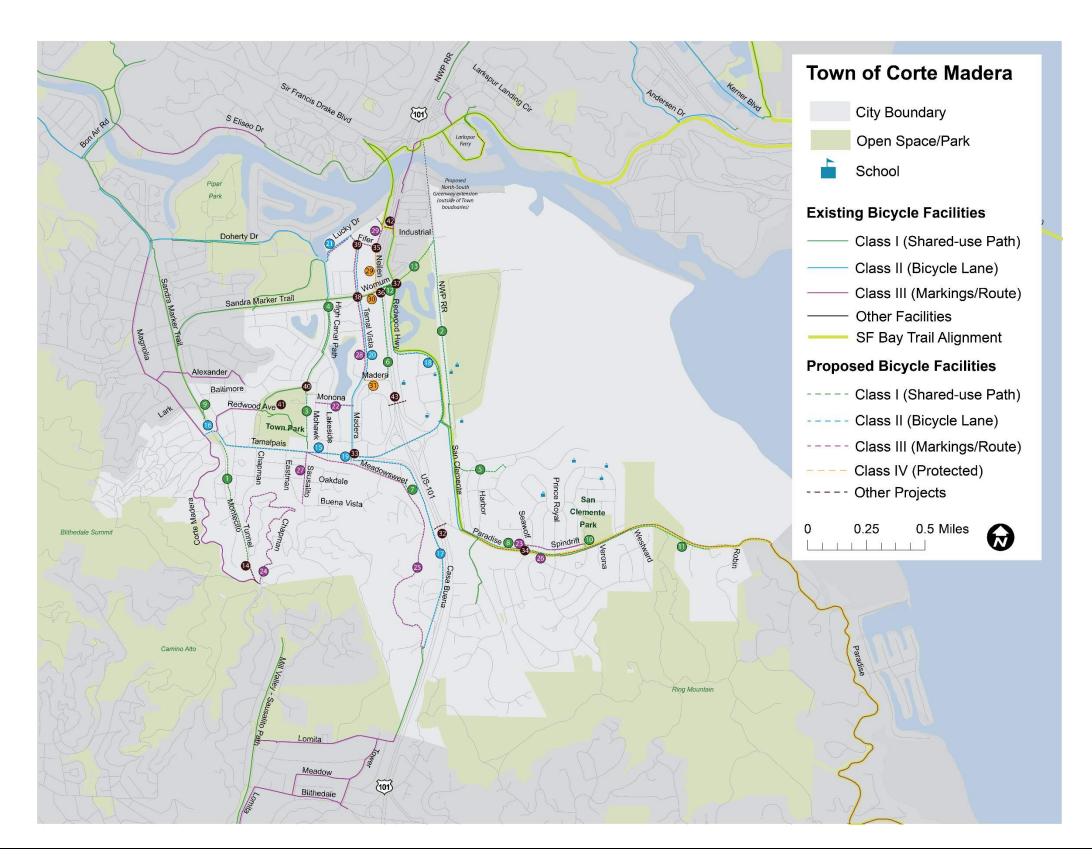
In addition to Class I, II, III, and IV bicycle facilities, several other proposed projects will provide enhance bicycle and pedestrian access. Three of the projects identified are US 101 overcrossings and attempt to help reconnect the east and west sides of Corte Madera. These projects are described in Table 4-13.

Table 4-13: Proposed Intersection Treatments and Other Bicycle-Related Projects

Route/Project	Begin/Primary Street	End/Secondary Street	Description	Cost
Paradise Drive – US 101 – Casa Buena Drive Overcrossing	Casa Buena Drive	San Clemente Drive	Project #32: Study potential for bicycle and pedestrian overcrossing that would connect Paradise Drive and Casa Buena Drive.	\$75,000
Intersection	Tamalpais Drive	Meadowsweet Drive	Project #33: Study potential for intersection alterations that accommodate bicycle and pedestrian travel.	\$15,000
Intersection	Paradise Drive	Seawolf Passage	Project #34: Study potential for intersection alterations that accommodate bicycle and pedestrian travel.	\$15,000
Intersection	Fifer Avenue	Nellen Avenue	Project #35: Study potential for intersection alterations that accommodate bicycle and pedestrian travel, including a proposed rectangular rapid flashing beacon.	\$15,000
Intersection	Nellen Avenue	Wornum Drive	Project #36: Study potential for intersection alterations that accommodate bicycle and pedestrian travel, including a proposed traffic signal.	\$15,000
Intersection	Wornum Drive	Redwood Highway	Project #37: Study potential for intersection alterations that accommodate bicycle and pedestrian travel (currently under study).	\$30,000
Intersection	Tamal Vista Boulevard	Wornum Drive	Project #38: Study potential for bicycle and pedestrian intersection alterations (consider grade separated crossing).	\$30,000

Route/Project	Begin/Primary Street	End/Secondary Street	Description	Cost
Intersection	Fifer Avenue	Tamal Vista Boulevard	Project #39: Study potential for bicycle and pedestrian intersection alterations. Consider tightening turning radii and installing green lane markings through the intersection).	\$15,000
Neil Cummins Path	N/A	N/A	Project #40: Install concave mirror at corner northwest of Neil Cummins Elementary School, just south of Hickory Avenue.	\$1,000
Neil Cummins Path	N/A	N/A	Project #41: Consider paving Neil Cummins Path west of Neil Cummins Elementary School and east of Pixley Lagoon (currently under study).	\$75,000
Nellen Avenue – US 101 – Redwood Highway Overcrossing	Nellen Avenue	Redwood Highway	Project #42: Maintain existing overcrossing in short-term and seek funding to make ADA-compliant in long-term. Also, study proposed raised crosswalk across Nellen Avenue to provide additional access to overcrossing.	\$50,000
"Ponte Nuvio" Overcrossing	Town Center at Corte Madera	The Village at Corte Madera	Project #43: Study feasibility of overcrossing connecting two shopping centers with coordination from Caltrans, and improve access to US 101 bus pads.	\$75,000
Total Cost				\$411,000

Figure 4-7: Proposed Bikeway Network



4.6.6 Countywide Bicycle Route Wayfinding Signage Project

As described in the preceding Existing Conditions section, the Marin County Department of Public Works plans to install standard bicycle route signs throughout the county to direct users to to routes and destinations throughout the County. Although it is not an infrastructure project included in this plan, the town and the B/PAC are committed to working with the Marin County Department of Public Works to ensure implementation of this project within Corte Madera. Because the county project focuses primarily on decision points to provide wayfinding, it may be supplemented by Class III Bikeway: Bicycle Route signage, as described later this plan. In addition, Class III Bikeway signage may be found on designated Corte Madera bike routes, which are not a part of the county's project.

4.7 Recommended Bicycle Programs & Policies

Support programs and policies are an important component of a bicycle transportation system. Bikeway facilities alone are not sufficient to increase bicycling, and must be supported by amenities such as secure bicycle storage, restrooms, and changing areas for long-distance commuters. In addition, bicycle racks on buses, directional signage intended for bicyclists, route maps, and educational and encouragement programs expand travel options. Programs such as bikeway management and maintenance improve bicyclists safety, and promotional and educational programs support the cultural shift that encourages bicycling as a mode of transportation. The following section includes both general and specific recommendations for support facilities and programs.

4.7.1 Bicycle Parking and End-of-trip Facilities Recommendations

Bicycle parking includes standard bike racks, covered lockers, enclosed lockers, bike spas, and corrals. Other end-of-trip facilities include showers and changing facilities. Below are recommendations for bicycle parking and end-of-trip facilities.

Bicycle Parking Inventory

Create an inventory of existing bicycle parking and update the inventory annually. The inventory should be geo-located and maintained by the Town of Corte Madera.

Increase Public Bicycle Parking Facilities and Encourage/Mandate Provision of Shower and Changing Facilities

The Town should seek to provide bicycle lockers at public destinations, including park-and-ride lots, major bus stops, community centers, libraries, parks, schools and shopping centers where appropriate. All bicycle parking should be in a safe, secure, covered area (if possible). Large employers should be encouraged to provide secure indoor parking, covered bicycle corrals, or bicycle lockers.

The Town of Corte Madera should work with employers to implement the requirements for providing bicycle parking, shower, and changing facilities for employees as called for in Town ordinance and as a component of all commute and traffic demand management programs (per Municipal and Building Codes).

The B/PAC should periodically review the effectiveness of the existing standards and ordinances and update them with best practices as needed.

Provide Valet Bike Parking at Public Events

A formal program to provide closed-in secure bicycle corrals at all large public events to encourage residents and visitors to bicycle rather than drive should be instituted. The bicycle coalitions in Marin County and San Francisco have been providing free bicycle parking at events. The valet parking works much like a coat check: the cyclist gives their bicycle to the attendant, who tags the bicycle with a number and gives the cyclist a claim stub. When the bicyclist 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 Marin County Bicycle Coalition (MCBC) will also park strollers, rollerblades, electric scooters and other humanor electric-powered transportation devices. Valet parking could be sponsored by the Town in partnership with the Marin County Bicycle Coalition and/or other providers or sponsors. Volunteers are critical to the success of such a program as they are typically used to staff the corral during the events.

Bikeways and Development Policies Recommendations

Private development presents an excellent opportunity to integrate active transportation into newly constructed or redeveloped environments. Similar to the bicycle parking and end-of-trip facilities requirements described above, a policy should be developed concerning bikeway construction as a part of redevelopment or new construction (see <u>Carrboro's Vision 2020</u> plan; County of Luzerne, PA, <u>Ordinance o. 2015-10</u>; and Cary, NC, <u>Ordinance No 7.10.5</u>). Based on specific criteria, bikeways could be required for development permits or bicycle facilities could be incorporated into the Town's traffic mitigation strategies. Bikeways to be constructed should be identified in the *Corte Madera Bicycle and Pedestrian Plan* and be reviewed by staff with the involvement of the B/PAC. End of trip facilities should be integrated according to national and international best practices.

4.7.2 Safe Routes to School Recommendations

Identifying and improving routes for children and school staff to walk or bicycle to school is an effective means of reducing morning traffic congestion and addressing safety problems around schools. Most effective school commute programs are joint efforts of the school district and Town or County, with parent organizations adding an important element. The traffic calming, route maps, School-Pool efforts, 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.

The Town of Corte Madera should continue its support of the Safe Routes to Schools program. Bicycle alterations at local schools should be coordinated with town wide bicycle infrastructure alterations to create a seamless network by which children and school staff can travel safely by bicycle and on foot.

4.7.3 Traffic Calming Recommendations

Traffic calming programs are beneficial for bicyclists and improve safety and comfort for all road users, especially if programs succeed in reducing the speed differential between automobile and bicyclist travel speeds. However, if not appropriately designed, some physical traffic calming devices can present hazards for cyclists. For example, chokers or median islands narrow the space between bicycles and cars, compromising a cyclist's safety.

Physical traffic calming solutions should take into account cyclists' needs; incorporate design features and signage that ensure that cyclists and motorists have enough room to share the lane; and clearly establish right-of-way priorities.

The Town of Corte Madera should adopt a traffic calming program that identifies roadways with a history of unsafe motor vehicle operations, roadway configurations that encourage speeding, poor delineation of pedestrian crossings, and other potential bicycle- and pedestrian-related safety issues. Once identified, the traffic calming program should provide a toolbox of potential countermeasures, and designates a clear process for implementing traffic calming measures.

4.7.4 Maintenance Recommendations

Providing ongoing maintenance is often identified as one of the chief obstacles in the implementation of local bicycle and pedestrian plans in Marin County. Corte Madera's bikeways should be well-maintained. Some tasks, such as repairing damaged and potholed roadway surfaces, clearing plant overgrowth and regular sweeping are associated with routine roadway maintenance. Additional care and attention should be taken to ensure bikeways are included in the maintenance. For example, street sweeping activities should include the bicycle lane and not transfer debris out of the roadway and into the bicycle lane. Other maintenance activities are bikeway specific, and could include restriping lanes, repainting stencils and replacing signs. An example of needed bikeway maintenance is the repaving of the multi-use path along the east side of Redwood Highway from Tamalpais Drive/San Clemente Drive to Wornum Drive.

Develop a Funding Source for the Bicycle Maintenance Program

Bikeways are an integral part of Corte Madera's transportation network, and maintenance of the bikeway network should be part of the ongoing maintenance program for all town transportation facilities. As such, bikeway network maintenance should be adequately funded. In addition to maintenance funds from general revenue, the Town may also want to consider pursuing other methods of securing funding for bikeway and pathway maintenance. Examples of alternative funding include "adopt-a-trail" programs, implementing recreational fees on the purchase of recreational equipment in the town, project-specific fundraising, and the sale of town-developed bicycle maps. 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 bikeways in Corte Madera.

Intersection and Bikeway Spot Improvement Program

The Town should ensure that a mechanism exists to evaluate the bikeway network, to alleviate potential hazards and to improve conditions for bicyclists at specific intersections and locations. Training should be provided if necessary to ensure that public works 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., bicycle lane to left-turn pocket)
- Signal timing problems (e.g. green phase too short)
- Locations where motor vehicle traffic blocks bike facilities on a regular basis

4.7.5 Interchange Improvement Program

Freeway interchanges present conflict points between people driving and active transportation users. The Town should develop a program to identify interchange area improvements for bicyclists and pedestrians, and coordinate these improvements with Caltrans.

4.7.6 Integrate Bicycle Maintenance into DPW Maintenance Requests

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

Complaint form:

http://www.ci.corte-madera.ca.us/DocumentCenter/View/825

Request form:

http://www.ci.corte-madera.ca.us/DocumentCenter/View/826

4.7.7 Periodically Analyze Bicycle Collision Data

The Town should evaluate bicycle collision data on an annual basis to determine if any specific intersection locations appear to have higher accident rates that could be due to design problems.

4.7.8 Bicycle Signal Detection Recommendations

As described in this plan, the Town of Corte Madera has no official policy regarding bicycle signal detection. The following recommendations are intended to expand the Town's existing bicycle signal detection efforts to include bicycles along all designated lanes/routes and at key intersections.

Calibrate Loop Detectors and Video Detection Devices

While detector loops and video detection facilitate faster and more convenient motorist trips, if they aren't calibrated properly or stop functioning, they can frustrate cyclists waiting for signals to change, unaware that their bicycle is not being detected. The Town should ensure that all existing loops and video detection devices are calibrated and operable for bicycle users.

Develop Policy of Installing Bicycle-Calibrated Loop Detectors or Video Detection with Bicycle Zones at Signalized Intersections

The Town should develop and adopt a policy of installing bicycle-calibrated loop detectors at intersections along designated bicycle routes as they are repaved. For new installations it is recommended that the Town continue to use Type D for lead loops in all regular travel lanes shared with bicycles. Within bicycle lanes it is recommended that the Town install bicycle loop detectors (BLDs) using narrow Type C loops.

Where video detection is currently or planned to be in use, it is recommended that the Town continue and expand its practice of incorporating additional detection zones for bicycles, especially for intersections with sidepaths, wide curb lanes or Class II bikeways. Video image detection should sense bicycles in all approach lanes and also on 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

Since most bicyclists, as well as motorists, do not know how loop detectors or video detection work, all detector loops and video detection areas expected to be used by cyclists should be marked by a pavement stencil such as the *Caltrans Standard Plan A24C* bicycle detection marking that shows cyclists where to stop to activate the loop or video detection. Educational materials distributed by the Town should describe how to activate bicycle detectors. Stencils should be repainted as needed along with other roadway markings.

4.7.9 Protect Bicycle Facilities from Removal

The Town should adopt and implement a practice that prohibits the removal of existing bikeway facilities. For example, Class II bicycle lane facilities should not be removed at a future date to increase motor vehicle capacity without a thorough study analyzing the alternatives and unless the bicycle accommodation is replaced by another facility of equal or greater utility to cyclists.

4.7.10 Multi-modal Connection Recommendations

The Town of Corte Madera should work with the Golden Gate Transit and Marin County Transit District to continue to expand bicycle access to transit. Bicycle travel to transit stops and stations should be enhanced in order to make the transfer between bicycle and transit travel as convenient as possible. Key components to enhancing transit-bicycle connections include: providing bicycle parking at transit stops, including bicycle 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. Improvements to bicycle rack

capacity on buses will benefit Corte Madera bicyclists who use Marin Transit and Golden Gate Transit. Primary obstacles are limited racks on buses and poor security for racks at bus stops.

4.7.11 Education Program Recommendations

Statewide trends show that the lack of education for bicyclists, especially younger students, continues to be a leading cause of collisions. Studies of collisions locations around California consistently show the greatest concentration of accidents is directly adjacent to elementary, middle, and high schools. Most education and encouragement programs and activities will likely be cooperative efforts between the Town of Corte Madera, the Central Marin Police Authority, the Marin County Sheriff, the County of Marin, the Transportation Authority of Marin, and local bicycle groups such as the Marin County Bicycle Coalition.

Continue and Expand Existing Education Programs

Existing school education programs should be continued, and funding for Safe Routes to School programming should be actively supported by Town officials. For adult education, the Town should 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. Corte Madera should continue to offer "Bicycle Traffic School" in the form of "Street Skills" classes in lieu of fines.

Educate Motorists

Motorist education on the rights of bicyclists and pedestrians is limited. Many motorists mistakenly believe, for example, that bicyclists do not have a right to ride in travel lanes, or do not understand the concept of sharing the road with bicyclists. The Town should support the education and enforcement efforts of the Central Marin Police Authority for both motorists and bicycles.

Shared-use Path and Trail Etiquette

Informing trail users of acceptable etiquette is a common issue when multiple user types are sharing a facility. Yielding the right-of-way is a courtesy and yet a necessary part of a safe trail experience involving multiple trail users. Trail right-of-way information should be posted at trail access points and along the trail. The message must be clear and easy to understand. The education of trail users is a critical part of creating a safe trail environment for all trail users.

Guidelines should be clearly posted at trail access points. Educational curricula, similar to the "Safe Routes to School" programs, could be used to encourage safe practices of various trail users. The purpose of trail etiquette is to promote user safety and enhance the enjoyment of all users. Common items that should be covered in trail etiquette curricula or programming include speed limits, restrictions on motor vehicles, courteous methods to pass others along the path, and managing pets on leashes.

4.7.12 Encouragement Program Recommendations

Encouragement programs are vital to the success of the *Corte Madera Bicycle and Pedestrian Plan*. Encouragement programs work to get more people out of their cars and bicycling and walking, which will help to reduce traffic congestion and air pollution, as well as improve the quality of life in *Corte Madera*. In addition to government efforts, involvement by the private sector in raising awareness of the benefits of bicycling is important and can range from small incremental activities by non-profit groups, to efforts by the largest employers in the Town. Specific programs are described below:

Bike Fairs and Races

Hosting bike fairs and races in Corte Madera can raise the profile of bicycling in the area and provide entertainment for all ages at the same time. Bike fairs and races, similar to bike-to-work day events and bike rodeos currently hosted by the Town provide an opportunity to educate and encourage current and potential bicyclists. These events can also bring visitors to Town of Corte Madera that may contribute to the local economy.

Bike-to-Work and Bike-to-School Days

The Town of Corte Madera participates in the annual Bike-to-Work day in May, in conjunction with the California bike-to-work week activities. Town staff should be present at energizer stations along the route to promote the plan and other programs. The Town may also consider implementing bike-to-school days.

4.7.13 Corte Madera Bicycle Facilities Map

Producing a bicycle facilities map is the primary tool for showing bicyclists all the designated bikeways in Corte Madera. On a regular basis, the Town of Corte Madera should work produce a Corte Madera-specific bicycle map. The Corte Madera Bicycle Map should clearly show the type of facility (path, lane, or route) as well as include basic safety information, significant destinations, and location of bicycle parking facilities, public bathrooms, water fountains, transit stops, and bicycle facilities in the neighboring communities. Selling advertising space on the map to local restaurants, shops and bicycle stores could offset the cost of developing and printing. The map could also be sold for a nominal fee. Distribution points for the map include: Town offices, the libraries, the community center, local schools, bicycle shops and other recreational retail outlets. In addition, the Town should work with Google Maps, OpenStreetMap, and other online map application program interfaces (APIs).

5 Pedestrian Element

Pedestrian infrastructure in Corte Madera currently connects residents and visitors to key destinations; however, major gaps in the pedestrian network remain.

5.1 Proposed Pedestrian Network

As shown in this plan, Corte Madera's current pedestrian system provides some opportunities to improve connectivity. Details on proposed projects and cost estimates can be found in Table 5-1 and Table 5-2. The combined cost for all projects is \$2,284,000. It is important to note the three following assumptions about the cost estimates. First, all cost estimates 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.

All the projects are recommended to be implemented over the next 2 to 20 years, or as funding becomes available. 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 something difficult to pinpoint exactly, due to the dependence on competitive funding sources and, timing of roadway and development, and the overall economy.

Proposed pedestrian facilities focus on intersection and mid-block crossings. Intersections along Tamalpais Drive and Wornum Drive are particularly problematic. Figure 5-1 shows the proposed pedestrian project.

In addition to sidewalks and intersection treatments, Corte Madera's hillsides are host to staircases and earth trails that climb the Chapman and Christmas Tree Hill areas. These paths provide an important link between residential streets and allow local residents pedestrian access to Old Corte Madera Square, Town Hall, and Town Park. These paths also provide convenient points of access to regional open space and hiking areas, as well as alternative emergency evacuation routes.

Table 5-1: Proposed Pedestrian Intersection Projects

Primary Street	Secondary Street	Description	Cost
Paradise Drive	Verona Place (west)	Project #44: Study feasibility of mid-block crossing.	\$7,000
Mohawk Avenue	Madera Boulevard	Project #45: Install flashing beacons at north crosswalk; consider trimming vegetation.	\$60,000
Redwood Avenue	Montecito Drive	Project #46: Install pedestrian intersection alteration concepts (currently under study).	\$70,000
Tamalpais Drive	Chapman Drive	Project #47: Install pedestrian intersection alteration concepts (currently under study).	\$70,000
Tamalpais Drive	Eastman Avenue	Project #48: Install pedestrian intersection alteration concepts (currently under study).	N/A
Tamalpais Drive	Sausalito Street	Project #49: Install pedestrian intersection alteration concepts (currently under study).	\$70,000
Tamalpais Drive	Lakeside Drive	Project #50: Install pedestrian intersection alteration concepts (currently under study).	\$70,000
Tamalpais Drive	US 101 SB Off-Ramp	Project #51: Coordinate with Caltrans to install high-visibility crosswalks on north and west legs.	\$10,000
Sausalito Drive	Oakdale Avenue	Project #52: Study high-visibility crosswalk at south leg.	\$5,000
Buena Vista Avenue	Sausalito Street	Project #53: Install high-visibility crosswalk at west leg	\$5,000

Primary Street	Secondary Street	Description	Cost
Casa Buena Drive	Meadow Valley Road	Project #54: Study potential for pedestrian intersection alterations.	\$5,000
Madera Boulevard	Monona Drive	Project #55: Study potential for pedestrian intersection alterations.	\$5,000
Sandra Marker Trail	High Canal Path	Project #56: Add yield pavement markings/signage.	\$2,000
Paradise Drive	Golden Hind Passage	Project #57: Install pedestrian crossing/safety alterations (includes restriping of the crosswalk as well as the addition of a left turn pocket).	\$75,000
Paradise Drive	Prince Royal Passage	Project #58: Install pedestrian crossing alterations (includes bulb outs, rectangular rapid flashing beacons, median island, and restriping of crosswalks	\$150,000
Madera del Presidio Drive	Meadow Ridge Drive	Project #59: Install pedestrian crossing improvements (includes narrowing of lanes, addition of crosswalk, RRFBs, and signage).	\$100,000
Paradise Drive	Harbor Boulevard	Project #60: Increase sight lines and widen sidewalk at the northwest corner.	\$10,000
San Clemente Drive	Between Redwood Highway/Tamalpais Drive and Paradise Drive	Project #61: Study potential for mid-block crossing, median refuge island, and additional traffic calming measures.	\$15,000
Total			\$729,000

Table 5-2: Proposed Pedestrian Segment and Wayfinding Projects

Route	Begin	End	Description	Length (miles)	Cost
Sausalito Street	Tamalpais Drive	Oakdale Avenue	Project #63: Construct southbound sidewalks	0.12	\$70,000
Sausalito Street	Oakdale Avenue	Buena Vista Avenue	Project #64: Construct northbound sidewalks	0.09	\$50,000
Corte Madera Avenue	California Lane	Chapman Drive	Project #65: Construct sidewalk on west side of Corte Madera Avenue	0.85	\$1.4 million
Town Gateway Signage	N/A	N/A	Project #66: Consider changing town gateway signage to read, "Welcome to Corte Madera"	N/A	\$15,000
Casa Buena Drive	Sanford Street	Meadowsweet Drive	Project #67: Study and construct of sidewalks on west side of Casa Buena Drive along the full length of the roadway.	1.04	\$20,000
Total				2.10	\$1,555,000

Town of Corte Madera (101) City Boundary Open Space/Park **Proposed Pedestrian Facilities** Sidewalk Gap Closure Pedestrian Alterations 0.25 0.5 Miles

Figure 5-1: Proposed Pedestrian Projects

5.2 Recommended Pedestrian Programs & Policies

This section outlines priority actions for improving walking in Corte Madera, with a focus on meeting plan objectives, including the strong desire to improve safety while maintaining existing infrastructure. The following sections summarize positive actions that can be undertaken or considered as part of this plans' implementation using the "Five E's" of transportation planning: *engineering*, *education*, *enforcement*, *encouragement*, *and evaluation*.

5.2.1 Engineering

The Town should adopt a more rigorous policy for pedestrian accommodation, including specific streets (e.g., all minor and collector arterials) where ADA-compliant sidewalks or pathways are a priority. These recommendations should be included in the Town's Standard Specifications as permitted/desired treatments.

5.2.2 Education

Partnering with local student groups can provide youth engagement opportunities, bring enthusiasm to projects, and help build community buy-in. Environment-focused groups, such as the Corte Madera Park and Recreation Department or the Conservation Corps North Bay, may be natural partners for the goals of increasing active transportation in Corte Madera.

5.2.3 Encouragement

Residents and community members are excellent resources for garnering support and enthusiasm for pedestrian facility improvements. The Town could work with volunteers to substantially reduce implementation and maintenance costs, particularly for unpaved walkways. Local schools, community groups, or dedicated neighbors group may help sponsor projects, possibly by working with a local designer or engineer. Work parties can be formed to help clear right-of-way where needed. Local construction companies can donate or discount services. Potential volunteers include neighborhood and other community groups, including Boy Scouts of America, for a community-service project.

Create a strong pedestrian culture that welcomes and celebrates walking through:

- Support local advocacy groups and reach out to local schools or groups in order to promote pedestrian-related projects and to maximize public-private funding opportunities such as development of walking maps and/or path maintenance.
- Support bike-to-work and walk-to-work Days by hosting energizer stations and by promoting the events through available media outlets.
- Support International Walk and Roll to School Day in October through coordinated efforts with Corte Madera schools.
- Consider partnering with MCBC to start a "bells for trails" campaign in which free bells are distributed along Class I Shared-use Paths.

5.2.4 Enforcement

Strive to improve safety for all users by:

- Consider a 15/20 MPH zone speed limit for application in select school zones
- Conduct crosswalk safety analyses in areas with reported issues.
- Communicate safe and appropriate rules of the road for all roadways users through targeted enforcement and education.
- Encourage Corte Madera public and private schools to fund crossing guards to assist with active school commutes.

5.2.5 Evaluation

Continue to use the B/PAC to evaluate the progress of plan implementation.

Data Collection

Pedestrian counts are important because they provide documentation of actual pedestrian activity, allowing the Town to make informed decisions to target improvements in areas where they will be most beneficial. Project-specific "before and after" counts are also valuable to assess progress in encouraging active transportation, and are increasingly required to compete for outside grant funding (including the statewide Active Transportation Program, or ATP).

- Create a program to conduct regular pedestrian data collection efforts at strategic screen lines to assess activity level trends.
- Update town wide traffic counts for all modes, including automobile counts, to assist the feasibility and design for including pedestrian facilities in new projects.
- Create and maintain a regularly updated sidewalk inventory and sidewalk condition database, as well as a maintenance plan to address identified issues.

6 Project Prioritization

Once a bikeway and pedestrian network has been identified, the next challenge is to identify the priority projects that will offer the greatest benefit to bicyclists and pedestrians once they are implemented. The project prioritization in the following section was developed through a qualitative analysis based on stated priorities of the B/PAC and Town staff, priorities communicated by the public at the *Town of Corte Madera Bicycle and Pedestrian Plan* public workshops held on October 9, 2014 and March 12, 2015, priorities from the 2008 *Corte Madera Bicycle Transportation Plan*, and the criteria detailed below.

- 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 and/or pedestrians for the amount of investment required to build it?

It is important to remember that the lists of bikeway and pedestrian projects and programs are flexible concepts that serve as guidelines to those responsible for implementation. The priority projects list, and perhaps even the overall system and segments themselves, may change over time as a result of changing bicycling patterns and implementation constraints and opportunities. Project prioritization is not meant as an absolute value, rather as an indication of project's relative importance only. These priorities should be considered a living document. The B/PAC and Town staff should review the priority projects list on an annual basis to ensure that it reflects the most current priorities, needs, and opportunities for implementing the bikeway network in a logical and efficient manner. In particular, the list should be adjusted to take advantage of all available funding opportunities and grant cycles. As projects are implemented and taken off the list, new projects should be moved up into priority projects status.

Based on the prioritization criteria, the following projects are priorities for the Town:

6.1.1 Class I Bikeway Priorities

- 1. Multi-use trail along the south side of Paradise Drive from Westward Drive to Upland Circle
- 2. <u>Multi-use trail along the north side of Paradise Drive from San Clemente Drive to Prince Royal Passage</u>
- 3. Corte Madera Town Park Pathway Tamalpais Drive to Neil Cummins Elementary School

6.1.2 Class II Bikeway Priorities

- 1. Tamalpais Drive San Clemente Drive to Redwood Avenue
- 2. Casa Buena Drive Sanford Street to Meadowsweet Drive
- 3. Tamal Vista Boulevard (northbound) Fifer Avenue to Madera Boulevard*
- 4. Sanford Street Tamalpais Drive to Meadowsweet Drive

6.1.3 Class III Bikeway Priorities

- Tamal Vista Boulevard (southbound) Fifer Avenue to Madera Boulevard*
- 2. <u>Meadowsweet Drive Tamalpais Drive to Casa Buena Drive</u>

6.1.4 Other Bicycle Project Priorities

- 1. Paradise Drive US 101 Casa Buena Drive Overcrossing
- 2. Tamal Vista Boulevard/Wornum Drive intersection alterations

6.1.5 Pedestrian Project Priorities

- 1. Paradise Drive at Golden Hind Passage
- 2. Intersections along Tamalpais Drive (at Chapman Drive, Eastman Avenue, Sausalito Street, Lakeside Drive, Meadowsweet Drive, and US 101 SB Off-Ramp) and Redwood Avenue (at Montecito Drive)
- 3. Paradise Drive at Prince Royal Passage Pedestrian Crossing Enhancements

^{*} Study potential for southbound Class II on Tamal Vista Boulevard from Madera Boulevard to Wornum Drive.

7 Plan Implementation

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

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:

- Adoption of the Corte Madera Bicycle and Pedestrian Plan by the Corte Madera Town Council
- Conduct public outreach
- 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
- Integrate, as necessary, emerging technology that can contribute to plan implementation
- Secure, as necessary, outside funding and any applicable environmental approvals
- Consider the parking needs of businesses and residents in the development of new bicycle lanes through a thorough community engagement process
- Approval of the project by the Town Council, including the commitment by the latter to provide for any unfunded portions of project costs
- Include project in the Town's Capital Improvement Plan
- Completion of final plans, specifications and estimates, advertising for bids, receipt of bids and award of contract(s)
- Construction of project
- Monitor project performance (bicycle and pedestrian counts)

8 Maintenance

Maintenance costs for the bikeway and pedestrian network are relatively low. 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, such as frequent sweeping schedules for roadways on the bikeway network. As required under the town code, the costs to maintain the sidewalk network are the responsibility of property owners. Intersection and crossing projects will also be treated as part of the normal roadway maintenance program.

9 Marketing the Plan

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

- Distribute copies of the plan to members of the Planning Commission, B/PAC, Parks and Recreation Department, and Department of Public Works.
- Provide copies of the Town of Corte Madera's 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 a press release about the adoption of the plan.
- Provide copy of plan to public libraries.
- Reference elements of the plan in staff reports for relevant Town Council legislation.
- Provide regular reports to Town Council regarding the implementation of the plan.

Appendix A: Funding Sources

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

Federal Sources

Fixing America's Surface Transportation (FAST) Act

Enacted in December 2015, the Fixing America's Surface Transportation (FAST) Act dedicates a combined \$305 billion from the Highway Trust Fund (HTF) and the General Fund (GF) of the United States Treasury to fund federal highway, highway safety, transit, and rail programs for fiscal years (FY) 2016-2020. The FAST Act replaces the Moving Ahead for Progress in the 21st Century Act (MAP-21) and represents the federal government's first long-term comprehensive surface transportation legislation since 2005. Compared to MAP-21, the FAST Act contains a 15 percent increase in highway investment (\$233 billion), an 18 percent increase in transit funding (\$49 billion), and an equivalent level of federal passenger rail investment (\$10 billion) over the five year period. The FAST Act will provide every state a 5.1 percent increase in formula funds in FY 2016 followed by annual increases ranging from 2.1 percent in FY 2014 to 2.4 percent in FY 2017.

National Highway Performance Program (NHPP)

The NHPP is the most significant highway program, receiving 63.7 percent of formula funds remaining after funding is provided for the Congestion Mitigation & Air Quality (CMAQ) Program, metropolitan planning, and national freight programs. The FAST Act will add two permissible uses for NHPP funds: to pay subsidy and administrative costs for Transportation Infrastructure Finance and Innovation Act (TIFIA) projects and for improvements to bridges that are not on the National Highway System.

Surface Transportation Block Grant Program (STBGP)

The FAST Act expands the existing Surface Transportation Program (STP) into the STBGP which places more decision-making power in the hands of state and local governments. The FAST Act simplifies the list of uses eligible for program funds and increases the ways that funds can be used for local roads and rural minor collectors. The new program requires 55 percent of program funds be distributed within each state on the basis of population, compared to 50 percent under STP. In addition, \$835 million to \$850 million of funding is set aside for the transportation alternatives program, which supports a variety of pedestrian, bicycling, and environmental activities. The bill requires states to invest the same amount each year in recreational trails as invested in 2009, although states are able to opt out of the Recreational Trails Program. The STBGP receives the same 29.3 percent of formula funds under the FAST Act as STP did under MAP-21.

STBGP Set-aside

What used to be the Transportation Alternatives Program (TAP) under MAP-21, which included the Transportation Enhancements, Safe Routes to School, and Recreational Trails programs, is now the Surface Transportation Block Grant Set-aside Program. These funds may be used for a variety of pedestrian, bicycle, and complete street projects including sidewalks, bikeways, multi-use paths, and rail-trails. The FAST Act changes funding for this program from 2 percent of annual apportionments (about \$820 million per year) to a flat \$835 million in FY 2016 and FY 2017 and then to \$850 million per year thereafter. The FAST Act also expands eligible recipients for funds to include nonprofits responsible for administration of local transportation safety programs and requires annual reports from state and local planning organizations on the number of project applications and awards.

Highway Safety Improvement Program (HSIP)

The FAST Act eliminates the ability of states to shift funds designated for infrastructure safety programs to behavioral or educational activities, ensuring resources remain in construction-related programs. It also designates several new safety improvements eligible for funding including vehicle-to-infrastructure communication and roadway improvements that provide separation between pedestrians and motor vehicles.

With regards to unpaved roads, the FAST Act allows states to "opt out" of collecting safety inventory data for unpaved/gravel roads if certain conditions are met, as long as the states continue to collect data related to serious crashes and fatalities. It also requires that U.S. DOT to review data and report to Congress on best practices for roadway infrastructure improvements that enhance commercial motor vehicle safety.

Nationally Significant Freight and Highway Projects Program

This program will provide an average of \$900 million per year in grants of at least \$25 million for highway, bridge, rail-grade crossing, intermodal and freight rail projects costing more than \$100 million that improve movement of both freight and people, reduce bottlenecks, and improve intermodal connectivity. Projects will be awarded competitively, with at least 25 percent of funds to be spent in rural areas.

Transportation Investments Generating Economic Recovery

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

and make investments in the nation's infrastructure that make communities more livable and sustainable. Many awards have been made to construct bicycle and pedestrian infrastructure, including projects in Atlanta, GA, Birmingham, AL, Fresno, Indianapolis, IN, and Philadelphia, PA.

Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, provide more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure - "Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health." The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). MCOG and Caltrans should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

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

Rivers, Trails, and Conservation Assistance Program

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

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

Community Development Block Grants

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

Community Transformation Grants

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

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

National Scenic Byways Program

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

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

Federal Recovery Act State Fiscal Stabilization Funding

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

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

Smart City Challenge

The USDOT's Smart City Challenge will award up to \$40 million in federal funding to a mid-size city (200,000 to 850,000 people within city limits) to conduct a "Smart City Demonstration" in an effort to encourage cities to test how creative ideas involving transportation data, technologies, and applications can be integrated with existing systems in a city to address transportation challenges. The USDOT will issue two separate solicitations to carry out this challenge. This solicitation will result in selection of an estimated five Smart City Challenge finalists who will receive funding to support concept development and planning activities. The second solicitation will invite the Smart City Challenge finalists to apply for funding to support implementation of their proposed demonstration.

State Sources

Active Transportation Program

The California State Legislature consolidated a number of state-funded programs centered on active transportation into a single program. The resulting Active Transportation Program (ATP) consolidated the federal programs, Bicycle Transportation Account, the Safe Routes to Schools Program, and the Recreational Trails Program. The ATP's authorizing legislation (signed into law by the Governor on September 26, 2013) also includes placeholder language to allow the ATP to receive funding from the newly established Cap-and-Trade Program in the future. The Statewide Competitive ATP will have \$180 million available statewide for the 2014/2015 and 2015/2016 fiscal cycles. The Regional Competitive ATP will have \$30 million available for the Metropolitan Transportation Commission (MTC) region 2014/2015 and 2015/2016 fiscal cycles. The California Transportation Commission writes guidelines and allocates funds for the ATP, while the ATP will be administered by the Caltrans Division of Local Assistance. Goals of the ATP are currently defined as the following:

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

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

State Highway Operations & Protection Program

The State Highway Operations and Protection Program (SHOPP) is a four year program that funds projects on the state highway system to maintain and preserve the asset. The program is primarily funded by federal highway trust funds. The federal funds that make up the SHOPP are National Highway Performance Program (NHPP), the Surface Transportation Program (STP), and the Highway Safety Improvement Program (HSIP). The new federal act, Fixing America's Surface Transportation (FAST) Act, requires that states implement targets based on performance measures that will be forthcoming. This will dictate how funds need to be programmed based on meeting the targets. The emphasis of the federal bill is to maintain and/or improve the current asset condition and to address the safety needs. The cycle includes identification of rehabilitation and reconstruction needs in the ten year plan, the estimation of available funding in the fund estimate, and finally a financially-constrained portfolio of projects in the four-year SHOPP. As required by statutes, the SHOPP is updated every two years. The SHOPP project funding process is internal to Caltrans. SHOPP projects are originally scoped through the ten year SHOPP plan process. The ten year SHOPP plan has a fiscally-constrained list of program areas that have

specific estimated amounts of funding. The determination of the balance of funds for each of the areas is based on federal funding programs, priorities as agreed between the Caltrans and the CTC, and direction from the Caltrans SHOPP Executive Committee. The priorities are:

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

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

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

Caltrans Planning Grants

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

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

Environmental Justice Grant Program

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

More information: http://www.dot.ca.gov/hq/tpp/offices/ocp/completed projects ej.html

Community Based Transportation Planning Grant Program

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

More information: http://www.dot.ca.gov/hq/tpp/offices/ocp/completed-projects-cbtp.html

Petroleum Violation Escrow Account

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

More information: www.dot.ca.gov/hq/LocalPrograms/lam/prog-g/g22state.pdf

Office of Traffic Safety Grants

The Office of Traffic Safety (OTS) distributes grants statewide to establish new traffic safety programs or fund ongoing safety programs. OTS grants are supported by federal funding under the National Highway Safety Act and FAST. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Eligible grantees are governmental agencies, state colleges, state universities, local 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. The California application deadline is January of each year. There is no maximum cap to the amount requested; however, all items in the proposal must be justified to meet the objectives of the proposal.

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

Environmental Enhancement and Mitigation Funds

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

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

Land and Water Conservation Fund

The Land and Water Conservation Fund is a federal program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The fund is administered by the California State Parks Department. Cities, counties, and districts authorized to acquire and develop park and recreation space are eligible for grant funding. While non-profits are ineligible, they are allowed to apply in partnerships with eligible agencies. Applicants must fund the project entirely and will be reimbursed for half of the cost. Up to \$2.0 million was available in California in the 2012 round of grant funding.

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

California Strategic Growth Council

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

More information: http://sgc.ca.gov/m grants.php

Climate Ready Grant Program - California State Coastal Conservancy

Climate Ready grants are intended to encourage local governments and non-governmental organizations to advance planning and implementation of on-the-ground actions that reduce greenhouse gas emissions and lessen the impacts of climate change on California's coastal communities. The grant program makes eligible "development of multi-use trails with clearly identified greenhouse gas (GHG) reduction goals; (and) protecting and managing open space lands with clearly identified GHG reduction goals." A total of \$1,500,000 is available on a competitive basis, with a minimum award of \$50,000 and a maximum of \$200,000. The size of awarded grants will be based on each project's needs, its overall benefits, and the extent of competing demands for funds. Applications were due November 17, 2014. It is not clear whether additional application solicitations will be made.

More information: http://scc.ca.gov/webmaster/pdfs/Climate Ready Announcement3.pdf

Regional & Local Sources

Developer Impact Fees

As a condition for development approval, municipalities can require developers to provide certain infrastructure improvements, which can include bikeway projects. These projects have commonly provided Class II facilities for portions of on-street, previously-planned routes. They can also be used to provide bicycle parking or shower and locker facilities. The type of facility that should be required to be built by developers should reflect the greatest need for the particular project and its local area. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

Roadway Construction, Repair and Upgrade

Future road widening and construction projects are one means of providing improved pedestrian and bicycle facilities. To ensure that roadway construction projects provide these facilities where needed, it is important that the review process includes input pertaining to consistency with the proposed system. In addition, California's 2008 Complete Streets Act and Caltrans's Deputy Directive 64 require that the needs of all roadway users be considered during "all phases of state highway projects, from planning to construction to maintenance and repair."

More information: http://www.dot.ca.gov/hq/tpp/offices/ocp/complete-streets.html

Utility Projects

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

Cable Installation Projects

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

new bikeway facilities following completion of the cable trenching, such as sharing the use of maintenance roads.

Marin County Measure A

A one-quarter cent retail transactions and use tax passed as Measure A in November 2012 to care for Marin's existing parks and open spaces, support regional community parks projects and programs, and further farmland preservation. An expenditure plan guides the use of the funds, as follows:

- 65 percent will be used by Marin County Parks to restore natural resources, maintain county parks and open space preserves, restore and improve public access, and protect natural lands.
- 20 percent will be dedicated to saving family farms and ranches through the purchase of agricultural conservation easements in voluntary transactions and landowners.
- 15 percent will be used by cities, towns, and applicable special districts to enhance and manage parks, nature preserves, recreation programs, and vegetation to reduce wildfire risk.

Several grant programs have been established to distribute funds including the Breathe/Respira Community Grant Program, Marin County Park and Open Space Program, and the City, Town, and Special District Program.

More information: http://www.marincountyparks.org/depts/pk/about-us/main/measurea

BAAQMD Grants

The Bay Area Air Quality Management District (BAAQMD) established several grant programs aimed at reducing emissions of oxides of nitrogen, reactive organic gasses, and particulate matter.

- Transportation Fund for Clean Air (TFCA) provides grants to projects that implement
 the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions,
 and thereby improve air quality. Projects must be consistent with the 1988 California
 Clean Air Act and the Bay Area Ozone Strategy.
- Environmental Justice Small Grants Program provides up to \$20,000 in grants to eligible
 community-based grassroots organizations and federally recognized tribal governments
 that are located in areas adversely affected by environmental pollution and hazards and
 are involved in addressing environmental justice concerns.

More information: http://www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources.aspx

MTC Grants

The OneBayArea Grant Program (OBAG) established program commitments and policies for investing roughly \$800 million over the four-year Cycle 2 period (FY's 2012-13 through 2015-16), funded by federal funds authorized by Congress in Moving Ahead for Progress in the 21st Century (MAP-21), the predecessor to the current Fixing America's Surface Transportation (FAST) Act.

OBAG is a new funding approach that integrates the region's federal transportation program with California's climate law (Senate Bill 375, Steinberg, 2008) and the Sustainable Communities Strategy. Funding distribution to the counties will consider progress toward achieving local land use and housing policies by:

- Rewarding jurisdictions that accept housing allocations through the Regional Housing Need Allocation (RHNA) process and produce housing using transportation dollars as incentives.
- Supporting the Sustainable Communities Strategy for the Bay Area by promoting transportation investments in Priority Development Areas (PDAs) and by initiating a pilot program that will support open space preservation in Priority Conservation Areas (PCAs)
- Providing a higher proportion of funding to local agencies and additional investment flexibility by eliminating required program investment targets. The OBAG program allows flexibility to invest in transportation categories such as Transportation for Livable Communities, bicycle and pedestrian improvements, local streets and roads preservation, and planning activities, while also providing specific funding opportunities for Safe Routes to Schools (SR2s) and Priority Conservation Areas.

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

San Francisco Bay Trail Grant Program

The Bay Trail offers grant funding to jurisdictions for planning, design, and construction of the Bay Trail, and has provided assistance to the Town of Corte Madera in the past (\$60,000 for the Corte Madera Bay Trail Feasibility Study). While funds associated with the current allocation from the Coastal Conservancy via Proposition 84 are fully committed, future measures may result in additional Bay Trail funding.

Private Sources

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

PeopleForBikes Community Grant Program

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

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

Bank of America Charitable Foundation, Inc.

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grant program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Program, and specifically the Program Related Investments subcategory. This program targets low- and moderate-income communities and seeks to encourage entrepreneurial business development.

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

The Robert Wood Johnson Foundation

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

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

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

The Wal-Mart Foundation

The Wal-Mart Foundation offers a Local, State, and National Giving Program. The Local Giving Program awards grants of \$250 to \$5,000 through local Wal-Mart and Sam's Club Stores. Application opportunities are announced annually in February with a final deadline for applications in December. The State Giving Program provides grants of \$25,000 to \$250,000 to 50lc3 nonprofits working within one of five focus areas: Hunger Relief & Nutrition, Education, Environmental Sustainability, Women's Economic Empowerment, or Workforce Development. The program has two application cycles per year: January through March and June through August. The Wal-Mart Foundation's National Giving Program awards grants of \$250,000 and more, but does not accept unsolicited applications.

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

The Kodak American Greenways Program

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

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

Community Action for a Renewed Environment (CARE)

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to re-duce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between \$90,000 and \$275,000.

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

Corporate Donations

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

mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

Other Sources

Local sales taxes, fees and permits may be implemented as new funding sources for pedestrian and bicycling projects, such as Measure A approved by voters in 2004. However, any of these potential sources would require a local election. Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly multi use paths. For example, a local college design class may use such a multi-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of way for the route. A local construction company may donate or discount services beyond what the volunteers can do. A challenge grant program with local businesses may be a good source of local funding, in which the businesses can "adopt" a route or segment of one to help construct and maintain it.

Appendix B: Municipal Code

Municipal Code – Bicycle Policies

8.20.040 - Required number of off-street bicycle parking spaces.

Bicycle parking spaces shall be required for all new commercial developments or multifamily residential developments, or for additions of over two thousand square feet to existing developments. Required bicycle parking shall be calculated on the basis of new or added square footage only. All bicycle parking spaces to be used after six p.m. shall have adequate security lighting. Bicycle parking spaces shall have minimum dimensions of two feet by six and one-half feet, and shall be designed to permit convenient locking of bicycles.

Bicycle parking spaces shall be provided at least in accord with the following schedule:

Use	Required bicycle parking spaces		
Lodging house, hotel, motel, apartment or private club providing sleeping accommodation	0.2 spaces per unit, with a minimum of two spaces		
Place of public assembly including church, community center, private club or lodge, auditorium (including school or college auditorium) or gymnasium	One space per 500 square feet		
School	0.2 spaces per person		
Theater	One space per 500 square feet		
Medical or dental office	One space per 1,000 square feet		
Other business office, technical service office, or administrative office	One space per 1,000 square feet		
Retail stores and service establishments	One space per 1,000 square feet		
Restaurant, soda fountain, bar, cocktail lounge, or similar establishment for the sale and consumption of food or beverages on the premises, not in a shopping center	One space per 400 square feet		
Food store, grocery store, delicatessen, supermarket or similar use not in a shopping center	One space per 1,000 square feet		
Shopping center, retail store or service establishment in the C-1, C-2, C-3, or C-4 commercial districts under 20,000 square feet in size	One space per 1,000 square feet		

Use	Required bicycle parking spaces	
Commercial amusement device establishment	One space per two commercial amusement devices	
Shopping center, retail store or service establishment in the C-1, C-2, C-3, or C-4 commercial districts over 20,000 square feet in size	One space per 2,000 square feet	
Commercial service enterprise, repair shop, wholesale establishment, commercial recreation, retail store handling only bulky merchandise such as furniture, household appliances or motor vehicles	One space per 2,000 square feet	
Warehouse or other storage building or facility combined with a retail store, commercial service enterprise, repair shop or wholesale establishment	One space per 3,000 square feet	
Manufacturing plant or other industrial use	One space per 2,000 square feet	
Public building	One space per 1,000 square feet	

(Ord. 785 § 3(b) (part), 1994); hn0; (Ord. No. 910, § 29, 4-21-2009)

10.12.040 - Bicycle or animal riders—Applicability of regulations.

Every person riding a bicycle or riding or driving an animal upon a highway has all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle by this title, except those provisions which by their very nature can have no application. (Ord. 461 \$ 3.3, 1966)

10.32.090 - Restrictions on use of freeways.

No person shall drive or operate any bicycle, motor driven cycle, or any vehicle which is not drawn by a motor vehicle upon any street established as a freeway, as defined by state law, nor shall any pedestrian walk across or along any such street so designated and described except in space set aside for the use of pedestrians, provided official signs are in place giving notice of such restrictions. (Ord. 461 § 8.8, 1966)

5.26.040 - Definitions.

Terms used in this chapter are defined as follows:

- (1)"Average vehicle ridership (AVR)" means the number of employees who start work at a work site during the peak period divided by the number of vehicles those employees use to arrive at the work site, averaging over the survey week.
- (2)"Carpool" means a vehicle occupied by two to six people traveling together between their residence and their work site or destination for the majority of the total trip distance. Employees who work for difference employers, as well as nonemployed people, are included within this definition as long as they are in the vehicle for the majority of the total trip distance.
- (3)"Commute trip" means the trip made by an employee from home to the work site. The commute trip may include stops between home and the work site.

- (4)"Compressed workweek" means a regular full-time work schedule which eliminates at least one round-trip commute trip (both home-to-work and work-to-home) at least once every two weeks. Examples include, but are not limited to, working three twelve-hour days (3/36) or four ten-hour days (4/40) within a one-week period; or eight nine-hour days and one eight-hour day (9/80) within a two-week period.
- (5) "Disabled employee" means an employee with a physical impairment which prevents the employee from traveling to the work site by means other than a vehicle and the employee has been issued a disabled person placard or plate from the Department of Motor Vehicles.
- (6) "Employee" means any person conducting a work activity for an employer twenty or more hours per week on a regular full-time, temporary or part-time basis. The term includes independent contractors. The term excludes field construction workers, field personnel, seasonal/temporary employees and volunteers.
- (7) "Employee transportation coordinator (ETC)" means an employee, other individual or entity appointed by an employer to market, administer and monitor the employer trip reduction program or employer trip reduction plan on a full-time or part-time basis.
- (8) "Employee transportation survey" means a questionnaire distributed by employers to employees designed to provide sufficient information to calculate AVR or VER for the work site.
- (9) "Employer" means any person(s), trust, firm, business, joint stock company, corporation, partnership, association, nonprofit agency or corporation, educational institution, school district, hospital or other health care facility, or federal, state, state, city or county government department, agency or district, or any other special purpose public agency or district. A city, county, or city and county is a single employer for purposes of this rule, not individual departments or agencies of the city, county, or city and county. Individual departments or agencies of the state of California and the federal government are separate employers for purposes of this rule. The term includes for-profit, not-for-profit, and nonprofit enterprises. Several subsidiaries or units that occupy the same work site and report to one common governing board or governing entity or that function as one corporate unit are considered to be one employer. The term shall not include employers with no permanent work site within the town.
- (10) "Employer program manager" means an employee with policy and budget authority who is responsible for the implementation of the employer trip reduction program or employer trip reduction plan and for fulfilling the requirements of this rule.
- (11) "Employer trip reduction program" means a group of measures developed and implemented by an employer that is designed to provide transportation information, assistance and incentives to employees. The purpose of such measures is to reduce the number of motor vehicles driven to the work site by increasing AVR or decreasing VER. An employer trip reduction program may include, but is not limited to, any or all of the following services, incentives and measures:
 - (A)Ridesharing.
 - (i)Carpool/vanpool matching,
 - (ii)Preferential parking for carpools and vanpools,
 - (iii) Carpool/vanpool financial subsidies or rewards,
 - (iv)Employer-provided vehicles for carpools and/or vanpools,
 - (v)Employer-sponsored vanpools,
 - (vi)Rideshare marketing campaigns,
 - (vii)Subsidy of vanpool liability insurance;
 - (B)Transit.
 - (i) Work site transit ticket sales,
 - (ii)Transit ticket subsidies, e.g., Commuter CheckTM,
 - (iii)Transit route maps and schedules on-site,
 - (iv) Shuttle to transit line (employer-sponsored or subsidized);
 - (C)Trip Elimination.
 - (i)Compressed workweeks,

- (ii) Work-at-home programs,
- (iii)Telecommuting;
- (D)Parking Management.
 - (i)Charge for employee parking,
 - (ii)Elimination of any employer parking financial subsidy,
 - (iii)Transition from employer parking financial subsidy to general transportation monetary allowance for all employees,
 - (iv) Free or reduced parking rates for carpools and vanpools only;
- (E)Bicycle and Pedestrian.
 - (i)Bicycle financial subsidies or rewards,
 - (ii) Financial subsidy to employees for the purchase of bicycles for commute trip use,
 - (iii) Bicycle lockers or other secure, weather-protected bicycle parking facilities,
 - (iv)Bicycle access to building interior,
 - (v)Bicycle and/or walking route information,
 - (vi)On-site bicycle registration;
- (F)On-Site Facilities/Services.
 - (i) Employee shower facilities and clothes lockers,
 - (ii)Site modifications that would encourage walking, transit, carpool, vanpool and bicycle use,
 - (iii)On-site services to reduce mid-day vehicle trips, e.g., cafeteria, ATMs, apparel cleaning, etc.
 - (iv)On-site transportation fair to promote commute alternatives;
- (G)Other.
 - (i)Membership in a transportation management association that provides services and incentives,
 - (ii) Establishment of employee committee to help design, develop and monitor the trip reduction program,
 - (iii)Guaranteed ride home program,
 - (iv)Financial subsidies or rewards for walking and other nonmotorized transportation modes
 - (v)Shuttles between multiple work sites,
 - (vi)Providing child day care on/near work site,
 - (vii)Enhanced trip reduction efforts on forecast criteria pollutant exceedance days, e.g., the district's spare the air program.
- (12) "Field construction worker" means an employee who reports for work to a temporary field construction site.
- (13) "Field personnel" means employees who spend twenty percent or less of their work-time at the work site who do not report to the work site during the peak period for pickup and dispatch of an employer-provided vehicle.
- (14)"Independent contractor" means an individual who enters into a direct written contract or agreement with an employer to perform certain services. The period of the contract or agreement is at least ninety days or is open-ended.
- (15)"Local jurisdiction" means a city, county or public agency, including a public agency formed through a joint powers agreement, with authority to adopt, implement and enforce an employer trip reduction ordinance.
- (16) "Peak period" means the time from six a.m. to ten a.m. Monday through Friday inclusive.
- (17) "Seasonal/temporary employee" means an employee who works for the employer for less than ninety continuous days (three months) within a calendar year.
- (18) "Single-occupant vehicle" means a vehicle occupied by one employee.
- (19) "Survey week" means a regular five-day Monday through Friday (inclusive) work week. The survey week for work sites with Saturday and Sunday work schedules will include only those work

days Monday through Friday. The survey week cannot contain a federal, state or local holiday, regardless of whether the holiday is observed by the employer. A survey week that meets the above criteria is to be selected by the employer during January through May, or September through November. The survey week cannot be Rideshare Week or contain any other rideshare or transit promotional events, e.g., "Beat the Back-Up."

- (20) "Telecommuting" means a system of working at home or at an off-site, nonhome telecommute facility for the full workday on a regular basis of at least one day per week.
- (21)"Transportation management association" means an organization through which developers, property managers, employers and/or local jurisdictions cooperate in designing, implementing and assessing employer trip reduction programs or other transportation demand or system management programs and measures.
- (22)"Vanpool" means a vehicle occupied by seven or more employees who commute together to work for the majority of their individual commute trip distance. Employees who work for different employers are included within this definition as long as they are in the vehicle for the majority of their individual trip distance.
- (23)"Vehicle" means a device by which any person or property may be propelled, moved or drawn upon a highway, except the following: (A) a device moved exclusively by human power; (B) a device used exclusively upon stationary rails or tracks; (C) buses used for public or private transit. Examples of vehicles include, but are not limited to, passenger cars, motorcycles, vans and pickup trucks.
- (24)"Vehicle employee ratio (VER)" means the number of vehicles used by employees who start work at a work site during the peak period divided by the number of those employees averaged over the survey week. VER is the reciprocal of AVR.
- (25)"Volunteer" means an individual who does not receive any wages, salary or other form of financial reimbursement from the employer for services provided.
- (26) "Work activity" means any activity for which an employee receives remuneration from an employer. Telecommuting or work at home is a work activity.
- (27)"Work site" means any property, real or personal, which is being operated, utilized, maintained or owned by an employer as part of an identifiable enterprise. All property on contiguous, adjacent or proximate sites separated only by a private or public roadway or other private or public right-of-way, served by a common circulation or access system, and not separated by an impassable barrier to bicycle or pedestrian travel such as a freeway or flood control channel, is included as part of the work site. If two or more employers each have one hundred or more employees at a single work site, then that work site is considered a separate work site for each employer.

These definitions are similar to those in Regulation 13 Transportation Control Measures, Rule 1 Trip Reduction Requirements for Long Employers approved on December 16, 1992 by Bay Area Air Quality Management District (BAAQMD). Any subsequent changes in definitions within Regulation 13 that occur in later revisions to the regulation will supersede the definitions contained in this chapter.

(Ord. 781 \$ 1 (part), 1993)

5.26.050 - Trip reduction requirements.

The following trip reduction requirements are in addition to and not in lieu of the Marin County CMA trip reduction requirements and are established and imposed upon employers within the town:

A.This chapter shall apply only to employers within the town with one hundred or more employees at an individual work site. Where such an employer has multiple work sites, only those sites which have one hundred or more employees are subject to this chapter.

B.Each employer subject to this chapter shall disseminate trip reduction information regarding transportation alternatives including carpools, vanpools, transit and bicycling and other methods of reducing trips such as telecommuting, compressed workweek and flexible work hours annually to each employee and to all new employees as they are hired.

C.Each employer subject to this chapter shall annually conduct an employee trip survey using a uniform survey form prepared by the Marin County CMA. A summary of the trip results shall be submitted annually to the town. Any survey procedures prepared for submission to and accepted by the BAAQMD shall serve as a valid survey for this chapter upon submission to the town.

D.Each employer subject to this chapter shall designate an employee transportation coordinator to be responsible for administering the employer requirements of this chapter.

(Ord. 781 \$ 1 (part), 1993)

28.020 - Prohibitions.

It is unlawful for any person to do any of the following on public property within the scope of <u>Section</u> 9.28.010:

- (9) No person shall operate, drive, ride upon or use any skates, in-line skates, scooters, skateboards, or bicycles on, in, or within the limits of Menke Park which includes the area bounded on the west by Corte Madera Avenue, bounded on the east by Montecito Drive, bounded on the north by Redwood Avenue, and bounded on the south by First Street;
- (10)No person shall operate, drive, ride upon or use any bicycle, unicycle, or other wheeled vehicle, other than skates, in-line skates and skateboards in the fenced area of the Town Park Skatepark. (Ord. 874 § 3, 2003; Ord. 868 § 1, 2001; Ord. 755 § 1, 1989; Ord. 530 §§ 1, 2, 3, 1970; Ord. 513 § 2, 1969)

12.04.055 - Encroachment permits for private parking facilities.

(5) The private parking facility will not impede sight distance within the right-of-way, has adequate backup room, will not block pedestrian or bicycle access, and otherwise will not adversely affect traffic safety or the public health, safety or welfare, cause other adverse traffic effects, or be injurious to other property in the vicinity.

Municipal Code – Pedestrian Policies

0.36.010 - Marked crosswalks establishment.

- (a) The traffic engineer shall establish, designate and maintain crosswalks at intersections and other places by appropriate devices, marks or lines upon the surface of the roadway at such places where the traffic engineer determines that there is particular hazard to pedestrians crossing the roadway subject to the limitation contained in subsection (b).
- (b) Other than crosswalks at intersections, no crosswalk shall be established in any block which is less than four hundred feet in length and such crosswalk shall be located as nearly as practicable at mid-block.
- (c) The traffic engineer may place signs at or adjacent to an intersection in respect to any crosswalk directing that pedestrians shall not cross in the crosswalk so indicated.

(Ord. 461 \$ 9, 1966)

10.36.020 - When pedestrians must use crosswalks.

No pedestrian shall cross a roadway other than by a crosswalk in any business district. (Ord. 461 § 9.1, 1966)

17.28.010 - Improvements required.

The subdivider shall improve, or agree to improve, all lands dedicated for streets, alleys, pedestrian ways, drainage channels, easements and other rights-of-way as a condition precedent to acceptance thereof and approval of the final map. Such improvements shall include grading and surfacing of streets, alleys and pedestrian paths; construction of sidewalks, curbs, gutters, culverts, bridges, storm drains, drainage channels, sanitary sewers and water supply lines; installation of fire hydrants, street signs and street lights; planting of street trees and landscaping of planting strips; and provision of such other improvements as may be required.

(Ord. 286 § 6.1, 1957)

12.20.030 - Maintaining traffic and street closures.

The permittee shall give particular attention to facilitating the flow of vehicular and pedestrian traffic. The permittee may be required to remove excavating material from the site of the encroachment as it is excavated rather than stockpiling it on the street when such removal is necessary to permit traffic to pass freely and safely.

When the temporary closure of a public street to pedestrian and/or vehicular traffic is requested by the permittee, the permit shall be applied for at least two weeks in advance of the date of requested closure. The director shall determine the effect of the requested closure, and if satisfied as to adequate, available, alternate detour routes may issue a permit, attaching such conditions as he may deem necessary for the health, safety and welfare of the public and for the protection of the town. When emergency situations arise due to unforeseen circumstances or other causes, the two week period may be waived. Before closure of any public street, the permittee shall notify the police, fire and ambulance authorities having jurisdiction.

(Ord. 469 \$ 28, 1967)

17.28.070 - Maintenance.

No street, alley, pedestrian-way, drainage channel, easement or other right-of-way offered for dedication shall be accepted by the town unless the subdivider shall first post with the town clerk a corporate surety bond in an amount fixed by the town engineer, which shall expressly guarantee that the street, alley, pedestrianway, drainage channel, easement or other right-of-way shall be kept and maintained in reasonably good repair by the subdivider for a period of one year from the acceptance of the completed improvements by the town council. (Ord. 286 § 6.7, 1957)

17.08.100 - Pedestrianway.

"Pedestrianway" means a way designed for use by pedestrians and cyclists which is not intended for use by automotive vehicles and which is not located within a street right-of-way. (Ord. 286 § 1.7(m), 1957)

17.08.140 - Sidewalk.

"Sidewalk" means a way designed for use by pedestrians which is located within a street right-of-way. (Ord. $286 \ 1.7(r)$, 1957)

12.40.020 - Trees, hedges, shrubbery, fences—Planting or erection.

No tree, hedge, shrub or other planting whatever, fence, trellis or similar structure shall be maintained across any existing walkway in a sidewalk area or shoulder. The intent of this restriction is to keep free a walkway for pedestrian or other lawful public travel without interference by or with vehicular travel. No encroachment of any nature will be permitted or maintained which impedes, obstructs, or denies such pedestrian or other lawful travel within the limits of the right-of-way of a public street, or which impairs adequate sight distance for safe pedestrian or vehicular traffic. (Ord. 469 § 45(a), 1967)

2.40.040 - Lawns and ground covers.

Notwithstanding anything contained in this chapter to the contrary, any person may plant and maintain a lawn or ground cover of any grass, or type not prohibited by other law, within the right-of-way of a public street without a written permit. However, the lawn or ground cover shall not extend into the traveled way of the public street nor into the drainage ditches, gutters or other drainage facilities, nor

impede pedestrian travel. The general public may not be denied the use of the planted area for pedestrian or other lawful travel. The town may use the planted area for any purpose whatever, and may issue a permit to any applicant to go thereon to perform work or otherwise encroach pursuant to this title. If the lawn is damaged or disturbed in the course of an authorized encroachment, it will be removed and replaced by the permittee unless the permit specifically states otherwise. (Ord. 469 § 45(c), 1967)

10.32.090 - Restrictions on use of freeways.

No person shall drive or operate any bicycle, motor driven cycle, or any vehicle which is not drawn by a motor vehicle upon any street established as a freeway, as defined by state law, nor shall any pedestrian walk across or along any such street so designated and described except in space set aside for the use of pedestrians, provided official signs are in place giving notice of such restrictions. (Ord. 461 § 8.8, 1966)

10.32.070 - Traffic obstruction.

No operator of any vehicle shall enter any intersection or a marked crosswalk unless there is sufficient space on the other side of the intersection or crosswalk to accommodate the vehicle he is operating without obstructing the passage of other vehicles or pedestrians, notwithstanding any traffic-control signal indication to proceed.

(Ord. 461 § 8.6, 1966)

18.04.670 - Right-of-way.

"Right-of-way" means an area or strip of land, either public or private, on which a right-of-passage has been established for the use of vehicles or pedestrians or both. (See Figure 9.) (Ord. 785 \$ 3(b) (part), 1994)

Appendix C: Bicycle Parking Guidelines

The goal of the Bicycle Parking Guidelines is to provide secure bicycle parking, typically through the installation of bolted or embedded 'U' type racks and/or bicycle lockers located at specific bicycle destinations to encourage increased bicycle use.

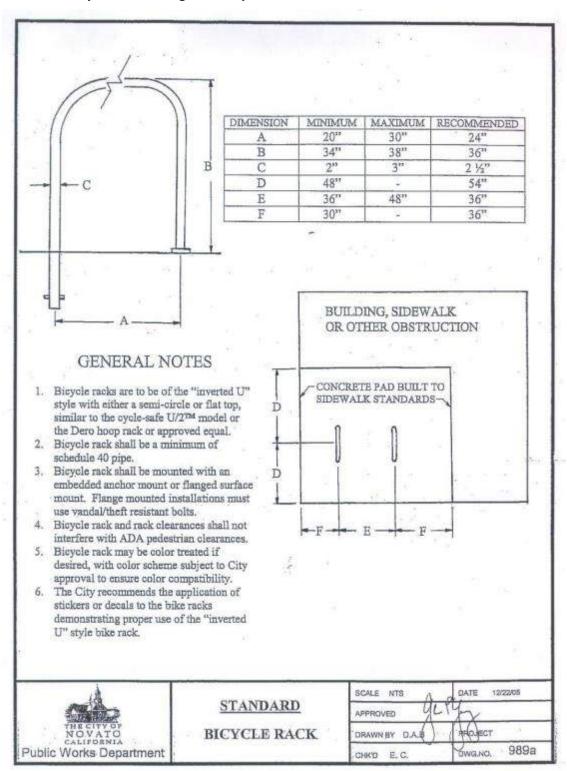
Basic Bicycle Rack & Locker Provisions

- 1. Bicycle parking guidelines are included at www.walkbikemarin.org in the Bicycle Parking Guidelines recommended by the Association of Pedestrian and Bicycle Professionals.
- 2. Bicycle racks shall be permanently anchored and tamper-proof bolts should be used where appropriate.
- 3. Bicycle racks should be compact and attractive as street furniture and coated to minimize damage.
- 4. Parking racks/lockers must be placed close enough to user destinations (such as public or employee entrances) to encourage their use, i.e. closer than automobile parking if possible since secure bicycle parking needs to be competitive with the other transportation alternatives.
- 5. Parking devices are to be placed so as not block or diminish accessibility to sidewalks, entrances, etc.
- 6. Marin County encourages the use of the Bicycle Rack Standard published by the City of Novato. http://cms6ftp.visioninternet.com/novato/agendas/pdfstaffreports/2015-05-15bikepedfinal.pdf
- 7. The recipient is encouraged to use the bicycle parking supplier used by the City of Novato (www.madrax.com, 'U' Rack), Town of Fairfax (www.bicycleparking.com, WSH36), or a supplier of their choice (see Exhibit D) to purchase and install the agreed upon bicycle parking infrastructure.
- 8. Parking racks/lockers must be placed according to the minimum space requirements provided for in these guidelines, with adequate room for cyclists to maneuver their bicycles in and out of place. Racks/lockers must be well secured to an immovable object (e.g. the ground or wall). It is preferred that bicycle parking will be placed in a sheltered area with easy access for cyclists.
- 9. Bicycle lockers are intended for destinations where long-term storage is required, where access is restricted, or weather protection is necessary.
- 10. Bicycle racks and lockers are to be installed per supplier recommendations.
- 11. Bicycle racks shall be located away from traffic and delivery vehicles and in cases where this is not possible, then bollards or raised concrete slabs are acceptable to protect them from damage.
- 12. Bicycle parking directional signage should be considered as appropriate.

Basic Bicycle Cage Provision

- 1. Bicycle cages should be secure and it is recommended that they include a cover or cage top.
- 2. Bicycle cages are ideal for locations where bicycle users arrive in and leave en masse at regular times.
- 3. Chain link is an acceptable material for day use, but if the users are expecting to leave their bicycle overnight, the cage material may need to be stronger.

Exhibit A: Bicycle Rack Designs and Specifications



SPACING FOR BIKE BARS



Spacing Between Racks:

Each bike bar accommodates two bicycles, and requires a total "foot print" space 2'X6'. Aisles between the foot prints should be at least 1' wide, and 2' aisles are preferred. Bars should be centered in the foot print space.

Spacing Between Racks and Building when Bikes Are Parallel to Building:



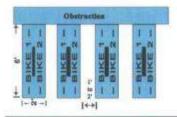
When bicycles will be parked parallel to a building, bike bars should be located at least 3' from the obstruction to allow for maneuvering handlebars between the locking devices and the building.

Spacing Between Racks and Curb When Bikes Are Parallel to Curb:



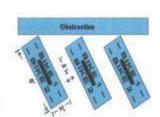
When bicycles will be parked parallel to a curb, bike bars should be at least 2' from the curb.

Spacing Between Racks and Obstruction When Bikes Are Perpendicular to Obstruction:



When bicycles will be parked perpendicular to a building, curb, or other obstruction, locking devices may be located as shown in the diagram at left.

Spacing When Racks Are Placed in a Diagonal Formation:



When bicycle bars will be placed diagonally to a building or other obstruction the angle may be varied; however, the bike parking area must still maintain a 2'X6' footprint and the aisles between the footprints should be at least 1' but preferably 2'.

Locked Room or Cage



To the left is an example of an interior bicycle storage room. Notice the cyclone fence enclosure. This facility has electronic locks activated by the user's security fob. There are men's and women's locker rooms with showers located adjacent to this enclosure and accessed from within.

A fully enclosed room or a cage should be covered by industrial grade chain link or equivalent. It should also have a heavy-duty combination or tumbler lock on the

entrance. Bicycle parking as shown below is provided within to economize parking spaces yet still provide bicycle security. Unless bicycles can be wheeled straight in from door to parking stall, there should be a 60 inch wide aisle inside the enclosure that allows bikes to be maneuvered in and out.



Double-decker



Space Saver vertical racks



Inverted U rack

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Appendix D: Shared-use Path and Trail Etiquette

Notifying bicyclists, pedestrians, skaters, equestrians, and other users of acceptable behavior and etiquette is a common issue on a shared-use paths and trails. The purpose of a code of conduct is to promote user safety and enhance enjoyment for all. Yielding the right-of-way is not only a courtesy, but a necessary part of a safe path and trail experience.

Existing Path and Trail Rules

The Marin County Code includes ordinances for path and trail use and are shown in the table below. Important elements include a) the classification of shared-use paths as "parks," b) the delegation of enforcement to any authorized department employee, official designee or peace officer, and c) the application of the California Vehicle Code.

Marin County Code - Trails and Paths⁴

Code Location ⁵	Code	
10.05.050 - Bicycles	No person shall operate any bicycle or similar vehicle within parks except upon paved roads, fire protection roads, designated bicycle pathways or public roads not signed against such use. Furthermore, no person shall operate or possess any bicycle or similar vehicle elsewhere within parks, including trails, unless signed specifically to permit such operation.	
10.05.040 – Speed limits	No person shall operate any land vehicle, including bicycles, at speeds in excess of fifteen miles per hour within parks, unless otherwise posted. No vehicle shall be operated at a speed greater than is reasonable for safe operation, nor in any manner which may endanger the safety of others of the protection of facilities and environmental resources.	
10.05.050 – Parking and vehicle removal	No person shall park, leave, abandon, possess or otherwise store any vehicle within parks, except in locations designated for such use. No person shall park any vehicle within parks during periods when parking areas or lands are closed, nor in the following locations: A. Within the traveled portion of any road; B. On any service road or trail; C. In front of any gate; D. On any undisturbed or natural hillside;	

⁴ Per 10.01.010 of the Marin County Code, the code is applicable to "management and administration of the Marin County department of parks and open spaces and the use of county parks... This code does not apply to lands and facilities operated by the Marin County open space district as the use of these lands and facilities is governed by the Marin County open space district code."

⁵ County of Marin Municipal Code (2014)

Code Location⁵	Code				
	E. In areas designated for persons with disabilities, unless the person has appropriate authorization;				
	F. In more than one parking space per vehicle;				
	G. Within posted "no parking" areas;				
	H. In a manner that obstructs the use of a boat ramp;				
	I. In any manner obstructing the free flow of traffic.				
	Except in designated overnight parking areas, no person shall park any vehicle for more than twelve consecutive hours. Any enforcement officer mentioned in California Vehicle Code Section 22651 is authorized to remove any vehicle parked in violation of this section.				
10.05.060 – California Vehicle Code	Except as otherwise provided in these regulations, the provisions of the California Vehicle Code shall be applicable to the operation of vehicles within parks.				
13.24.020 - Compliance with Vehicle Code.	Any person operating a bicycle or motorized bicycle within the County of Marin shall comply with all provisions of the California Vehicle Code which pertain to bicycles and motorized bicycles.				
	The provisions of Section 21201 of the Vehicle Code requiring lighting equipment on highways shall apply to the operation of bicycles on a paved bicycle path or paved multipurpose recreational trail within the County of Marin.				
13.24.040 - Multipurpose recreational trails.	Any person operating a bicycle on a multipurpose recreational trail shall yield the right-of-way to pedestrians and horses.				
13.24.050 - Use of trails.	a) It shall be unlawful for any person to operate, ride, propel or park a motorized bicycle on any county multipurpose recreational trail or bicycle trail, except the bike paths from:				
	Gate Six in Sausalito to the former Marin County Heliport;				
	2. The west shoulder of Highway 101 from Lincoln Avenue to Los Ranchitos Road; and				
	3. The west shoulder of Highway 101 from Miller Creek Road to Alameda Del Prado; and				
	4. Highway 37 to Hamilton Drive.				
	b) Any motorized bicycle which is authorized to be operated on a multipurpose recreational trail or bicycle trail shall not exceed a maximum speed of fifteen miles per hour on said trail.				
	c) For the purposes of this section, vehicles not registered with the department of motor vehicles being used by and designed primarily for the purpose of assisting persons with disabilities are exempted.				
15.53.040 - Enforcement.	Any employee of the Marin County fire department or any other duly constituted public agency having jurisdiction over a fire trail or hiking trail,				

Code Location⁵	Code			
	shall be deemed to be a peace officer for the purpose of enforcing this chapter.			
02.02.070 – Running and Jogging.	No school, club or other organization shall hold running, jogging, or cross-country meets, events or practice sessions on district lands without prior written approval of the district. No person shall run or jog in such a way as to endanger hikers, equestrians, bicyclist or other using district lands.			
2.02.080 – Games and miscellaneous activities.	No person shall engage in games or other activities which interfere with others using district lands or which endanger property, public safety or environmental resources. Non-permitted activities include: A. Participating in volleyball, baseball, softball, soccer, football and other similar organized sports; B. Participating in bicycle races; C. Hitting golf balls; D. Operating self-propelled model airplanes, boats, automobiles or other model craft; E. Throwing, releasing or discharging missiles, rockets, stones, paintballs or other similar projectiles; F. Hang-gliding, paragliding or parachuting; G. Operating or landing aircraft of any nature; H. Skateboarding, roller skating, in-line skating or any similar activity; I. Participating in any activity or operating any device in such fashion which interferes with others using district lands or endangers property, public safety or environmental resources.			
02.03.035 – Tools and trail building equipment.	No person shall possess, use or carry while on district lands any shovel, rake, pick, mattock, Pulaski, or other trail building equipment without prior written approval of the district.			
02.04.020 – Bicycles and similar vehicles.	No person shall operate any bicycle on district lands except upon fire protection roads, designated bicycle pathways or public roads not signed against such use. Furthermore, no person shall operate or possess any bicycle else here on district lands, including trails, unless signed specifically to permit such possession. All person operating a bicycle on district lands during hours of darkness shall carry and use a lamp which emits a white light visible from a distance of three hundred feet. No person shall operate or possess roller-skates, inline skates, grass skates, or any self-propelled or motorized skateboard, scooter or other similar device on district lands.			

⁶ "Parks" as referred to in this code means any park, playground, bicycle and multi-use path, recreation center or any other area or facility owned or managed by the county and devoted to active or passive recreation. Marin County Municipal Code 10.01.030 - Definitions.

Code Location ⁵	Code			
02.04.040 – Speed limits.	No person shall operate any land vehicle, including bicycles, at speeds in excess of fifteen miles per hour unless otherwise posted. Bicycles and similar vehicles shall slow to five miles per hour when passing others or approaching blind turns. No person shall operate any watercraft or other vessel in excess of five miles per hour. No vehicle, including bicycles shall be operated at a speed greater than is reasonable for safe operation, no in any manner which may endanger the safety of others or the protection of environmental resources.			
02.04.050 – Right-of- way	All person operating vehicles on district lands, including bicycles, shall yield the right-of-way to hikers and equestrians. Hikers shall yield the right-of-way to equestrians. District and emergency vehicles have the right-of-way on district lands at all times.			
02.05.010 - Dogs and other animals.	Dogs and other domestic animals are allowed on District lands when under the direct and immediate control of a responsible person. Up to three dogs per individual are allowed, with exceptions beyond that number granted on through issuance by the District General Manager of a Special or Commerci Use Permit. On maintained and designated fire protection roads three dogs off-leash per individual are allowed. In all other areas, dogs and other domestic animals must be fastened to and restrained by a chain or leash not exceeding six feet in length. No person shall do any of the following on District lands:			
	a) allow any dog or other domestic animal to enter environmentally sensitive or restricted areas of District lands;			
	b) allow any dog or other domestic animal to interfere with, bother or disturb others using District lands;			
	c) allow any dog or other domestic animal to hunt, pursue or harass other animals or wildlife;			
	d) bring or keep a noisy, vicious or dangerous dog or other animal;			
	e) bring or keep a dog four months of age or more without proof that the dog has a valid rabies inoculation and a valid license;			
	f) fail to promptly remove from District lands any dog or other domestic animal after being ordered by District personnel to do so.			
	g) allow excrement from dogs under their control to remain on District land.			
	h) bring dogs or other domestic animals onto district lands without possessing a chain or leash not exceeding six feet in length for each dog or animal so that they shall be prepared to restrain their animals, if necessary.			

Proposed Shared-use Path and Trail Guidelines

In addition to the rules, this plan also proposes additional guidelines for path and trail users. As paths and trails become more popular and congested, they can also become more hazardous. These guidelines will help users behave safely and courteously to make for an enjoyable experience for all. Some of the items in the code of conduct are based on the existing and proposed path and trail rules, but are rephrased into simpler sentences.

The table below shows the proposed path and trail guidelines to be followed by all trail users:

- 1 1	
Rule*	Description
Be Courteous and Predictable	Bicyclists always yield to pedestrians. The speed limit is 15 mph, and <10mph when passing pedestrians. No vehicle shall be operated at a speed greater than is reasonable for safe operation, nor in any manner which may endanger the safety of others of the protection of facilities and environmental resources.
Don't Block the Trail	Ride, walk, or run no more than two abreast and single file when passing others. When stopping, move off of the trail. Beware of others approaching you from behind and make sure they know you are stopping.
Keep Right Run, walk, and ride with awareness of others.	Stay as near to the right side of the trail as is safe, except when passing another user.
Pass on the Left	Pass others, going your direction, on their left. YIELD TO SLOWER AND ON-COMING TRAFFIC. Use hand signals to alert those behind you of your moves. Look ahead and back to make sure the lane is clear before you pull out and pass. Pass with ample separation and do not move back to the right until safely past. REMEMBER: KIDS AND PETS CAN BE UNPREDICTABLE.
Give Audible Warning BEFORE Passing	Give a clear signal by announcing "on your left" and ringing bell before passing.
Obey All Traffic Signs and Signals	Use extra caution where trails cross streets. Stop at all STOP signs and intersections and be cautious when crossing driveways. When entering or crossing a trail yield to traffic already on the trail.
Use Lights at Night	If on a trail at any time from dusk to dawn, make yourself visible to others.
Keep Animals Safe and under Control	Keep pets on a short leash less than six feet long. Walk pets on the right-hand shoulder and be aware of the potential hazard of leashes for passing bicyclists, skaters, and equestrians. Clean animal waste from the trail.

Rule*	Description
Have You Outgrown Trails?	Trails have engineering and design limits. If your speed or style endangers other users, check for alternative routes better suited to your needs. Selecting the right location is safer and more enjoyable for all concerned.

^{*} Alta Planning + Design; International Bike Fund (http://www.ibike.org/education/trail-sharing.htm)

Education and Awareness

The education of path and trail users is a critical part of creating a safe environment for all users. A code of conduct should be clearly posted at path and trail access points and intersections. Additionally, informational signs can help communicate basic etiquette along the way, such as the two examples shown below.



Bikes yield to pedestrians; Crescent Trail, Bethesda, MD; photo by Stuart Macdonald, 16 June 2007



Walkers keep right, cyclists pass on the left on West River Parkway, Minneapolis; photo by Stuart Macdonald. 29 Oct 2010

Educational curricula, similar to Safe Routes to School programs, could be used to encourage safe practices by various path and trail users. Below is an example brochure from the City of Portland's Share the Path campaign. The brochure communicates trail etiquette using illustrations and captions, which are easy to read and understand. Marin County Parks will be launching a new safety, education, and etiquette campaign regarding shared-use paths. This campaign is expected to launch in May 2015.



Share the Path campaign, City of Portland www.portlandoregon.gov

A kickoff campaign can be used to advertise the new etiquette guidelines. The City of Atlanta held the #BeltLineCharm campaign to remind users of the Atlanta BeltLine shared-use path to be safe while walking and biking. Volunteers held up positive, humorous and attention-grabbing signs along the trail reminding users of appropriate trail etiquette. Examples from the #BeltLineCharm campaign are shown below.

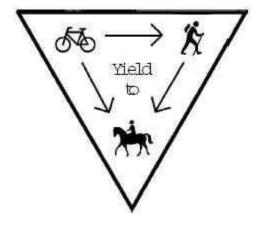




Source: www.beltline.org/beltlinecharm







Bicycle and Pedestrian Conflict Signs.

Share the Path Sign, FHWA





Share the Path Signs, Newport, RI (Danny Sullivan)

Share the Path Sign

Appendix E: Award Designation

BICYCLE FRIENDLY AMERICASM PROGRAM

The Town of Corte Madera is considering application to League of American Bicyclists for designating the city as a "Bicycle Friendly Community". The Bicycle Friendly Community (BFC) program provides a roadmap to improve conditions for bicycling and the guidance to make Corte Madera's vision for a better, bikeable community a reality.

A BFC welcomes bicyclists by providing safe accommodations for bicycling and encouraging people to bike for transportation and recreation. Making bicycling safe and convenient are keys to improving public health, reducing traffic congestion, improving air quality and improving quality of life.

The program provides guidance and benchmarking for building a Bicycle Friendly Community, the application itself is a rigorous and an educational tool in itself. Since its inception, more than 800 communities have applied for the five levels of the award – diamond, platinum, gold, silver and bronze — providing a clear incentive for communities to continuously improve.

Each Bicycle Friendly CommunitySM, Bicycle Friendly BusinessSM and Bicycle Friendly UniversitySM recognized by the League is different. Each with their own natural benefits and challenges — from climate and topography to culture and population density. But there are essential elements across five categories — known as the Five E's — that are consistent in making great places for bicycling.

THE 5 E'S

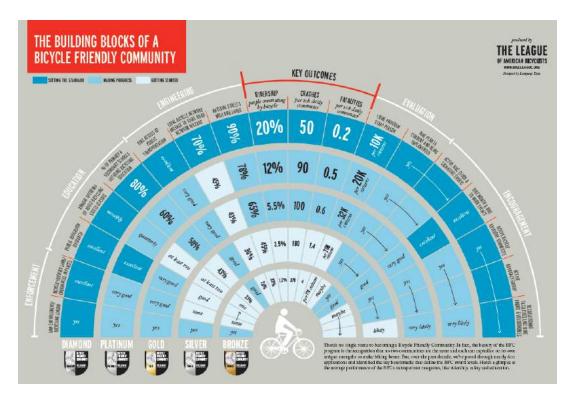
Engineering: Creating safe and convenient places to ride and park

Education: Giving people of all ages and abilities the skills and confidence to ride Encouragement: Creating a strong bike culture that welcomes and celebrates bicycling

Enforcement: Ensuring safe behavior from all users

Evaluation & Planning: Planning for bicycling as a safe and viable transportation option

The following diagram is a visual tool for differentiating the various levels, and the criteria for each.



Town staff has recommended the Town make the application to have the League of American Bicyclist evaluate Corte Madera as is, and then assess the cost impacts of making the improvements needed to receive the various levels of award. The item would be brought to the Town Council in the form of a Capital Improvement Project that would compete with other needed Town projects for available funding.

WALK FRIENDLY COMMUNITIES PROGRAM

Walk Friendly Communities is a national recognition program developed to encourage towns and cities across the United States to establish or recommit to prioritizing safe walking environments. The program recognizes communities that are working to improve a wide range of conditions related to walking, including safety, mobility, access, and comfort. Funding for the program comes from FedEx and the U.S. Department of Transportation Federal Highway Administration, and maintenance of the program comes from the University of North Carolina's Highway Safety Research Center.

Communities can apply to the program to receive recognition in the form of a Bronze, Silver, Gold, or Platinum designation. By applying for a Walk Friendly Community designation, your community will receive specific suggestions and resources on how to make needed changes for pedestrian safety. Through the questions in the assessment tool, your communities will be able to identify the areas of needed improvements that can form the framework for your comprehensive pedestrian improvement plan.

To apply, community members and individuals from multiple agencies must work collaboratively. The program recommends that there be one application coordinator to oversee the process. Applications are accepted twice a year: May 1st - June 15th and November 1st - December 15th. There is no cost to apply for

Walk Friendly Community designation, but the program estimates that it requires a time commitment of approximately 20-60 hours.

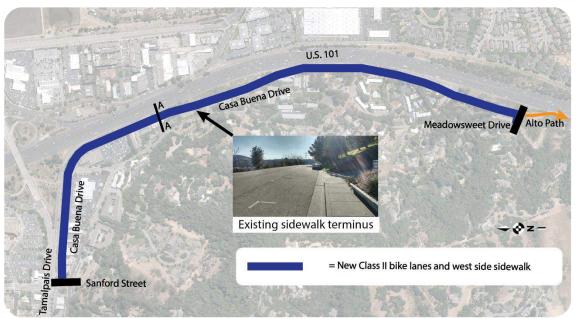
To get started, the application coordinator should download the <u>Walk Friendly Community Assessment Tool</u> which contains the questions and resources needed to complete the online application. The program suggests the application coordinator familiarizes himself or herself with the individuals and departments that will need to provide input on the application. Additionally, the applicant can fill out the application online and save as he or she progresses and can assess the Walk Friendly Community resources through their online <u>Resource</u> page.

Appendix F: Priority Project Details

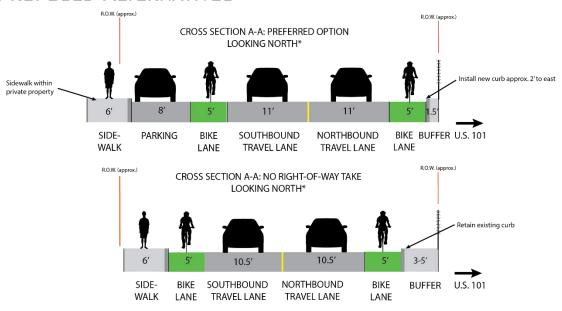
Town of Corte Madera - Class II Bike Lanes and Sidewalk Casa Buena Drive - Sanford Street to Meadowsweet Drive



VICINITY MAP AND PROJECT EXTENTS



PROPOSED ALTERNATIVES



 $^{^*}$ Concept is preliminary in nature and shows approximate dimensions. This concept serves as an example location; roadway widths vary throughout corridor * Concept is preliminary in nature and shows approximate dimensions. This concept serves as an example location; roadway widths vary throughout corridor * Concept is preliminary in nature and shows approximate dimensions.



EXISTING CONDITIONS

Casa Buena Drive between Sanford Street and Meadowsweet Drive/Alto Path is a 1.0-mile roadway adjacent to U.S. Highway 101 and Tamalpais Drive that connects residences and commercial properties along the roadway with the greater Corte Madera township. The following existing conditions apply:

- One vehicular lane in each direction with 8- to 14-foot wide on-street parallel parking. Typical paved widths south of Conow Street vary between 28 and 33 feet.
- Four-foot wide sidewalk on the west side of the street from Sanford Street to approximately 650 feet north of the Casa Buena Drive/Pepperwood Lane intersection.
- · No bicycle facilities.
- High peak traffic volumes and speeds make it uncomfortable for bicyclists to ride without separation from vehicluar lanes.

PROJECT DESCRIPTION

The preferred project (see top section on previous page) would provide bicycle lanes and a continuous pedestrian facility to improve multimodal safety and connectivity on Casa Buena Drive. The project would include the following:

- Obtain right-of-way and reconstruct the roadway where restriping within paved width is not possible.
- Provide eight-foot wide parallel parking (to maintain existing parking), two five-foot bike lanes, two eleven-foot vehicular lanes, and a six-foot sidewalk. A four-foot sidewalk may be constructed in constrained locations.
- A buffer of at least 1.5 feet shall be maintained from the fence adjacent to U.S. Highway 101 and the northbound bicycle lane.

An optional concept, not requiring acquisition of additional right-of-way, would provide bicycle lanes and sidewalk by removing on-street parking and narrowing the vehicular travel lanes. The curb on the east side could remain in place for potential cost savings (see bottom section on previous page).



COST ESTIMATE (PREFERRED OPTION)

Engineer's Preliminary Estimate of Probable Construction Cost

Item	Item	Estimated	Unit of	Unit	Item
No.	Description	Quantity	Measure	Cost	Total
1	Mobilization (5%)	1	LS	\$86,994.00	\$86,994.00
2	Traffic Control	1	L.S.	\$65,000.00	\$65,000.00
3	Remove Existing Markings & Buttons	1	L.S.	\$8,000.00	\$8,000.00
4	Remove tree and Grind Stump	12	Each	\$1,200.00	\$14,400.00
5	Clearing and Grubbing	1	L.S.	\$30,000.00	\$30,000.00
6	Earthwork	1	L.S.	\$90,000.00	\$90,000.00
7	Sawcut & Remove 1' A.C.	5,280	L.F.	\$4.00	\$21,120.00
8	Remove Existing Curb, Gutter, & Sidewalk	14,000	S.F.	\$5.00	\$70,000.00
9	Adjust Utility Cover to Grade	10	Each	\$500.00	\$5,000.00
10	SWPPP & Temporary Erosion Control	1	L.S.	\$5,000.00	\$5,000.00
11	Erosion Control (Type D)	1	L.S.	\$5,000.00	\$5,000.00
12	Landscape and Irrigation Repair	1	L.S.	\$15,000.00	\$15,000.00
13	Drainage Allowance	1	L.S.	\$10,000.00	\$10,000.00
14	Driveway Reconstruction	19	Each	\$6,000.00	\$114,000.00
15	Retaining Wall	100	L.F.	\$200.00	\$20,000.00
16	Curb & Gutter	5,280	L.F.	\$70.00	\$369,600.00
17	6' Concrete Path	31,680	S.F.	\$15.00	\$475,200.00
18	A.C. Pavement	42,240	S.F.	\$8.00	\$337,920.00
19	White Striping	15,840	L.F.	\$3.00	\$47,520.00
21	Centerline Striping	5,280	L.F.	\$4.00	\$21,120.00
22	Sign Relocation	1	L.S.	\$4,000.00	\$4,000.00
23	Pavement Markings	1	L.S.	\$12,000.00	\$12,000.00

 Subtotal
 \$1,826,874.00

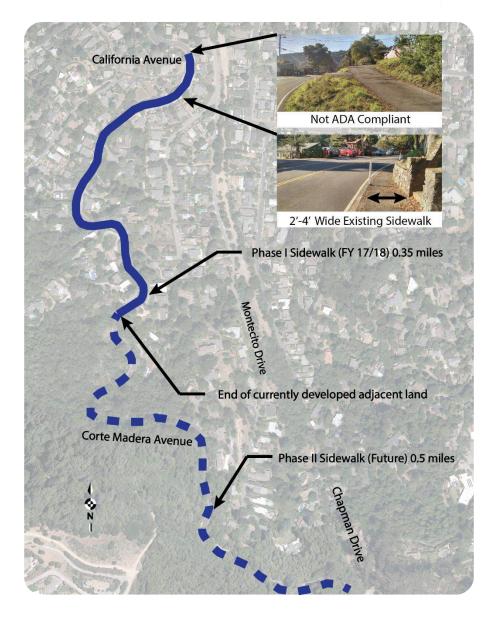
 20% Contingency
 \$365,374.80

Total Construction Cost \$2,192,248.80

Town of Corte Madera- Sidewalk Improvement Corte Madera Avenue from California Avenue to Chapman Drive

VICINITY MAP AND PROJECT EXTENTS







EXISTING CONDITIONS

Corte Madera Avenue between California Avenue and Chapman Drive is a 0.85-mile north-south corridor connecting residents along Corte Madera Avenue to downtown Corte Madera (Redwood Avenue and Tamalpais Drive). The following existing conditions apply:

- Existing two- to four-foot wide pathway on Corte Madera Avenue winds 0.35 miles south of California Avenue on the west side; no pathway exists for 0.5 miles from here to Chapman Drive.
- The pathway is not ADA compliant; its pavement is in poor condition and is elevated up to five feet higher than curb level in some locations. The existing grade west of the paved roadway and pathway width varies approximately between 1:3 to 1:1.

PROJECT DESCRIPTION

There is a desire to enhance pedestrian facilities to improve accessibility, safety, and connectivity on Corte Madera Avenue. The existing sidewalk is not ADA compliant and ends 0.5 miles north of Chapman Drive. Right-of-way may need to be obtained, and retaining walls would need to be built in areas where the new sidewalk cuts into the existing slope. This project includes the following recommendations, to be completed in two phases:

- Phase I (Construction FY 2017/18): Replace 0.35-mile existing west side pathway with four- to six-foot wide ADA-compliant sidewalk at curb level.
- Phase II (Construction TBD): Construct four- to six-foot wide ADA-compliant sidewalk on west side of Corte Madera Avenue to connect Phase I sidewalk to Chapman Drive.



COST ESTIMATE

Engineer's Preliminary Estimate of Probable Construction Cost

Item	Item	Estimated	Unit of	Unit	Item
No.	Description	Quantity	Measure	Cost	Total
1	Mobilization (5%)	1	L.S.	\$55,445.60	\$55,445.60
2	Traffic Control	1	L.S.	\$45,000.00	\$45,000.00
3	Remove Tree and Grind Stump	12	Each	\$1,200.00	\$14,400.00
4	Clearing and Grubbing	1	L.S.	\$15,000.00	\$15,000.00
5	Earthwork	1	L.S.	\$45,000.00	\$45,000.00
6	Sawcut & Remove 1' A.C.	4,488	L.F.	\$4.00	\$17,952.00
7	Remove A.C. Walkway	5,600	S.F.	\$3.00	\$16,800.00
8	Adjust Utility Cover to Grade	7	Each	\$500.00	\$3,500.00
9	SWPPP & Temporary Erosion Control	1	L.S.	\$5,000.00	\$5,000.00
10	Erosion Control	1	L.S.	\$5,000.00	\$5,000.00
11	Landscape & Irrigation Repair	1	L.S.	\$5,000.00	\$5,000.00
13	Drainage Allowance	1	LS	\$10,000.00	\$10,000.00
14	Driveway Reconstruction	11	Each	\$6,000.00	\$66,000.00
15	Retaining Wall	1,000	L.F.	\$200.00	\$200,000.00
16	Curb and Gutter	4,488	L.F.	\$70.00	\$314,160.00
17	5' Concrete Path	22,440	S.F.	\$15.00	\$336,600.00
18	Signs Relocation	1	L.S.	\$1,500.00	\$1,500.00
19	Utility Pole Relocation	2	Each	\$4,000.00	\$8,000.00

\$1,164,357.60 Subtotal 20% Contingency \$232,871.52 \$1,397,229.12

Total Construction Cost

Appendix G: Bay Trail





Appendix H: Plan Adoption

RESOLUTION NO. 16/2016

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF CORTE MADERA ADOPTING THE TOWN OF CORTE MADERA BICYCLE AND PEDESTRIAN PLAN- 2016

WHEREAS, the Town of Corte Madera adopted a Bicycle Transportation Plan on July 10, 2001.

WHEREAS, on September 2, 2008 the Bicycle Transportation Plan 2008 Update was accepted by the Town Council as an update to the 2001 Town Bicycle Transportation Plan; and

WHEREAS, an agency's Bicycle and Pedestrian Plan must stay current in compliance with the Active Transportation Program created by Senate Bill 99 and Assembly Bill 101 which encourages increased used of active modes of transportation such as biking and walking; and

WHEREAS, a local agency must have a current Bicycle and Pedestrian Master Plan to qualify for some grant opportunities; and

WHEREAS, the Town of Corte Madera Bicycle/ Pedestrian Plan- 2016 was developed in conjunction with the Transportation Authority of Marin (TAM), Town staff, the Bicycle and Pedestrian Advisory Committee (BPAC), and Town Council; and

WHEREAS, at their April 21, 2016 meeting, the Bicycle and Pedestrian Advisory Committee voted to recommend that the City Council adopt the Town of Corte Madera Bicycle/ Pedestrian Plan- 2016; and

WHEREAS, the Town of Corte Madera Bicycle/ Pedestrian Plan and the goals, policies and recommended improvements found within are categorically exempt under the California Environmental Quality Act (CEQA), pursuant to CEQA Guidelines Section 15304, Minor Alterations to Land subsections (a), (f) and (h) as well as Section 15301 Existing Facilities subsection (c), of the California Code of Regulations Title 14, Chapter 3; and

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Corte Madera hereby adopts the Town of Corte Madera Bicycle/ Pedestrian Plan- 2016.

* * * * * * * * *

I HEREBY CERTIFY that the foregoing Resolution was duly and regularly adopted by the Town of Corte Madera of Marin County at a regular meeting thereof held on May 3, 2016, to wit:

AYES: Andrews, Bailey, Condon, Furst, Lappert

NOES: None

ABSENT:

None

Sloan C. Bailey, Mayo

ATTEST:

Rebecca V aughr, Town Clerk